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NEW-YORK JOURNAL OF MEDICINE AND SURGERY.

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Page 52, line 17th, for "symptoms" read system.
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Miscellaneous Notices.
Art. I. Remarks on the Operation of Urethrotomy, with Cases.

By James H. Dickson, M. D.

I propose, in the following paper, to make a few observations on the operation of urethrotomy, and its application to the treatment of certain morbid states of the urethra and its associate organs.

The section of the urethra by the knife has been recommended and practised by very many distinguished surgeons under the following circumstances. First. Where a calculus or other foreign body has become impacted in the urethra, which cannot be dislodged by the urethra forceps, or by mechanical dilatation of the canal, assisted by the warm bath, and the other ordinary means of inducing relaxation of the part. Upon this point I will merely stop to remark, that the operation is in general very easy of performance, and is attended with but little risk, unless the obstructing body is situated in that portion of the urethra which is covered by the scrotum, and is so firmly impacted there, as to be incapable of being moved either forwards or backwards. If we are forced to make an opening into the urethra at this point, we must encounter the risk of infiltration of urine into the cellular tissue of the scrotum, and of the probable consequent sloughing of that
structure. This result may, however, in many instances, be obviated, by making a free incision through the external integuments; or should infiltration of urine occur, sloughing of the skin and cellular tissue of the scrotum may be frequently prevented by proper surgical treatment. Of course, where it is possible to do so, the obstructing body should be pushed back into the perineal portion of the urethra, and extracted through an incision made into that part.

Secondly. The operation of urethrotomy is applicable to the treatment of certain cases of permanent stricture of the urethra, especially if complicated with retention of urine. I say of certain cases of permanent stricture, for the great majority of cases of this disease do not require and would not justify the performance of so formidable an operation. In order then to determine with precision, the cases in which this operation should be selected as the best proceeding in cases of permanent stricture, it will be convenient to consider the disease in two points of view: 1st, as regards its character; 2d, as regards its situation.

First as regards its character.

Permanent stricture may be either permeable or impermeable. The caliber of the canal, being more or less diminished by the change of structure which constitutes permanent stricture, occasionally becomes entirely closed by the supervention of inflammation in the part, and thus the permeable is converted into the impermeable form of the disease. Whenever the stricture is capable of being passed by the smallest sized bougie, or by the directing wire of the lancet-pointed stilet, no judicious surgeon would think of resorting to so severe a mode of treatment as that of section of the urethra.

The only cases which occur to me as constituting an exception to this remark, are those in which there are false passages, into which it may be difficult to prevent the guiding wire of the instrument from entering.

Secondly. As regards the situation of the stricture.

A permanent impermeable stricture may be situated in any part of the urethra; but in considering the applicability of this operation to its treatment, we may be assisted in arriving at a correct conclusion by dividing the canal in two portions, viz.
anterior and posterior; the first embracing that portion of it, included between its orifice and a point a little distance behind the scrotum; the second comprehending the remaining portion of it to the prostate gland.

Whenever the kind of stricture under consideration has its seat in the anterior portion of the urethra, perforation of the stricture will in general be the better proceeding, for in this part of the urethra, we can determine with an approximation to certainty the direction of the canal. Besides, when the stricture occupies that part of the urethra which is covered by the scrotum, the same objection presents itself to the performance of urethrotomy, as that which has just been referred to in the case of a calculus occupying that situation, viz. infiltration of urine and its consequences. If, however, we are governed by authority in this matter, the division of the urethra may be regarded as perfectly proper, even when the stricture is situated in the anterior portion of the canal.

Sir Astley Cooper, in his chapter on operations for retention of urine, relates an interesting case in which he resorted to urethrotomy to relieve retention arising from a permanent stricture which had become impermeable, in consequence of the use of the caustic bougie for its cure. He says, “upon examination of the man, I found that the stricture was seated in that portion of the urethra which was covered by the scrotum; I tried to pass different instruments, but did not succeed. Reflecting upon the case, it appeared to me to be exposing the patient to unnecessary pain and danger, if I punctured his distended bladder; as when I directed him to make attempts to discharge his urine, the urethra swelled excessively behind the stricture, from the urine passing as far as its seat. I therefore determined to make an incision into the urethra only, which I immediately did, being directed to the place by the distension which an attempt to void the urine produced. The urethra was opened behind the scrotum, and the urine readily discharged. The patient rapidly recovered, without any bad symptom.” With all proper difference to the deservedly high authority of this eminent surgeon, I should prefer, in a like case, the operation of perforating the stricture by means of the lancet-pointed stilet, concealed in a catheter, inasmuch, as by such a mode of proceeding, the retention would
be as speedily relieved, and at the same time, an important step taken towards the radical cure of the stricture. We have the choice of either mode of proceeding in such cases; but as a general rule, the operation of urethrotomy is not required when the impermeable stricture is situated in the anterior portion of the canal. It is when this description of stricture occupies the posterior, or perineal division of the urethra, that I consider the operation of urethrotomy particularly applicable to its treatment, for the double purpose of radically curing the stricture, and relieving the retention of urine caused by it. I, of course, take it for granted, that there are cases in which it is impossible to pass the catheter, although a very distinguished surgeon, Mr. Liston, states that he has never met with a case, in which he has been foiled in his efforts to do so. But as we do not all possess such extraordinary dexterity, and as some of us do occasionally meet with cases, in which the bladder cannot be reached by catheter or bougie, some other mode of relief must be thought of and practised.

In this state of things, we have the selection of three modes of proceeding. These are, perforation of the urethra, paracentesis of the bladder, and urethrotomy. The horrible mode of driving a catheter through the obstruction, though sanctioned by the high authority and practice of Hunter and Dease, must, I think, be reprobated on all hands, and will not therefore be taken into the account.

The merit of originating the operation of perforation of the stricture, by means of the lancet-pointed stilet, is due, (upon the authority of Dr. Dorsey,) to the distinguished American surgeon, Dr. Physick, although in this, as in instances of more importance, the just claims of American surgery have been overlooked, and the credit awarded to others. Simply for the cure of permanent stricture which is permeable, the operation of perforation is preferable to section of the urethra, even when the stricture is seated in the posterior portion of the canal, for the lancet-pointed stilet may be guided by the wire, which in the improved instrument can be made to project before it. But when the stricture in this part of the urethra is impermeable, I am inclined to adopt the opinion and the language of John Bell, when in speaking of the proposal he says, "if so rash a thing has
been done, I protest against it, as a sword put into the hands of a fool; such an instrument, (a trocar pointed catheter,) would be in the hands of every young man, and would prove what the crochet is in midwifery, a merciless resource. Rejecting then the operation of perforation, when this description of stricture has its seat in the posterior portion of the urethra, we have to choose between paracentesis of the bladder, and urethrotomy.

All that can be said in favour of paracentesis, is, that it affords temporary relief, and is very easy of performance. This applies equally to the operation above the pubis, and to the disgusting mode of performing it through the rectum. But shall we resort to so serious an operation, when it is at best but a palliative? When the condition of the urethra upon which the whole difficulty depends, remains the same as before its performance, there should be no hesitation, I think, in giving a decided preference to urethrotomy in such cases, inasmuch as the operation involves no more hazard to the patient than paracentesis, and is at the same time a most important part of the treatment for the radical cure of the stricture. It is true it is somewhat more difficult than tapping the bladder, but that circumstance can surely constitute no objection to it on the part of a properly qualified surgeon. As an illustration of the application of this operation, to the treatment of impermeable stricture, the following case is taken from my note-book.

Dec. 1828. M——, aged about 40, has laboured under stricture of urethra for the last thirteen years. I have never been able to pass the smallest sized bougie entirely through the stricture, which is situated near the bulb of the urethra. The instrument can be made to enter the contracted portion of the canal about a quarter of an inch, but by no kind of manipulation can I cause it to advance farther.

He had been under the hands of a number of different surgeons, and had been treated by the caustic bougie. He was exceedingly anxious to have the stricture divided by the knife, but as I was desirous to make another trial of the armed bougie, he submitted to it. The caustic was very assiduously used for a month, and then abandoned as productive of no benefit.

A few days after I had given up the use of the armed bougie
I was desired to see him. I found him, January 27, labouring under complete retention of urine, which had existed for about twelve hours. He was in extreme suffering from constant and ineffectual efforts to empty the bladder. I bled him to the extent of \( \frac{3}{4} \) xxiv, gave him 100 drops of laudanum, and ordered a warm bath. In the course of two or three hours he was enabled to pass a few drops from his bladder, the violent straining to do which has caused a protrusion of the rectum to a considerable extent. As he was exceedingly anxious that an operation should be performed for the radical cure of the stricture; I consented to operate and proceeded to do so, although the retention had not lasted so long as to make the danger at all imminent. He was placed on a table and a staff introduced into the urethra as far as the stricture. The urethra was laid bare by an incision in perineo. The end of the staff was then made to protrude by an assistant, and the urethra opened at the point where it projected. Following the course of the urethra, the strictured portion was laid open to a little beyond the bulb, from which point a catheter was without difficulty passed into the bladder and its contents evacuated. A silver catheter was then passed through the whole course of the urethra into the bladder, an anodyne administered, and the patient carried to bed.

Jan. 28th. Rested well last night. On turning down the bed-clothes I was alarmed at finding the scrotum and prepuce distended with urine, and a small portion of the former at its lower part, of a dark colour. This unpleasant occurrence might probably have been prevented if a catheter had been passed through the incision into the bladder, instead of passing it through the entire urethra, as a more direct outlet would thus have been afforded for the urine. With a view to prevent as much as possible the sloughing, which is so common a consequence of the infiltration of urine, the scrotum and prepuce were freely scarified, and the whole of the former enveloped in a blister.

29th. The blister was taken off and the part dressed with ungu. resineæ, thinned with spirits of turpentine. The urine continued to dribble off at the punctures in the prepuce for two or three days, and the swelling of the scrotum gradually subsided without the occurrence of sloughing. The catheter was removed on the tenth day, cleaned and returned. The wound in the peri-
næum gradually healed, and in the third week from the performance of the operation, the catheter was finally withdrawn, and the patient was able to pass his urine in a full free stream.

Another class of cases in which the operation of urethrotomy seems to be peculiarly applicable, are cases of permanent stricture complicated with rupture of the urethra, with a consequent infiltration of urine. When stricture has been of long standing, that portion of the urethra immediately behind it frequently becomes dilated and bulges out from the violent propulsion of the stream of urine against this part. Whether the urethra ulcerates at this point, or from repeated distension finally becomes so thin as to yield to the propulsive efforts of the bladder, I am uncertain. At any rate a solution of continuity sometimes occurs, and infiltration of urine takes place into the cellular tissue of the perinaeum, scrotum, and penis, extending, sometimes, upwards towards the abdomen and downwards to the thighs.

The treatment of such cases recommended in the books, is simply to make free incisions into the cellular tissue, and to dress the parts with such applications as are calculated to prevent the occurrence or to lessen the extension of gangrene. The result is, if the patient recovers, that he does so with a fistula in perinaeum. If, however, in addition to free incisions with the cellular tissue, the operation of the urethrotomy is performed and the stricture divided, the patient is frequently entirely relieved, instead of having one disease substituted for another. As illustrating the application of the operation to this class of cases, I will relate the following case.

R——B——, a stout athletic negro, has followed the occupation of boatman, on the Cape Fear River, for a number of years. He has long been subjected to stricture, and has frequently suffered from retention of urine after a debauch. I was called to see him on the morning of December 13th, 1831. The day before he had been drinking very freely, and last night, while attempting to void his urine he felt something give way, and although it seemed to him that he was emptying his bladder, not a drop of urine passed off. I found his scrotum enormously distended, so much so that the form of the penis was entirely lost in the swelling. The perinaeum also had a soft puffy feel. I attempted to pass a catheter, but as I could distinctly feel it
slip through an opening into what I considered a false passage, I immediately withdrew it. With a view to the cure of the stricture, and for the purpose of preventing, if possible, a fistula in perinæo, I proposed to him the performance of urethrotomy, to which he unhesitatingly assented. A female catheter was passed down to the stricture, which was situated just behind the scrotum. The urethra was exposed by an incision. I endeavoured to find the ruptured point in the urethra, but did not succeed in doing so. An opening was therefore made into it, at the point where the end of the catheter was felt, and carried backwards through the stricture, and somewhat beyond it. A silver catheter was then passed into the bladder and free incisions made into the scrotum, which was also enveloped in a blister. The blistered surface was afterwards dressed with the ung. resin, thinned with spirits of turpentine, for several days. Sloughing was not however entirely prevented in this case. A portion of the scrotum about the size of a dollar became gangrenous. Owing to bad nursing and the want of proper comforts, sloughing over the sacrum occurred from the combined influence of pressure on this part, and the constant saturation of the bed-clothes with urine. These untoward circumstances retarded his recovery, but at the expiration of six weeks he was able to go about, and was discharged cured.

The next class of cases, in which the operation of urethrotomy may occasionally be resorted to with advantage, are cases of stricture, complicated with fistula in perinæo. When simple dilatation of the stricture by the bougie fails to produce a contraction of perinæal fistulæ, several different modes of treatment have been recommended by surgeons; among these, are the application of the cautery, either actual or potential, the rhinoplastic operation, and urethrotomy. As the cautery very often succeeds, it may perhaps be better to resort to it in all cases, in which there is not excessive thickening, and condensation of the tissue in the track of the fistula. As we cannot, however, reasonably anticipate success from the use of the caustic, or even from the application of the actual cautery, where there is much condensation or callosity of the surrounding tissue, it will be better to resort at once either to the rhinoplastic operation, or to urethrotomy. As, however, I have no experience in the compa-
rative advantages, or success of these different modes of opera-
ting, I will not pretend to determine between them, but will
bring this paper to a close by an abstract from a case in which
the latter operation was successfully employed in the treatment
of perinæal fistula.

W. S. wood-hewer, came from the country in Dec. 1833, to
place himself under my charge for the cure of fistula in perinæo,
which he had been labouring under for several years. Unsuccess-
ful attempts had previously been made, to close up the fistu-
loss opening by the application of the lunar caustic. If has been
such a source of annoyance to him, that he has made up his
mind to submit to any operation which affords a hope of radical
relief. The fistulous orifice is very small, a small lead wire can
be introduced about half an inch into it, but cannot be made to
come in contact with a bougie introduced into the urethra. There
is considerable callosity of the cellular tissue, around the orifice
of the fistula. He has a stricture, easily dilatable however, aboutive inches from the orifice.

The operation was performed as follows: A staff was intro-
duced into the bladder, and a fine probe passed in the fistula as
far as it could be done without violence. The fistulous canal
was then laid open by successive small incisions, until the ex-
tremity of the probe was reached. The continuation of the ca-
nal was then sought for, but as I failed to find it, the operation
was finished by cutting down upon the urethra, and laying it open
for somewhat more than an inch in extent. A catheter was then
passed into the bladder and kept there, with occasional removals
for the purpose of cleansing it, until cicatrisation was complete,
which was about the end of the third week. No infiltration of
urine occurred in this case, probably in consequence of the pre-
vious condensation of the cellular tissue of the perinæum.
Art. II. Remarks on engorgement, or congestion of the Cervix Uteri. By J. C. Beales, M. D.

Within a very brief period, in comparison with the existence of our science, the diseases of the internal genital organs of women were almost entirely neglected and unknown; either because they were considered too obscure to be well understood, or too uniformly fatal in their results to offer a fair chance of relief, or perhaps by some, because they were considered almost beneath the notice of the scientific; so that the man who devoted himself to the treatment of female diseases, was looked upon as holding an inferior grade in the profession. Fortunately for humanity, opinions on this point have changed, and of late years, several men of great eminence in Great Britain, France, Germany, and this country, have employed their talents in the investigation of this class of diseases; several very valuable works have been the result, and medical men in general have become better acquainted with the subject; yet I trust I shall be excused for more particularly drawing attention to it, as the extreme frequency of its occurrence, renders it of importance, and I do not know of any English or American writer who has sufficiently noticed it.

The affection which I now propose to discuss, is congestion or engorgement of the cervix uteri. This disease occurs with very great frequency, and although often productive of considerable physical suffering, and still more mental anxiety to the patient, is perhaps not so readily recognised and understood by the members of our profession in general, as it ought to be.

It may occur at any age, from that of puberty up to some few years even after the cessation of the menses; but it is more prevalent, that is to say, it commences generally between the ages of twenty and thirty years, and is much more frequent among married women, although I have seen several instances of it in the unmarried.

If we reflect upon the anatomy of the uterus, and on its functions when unimpregnated, we should be disposed to say a priori, that it is an organ very liable, and very much exposed to disorder and disease. We know that it is supplied in an extraordinary degree with blood-vessels, more so than any other organ in the
system in proportion to its size; we know by the careful and judicious experiments of Sir George Wintringham and others, that the relative tension and size of the iliac and pelvic arteries and veins in the female, are peculiarly adapted to the increase of circulation through the pelvis and uterus, and, if I may so term it, the permanence and repose of the blood in this organ. If we turn to its physiology, and consider its functions, our attention is forcibly drawn to the irregularity and inequality of the quantity of the circulating fluid at different times. Without ascribing the phenomena of menstruation altogether to a local plethora, as Cullen and many others have done, yet it must be allowed that such a state actually exists in the genital organs, during, and previous to those periods; in addition to this, we have the more uncertain, irregular, and yet perhaps, equally powerful determinations of blood to those parts occasioned by the sexual functions of the organs; we have furthermore, a variety of causes acting at indeterminate times, and with varying forces, all tending to disturb and derange the even balance of its ordinary circulation. We have, therefore, for the subject matter, an organ liberally supplied with blood vessels, and continually exposed to a vast irregularity, as regards the quantity and momentum of its circulation at different epochs. Now, were this organ much liable by its situation to the ordinary external occasional causes of local disease, it is probable that we should rarely see it in a state of health; but it is far too important in the female economy to be so little cared for; we find it therefore, carefully guarded from external injury by a circle of bones, and surrounded and cushioned by soft parts. Yet however well any organ may be protected, it is still liable to those casualties which more or less attend mortality; and we accordingly find there is no lack of occasional causes which produce disease in the uterus. Of those that tend to excite the particular morbid state under consideration, there is a long list, thus: whatever interferes with the perfect act of menstruation—whatever impedes the free circulation of blood through the uterus, or its return from the pelvic cavity, any degree of cold that affects the system generally, local injuries, such as those produced by the passage of the child's head during labour, or by the venereal act, (and this is a frequent cause in young married women) internal hemorrhoids, costiveness, &c. all, or any, may tend to determine an increased quantity of blood
to the part, or to retain it there. The vessels in consequence, become distended, their power of re-acting upon and propelling their contents is more or less injured; the circulation becomes sluggish, the quantity of fluids in the part is disproportionate, and the disease of which we are treating, is the result. But at first the local congestion is slight, and if the cause be removed, it will disappear entirely by the powers of nature alone; and doubtless, this is of very frequent occurrence without even the knowledge of the patient herself. But suppose that the exciting cause should continue, or be frequently repeated, the efforts of nature to give relief are ineffectual; then, as I have just said, the vessels become over distended, are no longer able to empty themselves, and the part is swollen and tense; this may be considered as the first stage. If now some local cause of irritation, and excitement be added, subacute inflammation is induced, the arteries of the part take on increased action, lymph is thrown out, the part becomes solidified, indurated, and scirrhus-like — this is the second stage. After this state of things has existed for some time, perhaps for months, perhaps even for years, a further advance is made, and we have the stage of ulceration.

A very important question now presents itself, viz: Whether the induration I have spoken of ever changes its nature, takes on a morbid action, and becomes true scirrhus? I have not yet myself witnessed a sufficient number of facts, to determine this satisfactorily. Indeed, it is evident that this question is very difficult to answer. If a surgeon be called to a patient in the early stages of the disease, as it is curable, he, of course, has no opportunity of seeing what it would become without the intervention of art; but unfortunately, owing to the false delicacy of females, they are usually not seen or attended to till the last stage, and the history of the complaint as given by the patient is too obscure and imperfect to place any reliance or found an opinion upon it.

I am not aware that many cases of post mortem examinations of this disease are on record, particularly in the first and second stages; for this there are several reasons. The disease in the early grades is not fatal, its existence is frequently unknown; and in private practice, even where we are aware of it, our researches are limited by the opinions and the wishes of the friends. I have had a few opportunities however to examine the uterus,
where death had taken place from some other cause, and where I knew this affliction to have existed previously. As perhaps might be expected a priori, the pathological changes of the first stage were scarcely perceptible. The neck of the uterus was soft, relaxed, and flabby; there was a slight looseness of texture, but otherwise the structure was not altered, and in fact probably would not have drawn observation as being unnatural had not the attention been specifically directed to it. Indeed it must be remembered, that the affection, thus far, as has before been observed, consists in an accumulation of the fluids in the capillary vessels, which state would be changed by death.

Where death has occurred during the second stage of the disease, the appearance is much more decided; we now find the part firm and of a yellowish white colour; the cellular substance is filled with lymph that appears semi-organized. It resists the scalpel, and I have occasionally observed white lines diverging in various directions, giving the tumour so close a resemblance to scirrhus as to render it very difficult to distinguish them. I especially recollect one case of a tailor's wife in the city of Mexico, where several physicians accustomed to post mortem examination, declared their inability to distinguish the structure presented to them from scirrhus, yet the history of the case in every particular forbade the idea of malignant disease. I had attended this lady for many months, but she died suddenly of epidemic scarlet fever, a short distance from the city, and without any professional attendance. To recur to the question then, whether this disease ever becomes true scirrhus, while I admit that what I have above stated is of very trifling importance; yet the impression on my mind is decidedly in the affirmative, influenced principally by the analogy derived from the etiology of scirrhus, situated in other parts of the body; as I believe most surgeons are now agreed, that a tumour, originally of a perfectly innocent character, may take on a cancerous or malignant action. I trust it will be observed, that I do not maintain it always does so; but provided it be admitted that it occasionally occurs, it will be sufficient to show the importance of properly attending to the affection in its early stages. I have said this is a very frequent disease. I should think that I have seen at the smallest estimate, upwards of thirty cases, and among these I do
not include infirmary or pauper patients. I will state only a few however, as they will be sufficient to illustrate the affection.

Mrs. F. the wife of a Mexican general, only 22 years of age. I was sent for to see this lady, and informed that she was suffering from a cancer in the womb, which had first attacked her four years previously, soon after marriage; that it had not made any very great progress, as it had been kept at bay by various remedies, which remedies I found had been of a most inefficient and absurd nature. I understood that there was but little, if any, disturbance of the menstruation. The lady had never been pregnant, and although suffering from confinement, and more especially from mental anxiety, it could not be said that her general health was bad. From the whole of this history it was probable that the disease was not cancer. I examined her per vaginam, and found the cervix uteri swollen, rather tender, hotter than natural, and the lips of the os tincæ pouting. On applying the speculum, I observed as I had anticipated, that the whole vaginal part of the uterus was engorged and red. I put this lady on what I considered a proper course of treatment, and in four months she was perfectly well.

Mrs. M. an English lady, a widow, aged 26, complained of a tumour in the hypogastric region, great sensation of weight and bearing down in the pelvis, dragging pain in the groins—leucorrhoea, and frequent fits of hysteria; menstruation regular. On examination, I found a tumour of the uterus, about the size of an orange, which could be easily felt through the parietes of the abdomen. On examining per vaginam, I found the cervix uteri swollen nearly as large as an egg, resistant to the touch, not very painful, and of rather a mottled colour. While I attended to the local disease, I improved the general health by vegetable tonics, with occasional aperients. After about six months this lady returned to Europe, very much improved in every respect, and the uterus had nearly resumed its normal state.

Mrs. K. a married lady, aged 23, complained that for two years she had been suffering uneasy sensations in her pelvis, pains in the groins, which had excited her alarm; her menstruation was rather more profuse than usual, and she had excessive leucorrhoea. On examination, I found the cervix uteri exceedingly painful to
the touch. On applying the speculum, I observed this part swollen to about twice the size of a nutmeg, and a quantity of excessively viscid stringy mucous emerging from the os uteri. This lady was put under treatment, and in five weeks was perfectly well.

In the latter end of last year, I was requested to visit Miss. B. aged 32, in consultation with her attending physician. She had been suffering for several months, with a frequent desire to go to stool; a sense of burning heat within the pelvis, a weight as "though a ball was inside of her;" considerable leucorrhœa, the discharge of a yellow colour—frequent desire to void her urine, pain in the loins and sometimes in the groins. She was very much depressed in spirits, and fully believed she had a "cancer."

On making an examination, per vaginam, I experienced very great difficulty, in consequence of the extreme narrowness of the external orifice, produced by the presence of a perfect hymen; for the same reason I found it impossible without injuring the patient, to introduce a common speculum; but I succeeded in obtaining a view of the cervix uteri, by making use of a female urethra dilator. I found the cervix uteri of a deep red colour; the anterior lip swollen to about the size of a walnut, and rather sensible to the touch; the mucous membrane of the vagina was heightened in colour and bathed with mucous secretion.

The treatment pursued was local abstraction of blood by means of leeches, first from the loins, afterwards from the cervix uteri itself, and once or twice from the entrance to the vagina—hip-baths daily. Saline aperient medicines in a little infusion, so as to insure one or two alvine discharges daily; and finally, by the use of vaginal injections, first, those of an emollient nature, and afterwards replacing them by astringents. This lady's symptoms decidedly indicated a more severe degree of disease than actually existed; but she was of a highly nervous temperament, was engaged in arduous mental occupation, and at length came to fix her thoughts almost continually on her complaint; for this reason the cure progressed very slowly, and she was five or six months before she was entirely well.

Mrs. A. ætat 50, in the state of New-Jersey, mother of several children. I was called to see her in the month of January of the
present year. This lady had formerly a polypus uteri, the flooding from which had nearly destroyed her before the cause was discovered; about a year and a half since, I removed the tumour and she entirely recovered. She now complained of excessive leucorrhœa; the discharge was of a greenish yellow, very fetid, and so profuse as to compel her to change her napkins eighteen or twenty times daily; she had also severe dragging pains in the groins and lumbar region, her feet and face were swollen, her appetite destroyed, and she was so exceedingly feeble that she could not rise from her bed; she is of an excessively nervous temperament, and very much alarmed lest there should be another polypus, or perhaps the constantly dreaded "cancer." On examination, I found the vaginal portion of the uterus very much enlarged, about the size of a small orange, the os uteri open so as to admit the finger, and on the anterior lip were four ulcers, three of them about the size of a split pea; although not of a regular shape, while the fourth was more than twice that size — they were all foul-looking and about a line in depth. There was none of that eversion nor jaggedness of the edges so indicative of carcinoma, neither was there that indurated deposit of new matter, which is so characteristic of that malignant affection. The vagina was almost filled with its morbid secretion, and strings of tough ropy mucus hung out of the os uteri, of such tenacity that I could not sponge them away.

My first care was to attend to this lady's general health, by putting her on a course of vegetable tonics, nourishing diet and wine, merely letting her use emollient and anodyne injections to the vagina: after a few weeks she was so much improved that I was enabled to take away blood locally. A doubt arose in my mind whether disagreeable results might not arise from the bites of the leeches, as there was evidently a disposition to ulceration in the part; but as I have repeatedly seen great benefit from the remedy in malignant ulceration, I determined to adopt it; the bites healed readily, and the ulcers almost immediately took on a healthy action as the general health improved. I touched them once with a strong solution of nitrate of silver, and by persisting in the usual treatment, the patient perfectly recovered. She enjoys better health than she has done for many years, and can ride several miles in a day to see her friends. She has now not a ves-
tigue of the disease, except a very slight leucorrhœa, which gives her neither trouble nor uneasiness.

In the early part of this year I went to see a woman about 30 years of age, mother of two children, at Bergen in New-Jersey, in consultation with two other physicians. This woman had been complaining for upwards of a year of great pain in the pelvis, in the groins and lumbar region, and of slight leucorrhœal discharge; but more especially of all those symptoms which usually indicate inflammation or excessive irritation of the bladder. These indeed were so prominent, that my first idea was that she had a calculus in the bladder, and I did not relinquish that opinion till the bladder had been carefully examined. On examination per vaginam, first with "the touch," and afterwards with the speculum, I found the cervix uteri somewhat enlarged, of a very bright red colour, with three or four of that kind of fissure leading into the os uteri, so frequently observed in the uteri of women who have borne children. In this case, the edges of these fissures were in a state of ulceration, and the whole organ was so excessively sensible that she could scarcely bear the slightest touch of the finger. The patient's general health was very bad, and she had that yellowish parchment look which commonly attends malignant disease. I recommended the application of caustic to the ulcers, a few leeches to the orifice of the vagina, emollient and anodyne injections, and a course of mineral tonics. This course was persevered in, and varied according to circumstances in a most judicious manner by the attending physician; and in about two months she was able to attend to her usual pursuits; since that time I have lost sight of her.

I need not give any more examples, as I trust the foregoing will be deemed sufficient.

Symptoms. The symptoms at the commencement of this disease are usually very obscure, and hardly sufficient to call the attention of the patient. Some inconvenience is felt in the pelvis when the bowels are costive; uneasy sensations are experienced for some days before the menstrual period; some degree of leucorrhœa attends.

As the disease progresses, pains in the loins are felt, and there is a sense of weight within the pelvis; as the uterus becomes more engorged, it falls lower, producing a feeling of "bearing
down, and tenesmus; while dragging and shooting pains are felt in the groins. All these symptoms may go on increasing to such an extent as effectually to alarm the patient, and cause her to seek for professional advice; but for the most part they proceed more slowly, keeping her in a state of ill health, and particularly subject to depression of spirits, filling her mind with great alarm, and yet from the mistaken delicacy of her sex, she conceals the cause from her friends. The symptoms vary very much at different times. When the patient remains perfectly quiet and tranquil they are usually very supportable; but if she take much exercise, or be placed in situations that cause much mental or local excitement, a great exacerbation of the symptoms is produced. The sensibility of the neck of the uterus varies very much in different subjects — in some I have known it to remain almost in its normal state of insensitivity; while in others the touch of the finger or the connubial act, produced very considerable pain. As the disease advances, the vaginal discharge increases vastly, and is mixed with an extremely viscid mucus, which I have no doubt is the produce of the nabothian glands, as I have seen it several times hanging partly out, and partly within the os tincæ.

At length ulceration takes place, and there is usually an increase in the severity of the symptoms, although this is not universally the case, as I have seen two or three instances where several ulcers had formed, and the patients scarcely made any complaints; most commonly however, there is acute pain in the part, the bladder and rectum become affected by contiguous sympathy, there is frequent desire to make water, great tenesmus, and very considerable pain when the bowels are relieved; the vaginal discharge is muco-purulent and occasionally streaked with blood. The patient takes to her bed under the full belief that she has cancer, a belief that is but too often fostered by an injudicious diagnosis; in fact, should the professional attendant content himself with the patient's statement of her sufferings, it will be extremely difficult if not impossible for him to arrive at a full knowledge of the affection. Nearly all diseases of the uterus have necessarily many symptoms in common, for this reason more close inquiry becomes necessary. By a common examination per vaginam, a well practised finger can ascertain many essential points with very great accuracy; but still more informa-
tion can be obtained by the use of the speculum. A great outcry has been raised against the use of this instrument, but I think without any just cause. All the affections for which it can be used are highly important; many of them are difficult to discriminate without its use; and with respect to its indelicacy, if applied in a proper manner it is certainly not more than in a common examination per vaginam, as there is not the slightest exposure of the person. Most women met with in private practice have very properly great repugnance to either; but with one or two exceptions, I have always succeeded in obtaining permission to use the instrument, after I had pointed out its utility and importance.

On examination then with the speculum, the surface of the tumour will be found smooth, probably shining, of a red or mottled colour; the ulcers will generally be found superficial, with even borders; perhaps their surface will be foul and without granulations, or occasionally they may be healthy-looking, with small specks of blood upon them, and more especially their base, and the unbroken surface between them, is not of that hard, stony nature, which I believe always attends carcinoma of the part: in brief, although it may be difficult to point out the characteristic distinctions between these two kinds of ulceration, by mere words, yet I think that any physician accustomed to see the two, will readily distinguish them. I am here endeavouring to mark the distinction between what may be termed simple ulceration in this stage of the affection and carcinoma; yet I will here take occasion to repeat my firm conviction, that the latter dreadful disease is not unfrequently produced by neglect in attending to the former in its early stages.

Treatment. The sympathy existing between the uterus and the stomach, and the rest of the alimentary canal, is one of the most remarkable and most constant in the system; we find consequently, that whenever the former organ is affected, either physiologically or morbidly, a deranged state of the chylopoietic viscera is almost certain to occur, in the affection of which we are treating. This is nearly universally the case, especially after it has existed a few months. Our patient will then complain of want of appetite, disordered bowels, nausea, and a feeling of excessive debility. Now although these symptoms are produced by
sympathy, and are of course, secondary to the real disease, yet it will generally be found advantageous to commence the treatment by gentle aperients, with occasionally a dose of blue pill, and these followed up by a course of vegetable bitters. By this method, the general state of the patient will usually be very much improved, and he will be encouraged to persevere in the further treatment, and this is no trifling point gained.

With regard to the local disease, it may be useful in very robust women, to bleed from the system at large; but this will very seldom be necessary. After the above mentioned indication has been fulfilled, ten or twelve leeches should be applied to the lumbar region, and perhaps it may be useful to repeat these in two or three days, if the pain there should be very severe. A tepid bath, either of the whole body, or where the patient is feeble, a hip bath should be taken daily; at first, if she remain in it ten minutes, it will be sufficient, but the time should be gradually increased to an hour, taking care to preserve the temperature always at the same degree; the bowels are to be relieved every day, and if necessary, injections or mild aperients must be used to insure this result; injections of an emollient and sedative nature must be thrown into the vagina several times a day. Among the best for this purpose, may be classed infusion of flaxseed, or elm bark, holding in solution the extract of bella-donna, or hyoscyamus, in the proportion of a drachm of the extract to a quart of the infusion. The patient must be confined as much as possible to a horizontal posture, although there is no necessity for her remaining in bed, as that would tend to debilitate her; she must be limited to a vegetable diet. By this course continued for two or three weeks, we shall generally find a great improvement in the state of the patient; but the cervix uteri will still be tender and swollen, and pain will usually be felt on taking exercise; four or six leeches should now be applied to the neck of the uterus itself, by means of the speculum, and it may become necessary to repeat this remedy once or twice. The effect of this local abstraction of blood is truly surprising; very frequently the relief is almost immediate, and where the disease has been in an advanced stage, so as not to admit of so speedy a cure, yet the benefit is so evident to the patients themselves, that I have frequently been asked to repeat the application even
before I thought it necessary. I have met with practitioners who have expressed to me their fears of hemorrhage from the bites of the leeches in this part; but I have directed this remedy certainly two hundred times in the course of my practice, and I can conscientiously assert that this, nor any other untoward result, has never occurred to me. Besides, should hemorrhage occur, of which I do not believe there is the slightest danger, the orifice might be touched with caustic, or the bleeding could be arrested by the tampon.

After the continuation of this treatment for a few weeks, more or less according to circumstances, the emollient injections are exchanged for astringent ones, either vegetable or mineral, the womb, if prolapsed, is supported by an external bandage or truss for a few weeks, and the cure is generally complete.

Where the disease has gone on to the last stage of ulceration, the same treatment is to be persevered in for a longer time; the leeches to the womb itself will have to be repeated more frequently, and in addition it will generally be necessary to make a few applications of a stick of lunar caustic to the ulcers. I have on two or three other occasions, derived great benefit from a course of arsenic, in very small doses two or three times a day, and continued for five or six weeks; I have seen the ulcers rapidly cicatrize with this constitutional treatment, after they had resisted all local applications.

By a judicious perseverance in the course laid down, for a few weeks, or in old cases for a few months, I believe this disease, so distressing and alarming to the patient, may always be conquered; at least, I have thus far never known it to fail.

Art. III. On the effects of Ergota in Parturition, with Cases.

By Horace Green, M. D. Professor of the Theory and Practice of Medicine, in the Vermont Academy of Medicine.

The diversity of opinion which prevails among the members of the medical profession, not only in regard to the specific powers of the ergot of rye,* but also in relation to the propriety of its

* As many of the other grains are subject to the "spur"—that disease which in
employment as an uterine excitant in parturition, renders it desirable that still further observations on this subject be obtained. If its use is attended with that uncertainty and danger which some of the profession would advocate; if, indeed, it is productive of more evil than good, when administered to aid the parturient effects, it ought to be banished from our materia medica.

Should it be ascertained, however, on the other hand, that one half the benefit may be derived from its employment, which is declared to be true by another part of the profession, it merits the attention of every practitioner in midwifery. At any rate, it would be better for the community, and less discreditable to our science, if more uniformity of opinion in relation to this, as well as other subjects, obtained among the members of the profession.

Having employed the secale cornutum for more than ten years to increase the uterine contractions, during which period I have administered it in nearly one hundred cases, I have no hesitancy in declaring the opinion that its action upon the gravid uterus is specific, and as certain in its operation as that of ipecacuanha upon the stomach; and that when judiciously and cautiously ad-

rye is productive of the ergot, this morbid growth, when it occurs in the latter grain, is denominated the ergot of rye. According to Dr. Adam Neale, who, several years since published a history of this substance, the secale cornutum, or spurred rye, was employed as a promoter of labour pains, by female midwives in Germany and in other parts of the continent as early as the sixteenth century.

No physician however, ventured to employ it as a child-bed remedy, until 1777, when M. Desgranges, an obstetrical practitioner in Lyons, made some trials with the medicine, and published a history of its effects upon the gravid uterus, in the medical journals of that day. For a period of thirty years, however, subsequent to the publication of Desgranges' observations, the medicine received little or no attention from the profession.

To Dr. Stearns of this city, belongs the credit of having first called the attention of the medical profession in this country, to the subject of employing ergot to facilitate parturition.

In Dr. Stearns' communication on this subject, which was published in 1807 in the New-York Medical Repository, he states that he has been in the habit of using the pulvis parturianus, to quicken child-birth for several years, with the most complete success. Although it has been much employed since that period in this country, yet it was not until 1820, that it became generally known in England. The attention of the profession was called to it at the above period in that country, by the publication of some cases, in which it had been tried by doctors Merriman and Davies.

"Since that time," says Dr. Ramsbotham, "it has come into very common use, and its powers almost universally known to the profession."
ministered, it is an invaluable agent in the hands of the obstetrical practitioner.

The diversity of opinion which exists in relation to its specific action, and likewise its mischievous effects upon the uterus, depends in a great measure, I believe, upon the quality of the medicine on the one hand, and upon its injudicious administration, as to time and quantity, on the other. Cases have fallen under my own observation, where, idiosyncrasy of the patient, or from some other counteracting cause, the drug has seemed to exert no influence upon the gravid uterus; and in many instances I doubt not, great mischief has followed its improper administration. All this, however, may be said with equal propriety of any efficient article of the materia medica, and forms no valid arguments against its employment under certain established regulations.

For several years I was accustomed to exhibit the ergot in scruple and half drachm doses, and yet in no instance have I been aware of its having proved fatal, or in any way injurious to fœtal life; and as to the supposition of some practitioners that it is frequently productive of the hour-glass construction of the uterus, I have had no instance in my own experience to confirm this opinion. Indeed, the three only decidedly marked instances of this condition of the uterus which have been observed in my practice, occurred in cases where the ergot had not been administered. Instead, however, of exhibiting the drug in the above doses, I am now, and for the last five years have been, accustomed to give it in doses of not more than one-third of this amount. Formerly I employed the medicine as obtained from the apothecary; but during the above period I have directed it to be gathered from the standing grain, and to be plucked at that period when the corn is ripe for the sickle. Thus procured, I have found the ergot altogether more certain in its operations, and in doses of eight or ten grains to prove as efficient in increasing the uterine powers, as the scruple or half drachm doses of the drug obtained in the ordinary way. Another advantage which is derived from the exhibition of the ergot in half scruple doses, arises from the fact that the medicine is retained upon the stomach with much more certainty than when administered in larger doses.
The following cases will tend, I think, to sustain the opinion expressed in the specific powers and efficacy of the ergot of rye as a parturient excitant.

Case I.—June 14th. This morning Mrs. P. was taken in labour with her fourth child. Each previous lying-in, I was informed, had been unusually lingering. Found her having an occasional well-marked pain, but on examination ascertained that there was but little or no dilatation of the os uteri. After a delay of between two and three hours, during which time the pains had increased somewhat in frequency, a second examination was made, when the mouth of the uterus was found enlarged to the size of a half dollar, and the external passage lubricated and relaxed. But still the pains, although frequent and regular, did not seem to be sufficiently powerful to terminate the labour, and there was every appearance that the case would be, as the former ones had been, lingering and protracted. At this period I administered, in some warm tea, ten grains of the powdered ergot.

In just ten minutes from the period of taking the ergot, its peculiar effect began to show itself in a strong and forcible pain, which was announced by the patient’s exclamation, “I’m in pain all over!” This pain continued with several remissions, but without intermissions, until a full-sized healthy child was born; which occurred in precisely twenty minutes from the exhibition of the ergot! The child, which weighed eight pounds, was larger than any of her former children, at birth, yet the patient several times remarked, that “she never got through so easily before.”

Case II.—July 5th. Was called to attend Mrs. E. who was in labour with her eighth or ninth child. This lady informed me that at her previous confinements, she had suffered much from the painful and protracted nature of each labour; and she greatly feared that the present would be equally lingering.

In this case I did not wait for a free opening of the os uteri, but as soon as the mouth of the uterus became easily dilatable, I administered eight grs. of the secale cornutum, intending to repeat the dose if the first did not take effect. In a few minutes, however, the labour pains became urgent, and the case was fa-
vourably finished within twenty-five minutes after the exhibition of the drug.

Case III.—Nov. 1. Attended Mrs. G. who was in labour with her third child.

Here too the friends of the patient, and the lady herself, stated that her former labours had been lingering: I was aware, however, that this was no criterion by which to judge of the present labour; but as the pains were short and inefficient, and the intermission between them long, the ergot was administered at the proper period, and the labour speedily and favourably terminated.

In the two following cases the effects of the ergot were so prompt and efficient, as to leave no doubt on my mind, of the specific powers and efficacy of the drug, when timely administered.

Case IV. — Dec. 1. Mrs. G. who had been delivered of several children, was at this lying-in attacked with labour pains in a somewhat singular manner. She was suddenly awakened in the night by a copious discharge of the liquor amnii, without any previous warning whatever. Presuming that her "time" had arrived, I was immediately sent for; but from an unavoidable circumstance, nearly three hours intervened between this occurrence and my arrival at the house of the patient. On arriving, I found she had remained quite free from pain since the "breaking of the waters;" and I waited two hours longer without my patient exhibiting the slightest symptom that the labour was progressing. During this time I had made examination per vaginam, and had found the uterus dilated to the size of a half crown piece; the presentation regular, and the parts lubricated and yielding. Perceiving no objection to the use of the ergot, I immediately exhibited ten grs. of the powdered drug, which was followed, within as many minutes, with a sharp pain. In thirty minutes more the woman was delivered of a full-sized, healthy child.

Case V. — July 27. Attended Mrs. P. at this date, in labour with her second child. In this case the os uteri opened with great reluctance, for the pains were short and inefficient, the intermission long; and there was every prospect that the labour, unless the uterus was stimulated to greater action, would prove to be a lingering one, at least.
As the presentation was regular, and the pelvic opening well proportioned to size of the head, I did not wait for much enlargement of the uterine orifice; but when it was of the size of a shilling, and the parts relaxed, I administered eight grs. of the powdered ergot. In a few minutes the medicine was followed by a pain, distinguished from all that had preceded it by its increased energy and power; and in twenty minutes from the exhibition of the drug the labour was terminated favourably to both mother and child. I am particular in the exact time, for I am accustomed always to look at my watch when the nurse administers the medicine, that the dose may be repeated at the end of twenty minutes, should the first fail to produce, in that time, any effect.

It does not, however, operate equally prompt and energetic in all cases. In some instances I have found its only effect was to increase, in a moderate degree, the tonic powers of the uterus, as the following cases will show.

Case VI. — Was called, April 6th, to attend Mrs. E. in labour with her third child. Her previous confinements, she stated, had all been lingering. In this instance, the pains for a long period seemed inefficient, and the progress of the labour was consequently slow. After rupturing the membranes, ten grs. of ergot were administered, which in a short time appeared to increase in a considerable degree, the uterine contractions. These increased labour-pains, however, were continued for nearly one hour and a half, when the case was favourably terminated.

Case VII. — In this case the pains continued for several hours after labour commenced, to be of that kind which is denominat ed "grinding," and as the orifice of the uterus, and the external parts remained rigid and unyielding, V. S. was employed. Notwithstanding depletion, however, the character of the pains remained the same; but the parts became in a degree relaxed. As soon as the uterine orifice had enlarged to the size of a shilling, half a scruple of the ergot was administered, which increased the pains and rendered them more efficient. A second portion was administered as the pains began to flag, and the labour favourably finished a little short of two hours from the taking of the first dose of ergot.

As I have stated in the early part of this paper, I have never known an instance where the administration of ergot seemed to
prove in any degree, deleterious to fœtal life. On the contrary, cases have come under my observation when its timely exhibition has, apparently, been the means of preserving the life of the child. In a recent number of the London Medical Gazette, Dr. Armstrong highly recommends that the ergot be given in all cases of breach presentation; as it tends he asserts, almost invariably to prevent asphyxia of the infant. There are other instances, in my opinion, when its judicious administration will prove equally efficacious in obviating the calamity.

The following case will illustrate my meaning.

Case VIII.—June 1st. I attended the wife of the Rev. Mr. C. at her second lying-in. Her previous and first confinement had been a lingering one, and she had been delivered of a still-born child. She had completed, at this time, her full period when labour commenced. The presentation was regular, and during the first stage the pains were efficient; but as the head descended into the pelvis, and particularly at the lower strait, they became flagging, and the head remained, for some time, resting with considerable force upon the rim of the pelvis. At this period I felt one or two sudden jerks of the head: such as occur when the head is retained too long in the breach presentation. Aware of the danger indicated by this sign, I promptly administered half a scruple of the ergot.

The action of the uterus was quickly aroused, and the labour was finished in a very few minutes; yet the child was completely asphyxiated: and it required the employment of the most strenuous efforts for nearly half an hour before its recovery (which finally took place,) was effected. Had the ergot been exhibited as soon as the flagging of the pains commenced, I am confident the asphyxia, in this instance, would have been prevented.

In regard to those contractions of the uterus upon the placenta, which, in the opinion of some practitioners, are so likely to follow the exhibition of ergot, I can state that, my own experience has given me a widely different impression, I am never so confident that there will be no detention of the placenta, as when labour is terminated under the influence of ergot.

As yet, I have not met with a single instance where any serious difficulty with the after-birth has occurred after the exhibition of this article. After the body of the child is expelled however, I
invariably take care to retain the thighs and legs in utero, in order to provoke another pain, which tends greatly, in my opinion, not only to cast off the placenta, but to insure a favourable contraction of the uterus itself.

Objections have been made to the employment of ergot in labour with first children; and as a general rule these objections are important and valid; for it is not, in these cases, usually necessary. Instances do occur, however, where it may be employed with safety and advantage, even in cases of first labour.

When such cases are lingering, and there exists no disproportion between the foetal head and pelvic cavity, and when the os uteri and vagina are well relaxed, and lubricated, I never hesitate to administer the ergot in small doses.

Case IX.—Jan. 29th. I attended Mrs. D. of Broadway, in labour with her first child. During the first stage the pains occurred at regular intervals, and the labour steadily but slowly progressed. As the head descended into the lower pelvis, the labour pains occurred with less energy, and at longer intervals; and although the os uteri had opened, and the external parts were well relaxed, yet for several hours, labour appeared to be stationary; apparently for want of sufficient power in the uterine contractions. As none of the objections I have named, existed to the use of the ergot, I administered at this point of the labour, ten grains of the drug.

In twenty-five minutes the lady was safely delivered of a full sized, healthy child.

Case X.—March 5th. Mrs. T. of Reade-street, was confined with her first child. In this instance, as in the preceding case, labour progressed favourably through the first stage; but after the head had passed the upper strait, the pains returned with less frequency, and were less efficient than at first.

At this point I gave eight grains of the ergot. The tonic power of the uterus was greatly increased, but not to that extent which is frequently produced by this agent. In a little more than one hour, however, she was delivered of a healthy child.

A few months since, I attended this lady in her second confinement, and in no case have I ever witnessed more prompt and happy effects produced by the ergot, than in this instance. When called, I found her comfortably seated in her arm chair.
and having any appearance but that of being in labour. On inquiry, however, I learned that she had had at long intervals, regular labour pains for the last three or four hours, without any apparent increase in strength or frequency. The pains continuing after my arrival, I advised her to take her bed, and having examined per vaginam, I found the parts relaxed, the head low down, and the uterine orifice well opened. After some delay, without any marked progress in the labour, I administered ten grains of the ergot. In five minutes a strong uterine action came on, and in ten more, or in fifteen minutes from the exhibition of the grain, a healthy child of large size, (weighing nine pounds,) was safely delivered.

Since I commenced drawing up this paper, a case has fallen under my observation where the effect of the ergot was so manifest, even in suspending the existing necessity of the use of the forceps, that I cannot omit a record of it here. A few nights since, I was requested by my friend Dr. Cumming of this city, to visit with him a lady who was in labour with her first child; and who, for reasons which will appear, he had determined to deliver with forceps. The early symptoms of labour had commenced, as I learned from the doctor, nearly forty-eight hours previous, and the labour had progressed slowly but regularly, through its first stages.

The patient was a robust young woman, and the os uteri and external parts remained rigid for a long time; but as the head descended towards the lower strait, they became somewhat relaxed,—yielding in a degree to the ordinary measures, which were adopted to overcome them. Still, the progress of the case was exceedingly slow; for although the pains continued to be frequent and quite severe for a space of ten or twelve hours, yet the labour had progressed but little during this period.

In the meantime, the strength of the patient had become much exhausted; and, as the powers of the uterus seemed inadequate to the task, Dr. C. had wisely determined to adopt some efficient measures for terminating the labour. It was at this stage of the case that I saw the patient.

She was at this time exceedingly restless, and in constant pain; but the pains, instead of being concentrated upon the uterus, seemed to be diffused over the whole system, causing that
nervous anxiety and unmitigated distress, which often attends the latter stage of tedious and protracted labours. Her pulse and general appearance indicated great prostration of strength. The external parts were relaxed, the uterus fully opened, and the head was occupying the lower strait, where it had remained for the four preceding hours, apparently for the want of sufficient contractile powers of the uterus; for there existed no marked disproportion between the fetal head and pelvic opening. It was a case, in short, demanding the prompt interference of art, and Dr. C. had very judiciously made preparations to employ the forceps at once. But as I had witnessed in similar cases, the effects of the ergot in concentrating the pains upon the uterus, and in speedily and safely terminating the labour, I proposed to my friend, its employment in this case. He assented, and half a scruple of the drug was immediately administered to the patient in some warm tea.

In ten minutes, the restlessness and moaning of the patient ended in a forcible, "bearing-down" pain, and in less than twenty-five minutes, she was safely delivered of a full-sized living child.

If it were necessary I could multiply cases, tending equally with the foregoing to establish the specific powers and value of the secule cornutum in parturition; more would be superfluous. Of its power to prevent anticipated hemorrhage, when administered just before the delivery of the child, in those cases when great loss of blood had followed parturition in previous labours, I have had some gratifying illustrations.

I am well aware, that while a majority of practitioners in our country have yielded to the accumulated mass of evidence in favour of the powers and efficacy of the ergot of rye in parturition, there are still some eminent obstetricians, for whose opinions I entertain the highest respect, who yet distrust its virtues, or acknowledge its powers, doubt the propriety of its employment, because of its frequent injudicious administration. In some excellent observations on the use of this article as an uterine excitor, and in answer to the objections which have been urged against its employment, Dr. Ramsbotham, in his lectures on the Theory and Practice of Midwifery, delivered at the London Hospital, remarks, "It surely is neither sound logic nor fair argu-
ment, to adduce as an objection against a valuable remedy, the possibility of its abuse. I would ask, is bleeding never liable to be abused; or mercury, that most powerful, perhaps, of all our internal medicines? Would we discard these remedial means because a bungler might misapply them? Neither is this or any other medicine to be prescribed at random; we must only have recourse to it in consequence of certain conclusions at which our mind has arrived, after a system of severe reasoning.*

In the absence of that entire uniformity of opinion, which might be desirable among the practitioners of this country in relation to this article, I was gratified, on a late visit to the Lying-in Institutions of London, to have my own views in regard to the virtues of ergot, confirmed by the experience and opinions of many of the eminent accoucheurs connected with those Institutions. In both the General Lying-in Hospital, and the East London Lying-in Institution, the secale cornutum is much used to increase the parturient efforts. Dr. Cory, obstetrical superintendent of the latter charity, speaks in the highest terms of the efficacy of the drug. In reference to its effects upon foetal life, he remarks: "Although I have used this substance in upwards of one hundred cases, I do not recollect an instance where the death of the infant could fairly be attributed to its employment."†

Mr. Clutterbuck also, in a late number of the London Medical Gazette,‡ makes some observations upon the safety and advantages of ergot in parturition, and adds: "In the last thirty cases of labour which I have attended, and where the orifice of the uterus was not dilated to more than the circumference of a shilling, and where the pains were pretty regular in succession, the exhibition of the freshly powdered ergot of rye has had the most beneficial effects in forwarding the progress of parturition."

It is needless, however, to accumulate testimony in its favour; for as Dr. Ramsbotham has justly remarked, the medical periodicals of the day, teem with the history of cases in which it has been found of service. Enough, indeed, has occurred in my own experience, fully to confirm the assertion of the able editor of the London Medical and Surgical Journal, that "the ergota when

* Lecture xxviii.
† London Medical Gazette, No. 49, p. 885.
‡ No. 50, p. 946.
good, does excite uterine action, relieves the woman from tedious and useless suffering, expedites parturition, arrests hemorrhage, and saves a vast deal of time and loss of rest, both to the medical attendant and his patient.”


From whatever geographical position this disease may have had its origin, it is now almost certain that there are local causes, which being brought into combination are capable of maintaining purulent ophthalmia in almost every Alms-House of the country, and of producing it frequently in other institutions without the aid of contagion.

In Alms-Houses particularly, children of different families are indiscriminately associated, frequently crowded in dormitories constructed without regard to ventilation, supplied with a diet more or less uniform, confined within limits comparatively narrow, and furnished with clothing clean it is true, but worn indiscriminately by one and another, with bed and bedding after the same manner; from eight to thirty beds being placed in a single room, which are not confined to the reception of any particular body. From all this it results that the air of the dormitories is breathed two or three times over every night, and that the secretions of different bodies are mingled and absorbed by particular bodies, and from these still farther combined, the surrounding atmosphere becomes contaminated — an odour so generated that a stranger can perceive within six hundred feet of the buildings, and wonders when he enters what there is so offensive. This odour is known and distinguished as the Alms-House odour, peculiar to itself and not confined to any Alms-House in particular. This contaminated atmosphere is also common to hospitals that are not well ventilated; to the dormitories of many boarding-schools, asylums, &c., of various descriptions; and this atmosphere produces always deleterious consequences to such as

have not been accustomed to a residence within it, for some time after they commence such residence. In hospitals it produces diarrhoea, almost without exception, among the pupils of medicine when they first commence visiting the wards. In most Alms-Houses, diarrhoea is perpetually endemic as well among adults as children. In boarding schools the more common effect is typhus fever, where the external atmosphere combines to excite the causes within. In asylums for children, diarrhoea and ophthalmia are of frequent occurrence, and frequently endemic; but ophthalmia is not confined to asylums attached to Poor-Houses; it pervades many other institutions of a similar character.

Since mucous or purulent ophthalmia has become so common, the means of prevention deserve the first consideration, which leads to the history of the disease in the New-York Alms-House, an asylum at present for more than seven hundred children. In 1831, these children were provided for at Bellevue, where at the time, all the above mentioned causes were rife; and though it is supposed that contagion was first introduced, these causes kept it in fermentation, so that more than half the children there, (about four hundred) were unfit for school; several became totally blind, others recovered with the loss of one eye: but the greatest loss to the whole number was their education, which could not proceed, from the unavoidable weakness of their eyes.

Under such circumstances the most experienced physicians were consulted, and finally employed. Under their direction and advice, especially under the direction of Dr. Cheesman, the treatment was improved, scarcely one lost both eyes, and few even one; still the number in the hospital did not greatly diminish. The farms were then purchased, and here Dr. Bushe took the direction. Under a pure ventilation the disease was not so destructive, and Dr. Bushe cured it in a shorter time than had any previous physician; but the cases attacked were not less numerous than before, and the hospital for ophthalmia still continued its usual quota. At this time, the 8th of January, 1833, the writer went to Blackwell's Island, and took charge of the nurseries at the farms.

He had treated the children before at Bellevue— he had seen that the above mentioned causes produced a general tendency to disease in the mucous membranes; he had witnessed that the
mouth, anus, and vulva were alike liable to ulcerations of a malignant character, which sometimes terminated in mortification; he had seen the vagina in cases of purulent ophthalmia, discharging a purulent matter precisely similar to that of the conjunctiva; he had witnessed that this discharge was poisonous to the eye of a healthy person, and capable of exciting an inflammation more destructive to the eyes of such individuals than of such as were associated with the disease; he had observed that children recently admitted became the readiest victims; that scarcely one escaped without taking the disease in from three to five days after admission; while such as had once had it, and became as it were acclimated, occasionally relapsed without much danger of positively losing their eyes, which remained weak. He had seen that the prevalence of diseases common to children, measles, scarlet fever, and sometimes varioloid, greatly modified the disease, diminished the number attacked, and frequently cured chronic cases; and inferred, that notwithstanding the disease might have arisen in the first place from contagion introduced, and notwithstanding it were certainly communicable by contact, that this communicability was maintained by causes existing within. He knew as aforesaid, that these causes produced a general tendency to disease in the mucous membranes; that many children were admitted who inherited a disposition to ophthalmia; some from a syphilitic taint, others from internal vices of the system; and believed that the above named causes, acting on this hereditary predisposition, would produce in the first place, disease of the conjunctiva; that this by rubbing, would turn to inflammation, and this terminate in a purulent discharge poisonous to the mucous membranes of a healthy child wherever applied, but especially to the mucous membrane of the eye, and thus generate an endemic disease, poisonous even at a distance, from a very simple form of inflammation in a very vitiated constitution.

To prevent the disease therefore, the physician directed that the children be divided into squads; that the name and number of each squad be taken and marked on the beds and blankets used by each squad; that no bed or blanket used by one child should be appropriated to another without previous washing; that every child be supplied with a towel for itself, firmly sewed on every morning, to be used through the day and on the next morning,
when every child was to wash either in separate water, or in water poured on his hands held over a tub, from another tub standing near, and filled with clean water; that the officer appointed to oversee the children, should be present at every ablution, and see that those directions were fully accomplished. In addition, the physician presented himself every morning, was frequently present during ablution, and in the dormitories at night, to see that his requisitions were fully answered: he also directed, and saw that his direction was performed, that the buildings which were not constructed for ventilation should be ventilated at night by the windows being left partially open, and that the dormitories should not be occupied for day rooms, or the day rooms for dormitories—thus allowing a tolerable opportunity for the purification of the air in each apartment during the absence of the children. He also directed that every thing washed should be washed in the most careful manner possible, and rendered perfectly clean. Now these appear to be regulations perfectly simple, and capable of being executed with ease. But the present writer found it very difficult, and could not procure the performance of all for more than a year after commencing; he did, however, finally procure their complete accomplishment, and had the gratification of seeing the disease gradually diminish year after year, till he has not now, the 15th of November, 1840, more than twenty out of seven hundred with ophthalmia, and these for the most part slight affections, while the others are as healthy as to their eyes, as any children in private families.

Six years ago it broke out in the Deaf and Dumb Asylum, and spread to fifteen or twenty cases: the same measures were immediately pursued on consultation of the then physician, with the writer, and the ophthalmia soon disappeared. Again, last summer they had several cases. When Mr. Peet, the excellent superintendent of that establishment, with Dr. Sargeant, again consulted the writer, he found everything under the best regulation, except that the dormitories were a little crowded and not well ventilated. Mr. Peet had the ventilators immediately enlarged, so that the air of each dormitory could be completely purified during the day. This alteration took place during the vacation; at the end of which the disease had disappeared, and has not again recurred.
From hereditary predisposition, from occasional neglect among the persons employed, from the mingled secretions of different families more or less physically antagonistical, from an occasional crowded state, unavoidable in such institutions at a period when the external atmosphere becomes pestilential, purulent ophthalmia can never be entirely eradicated. In Alms-Houses some cases will always be present, and in asylums the disease will occasionally break out, and therefore must be treated.

Physicians have made a distinction between what they name mucous ophthalmia and contagious Egyptian purulent ophthalmia; but in a vitiated constitution the conjunctiva will frequently secrete pus, and if it do, the disease should be purulent. In Alms-Houses certainly, it commonly terminates in a purulent discharge, although this discharge be mucous in the beginning, and therefore the writer will name it Alms-House ophthalmia. This begins with a slight smarting of the eye, a slight redness of the lining of the under lid passing to the ball, attended with a discharge of tears occasionally intermixed with small flakes of mucus or pus. This continuing for a shorter or longer period, modified by the constitution of the individual and violence of the attack, is the state of erethism, and may and does end frequently in resolution with the aid of a little milk and water, or sometimes a gentle emetic. But if not resolved, the lids soon swell and become closed, the discharge changes from a predominance of tears to mucus, which grows more copious, the eye becomes painful, small granulations begin to form on the conjunctiva of the lids, and pus begins to be secreted. The conjunctiva of the ball now becomes injected; lymph and serum are poured out underneath it; it becomes elevated from the globe to where it overlaps the cornea, which now appears as if sunken in a pit. At this time the inflammation has already passed to new formation on the surface of the palpebral conjunctiva, but the pus is not secreted free enough to relieve the vessels underneath; the tumefaction continues and increases, while the pain becomes excruciating. At the junction of the seventh and fifth pair of nerves over the orbit, and also at the plexus underneath it, the pain is excessive; and from this pain the patient can obtain no relief without opium, unless the disease abate. In such cases, the writer divides the temporal artery, and lets the blood freely till the pain is relieved and
the conjunctiva turns pale; he then gives a large dose of wine of colchicum, and follows it with an emetic of tartrate of antimony and ipecacuanha, and repeats the emetic as long as the patient can well bear to vomit: and if by this treatment the tumefaction subsides, and the pain does not return, he applies a blister over the forehead and partly on the lids, as recommended by Dr. Hoffman, as better than on the neck or behind the ears; and directs the patient to remain quiet and to have the eyes frequently washed with warm milk and water mixed in about equal parts. The next day, if the eye be not worse, though still bad, he repeats the emetic, and afterward gives from five to twenty drops of wine of colchicum, and so on till danger is over. But there will be cases in which this treatment will not be sufficient to remove the chemosis, in which case the cornea will remain in danger of sloughing, it still appearing as if sunken in a pit, while the patient feels the most excruciating pain on exposure to light. Under such circumstances the writer takes his lancet, or a scalpel which is better, depresses the lower lid with the thumb of his left hand, while an assistant carefully raises the upper, at which moment the ball will turn up to avoid the light, and leave the point of reflection of the conjunctiva from the lid to the globe nearly exposed, and as near this point as possible, makes an incision completely through the conjunctiva to the ball for near half the circumference of the cornea. The blood flows freely, the chemosis subsides immediately, and danger to the eye is nearly past. He then continues the wine of colchicum in doses to suit the situation of the patient, and the wash of tepid milk and water till the ball has cleared off, and then applies the crystal of sulphate of copper to the lids until a cure is effected.

In other cases, which are rare after the first two or three days of treatment, the swelling leaves the lids but remains in the conjunctiva of the ball, and as the writer believes, in the ball itself. Certainly the ball appears swollen, red, and protruding through the now attenuated lids, which cannot entirely close over it. It becomes terribly painful and as if ready to burst, which finally happens, notwithstanding any treatment known at present to the author; but fortunately such cases have always occurred in the writer’s experience where only one eye was attacked, while the other remained unaffected throughout.
Thus far, cases of an acute form terminating without a chronic stage have been considered; but often when the acute stage has passed, the lids are left very much thickened and granulated. Yet the steady application of the sulphate of copper, with the internal use of wine of colchicum, will finally overcome these granulations and effect a cure; if the course of treatment from the beginning have been such as has been above described. Frequently however, children and grown people are admitted in a chronic stage of a different character; in addition to thickened and granulated lids, there is a honey-combed ulceration of the cornea rendered irritable by the friction of hardened granulations. Now if the cornea be well observed in these, the vessels of the conjunctiva will be seen passing over their surfaces carrying red blood to the ulcers; but in the natural state the cornea is not nourished by the vessels of the conjunctiva, which only overlaps it about half a line, as demonstrated anatomically by Dr. Wallace, and pathologically still more perfectly in many cases of ophthalmia where the termination of the conjunctiva can be seen with greater certainty, so that these ulcers can rarely be cured unless these vessels be divided. The writer commences in such cases with wine of colchicum, in doses as large as the patient can well bear, and applies the crystal of sulphate of copper to the lids daily; and if occasion require, opens the temporal artery and bleeds freely; with these means the granulations can finally be overcome, and when the internal surface of the lids has become tolerably smooth, he takes a cornea knife, depressing needle or even a lancet, and divides completely every vessel of the conjunctiva carrying red blood to the ulcers; leave off all other treatment for a few days, then reapplies the sulphate of copper to the lids, and gives phosphorus internally. Under the use of these remedies the ulcers, no longer irritated by unnatural vessels or granulated lids, heal completely, and the cornea becomes nearly as transparent as ever. Indeed in all ulcerations of the cornea, it is beneficial to divide the vessels of the conjunctiva, if any pass into the ulcers; and some cases of opacity even, can be cured by such division.

Such is the progress of ophthalmia not modified by constitutional vices; other cases require different management. The state of erethism has already been described, and is the same in all cases. When this passes, if the patient inherit a scrofulous
constitution, or syphilitic taint, the purulent discharge will commence shortly after the accession of the disease, with a very moderate swelling of the lids. This swelling soon subsides, and very little redness of the ball is likely to take place.

To be distinct, the diagnostic marks of Alms-House ophthalmia, modified by the scrofulous or syphilitic constitution, are, not the least chemosis, rather a paleness of the lids, profuse purulent discharge, without sensible granulation, and great sensibility to light in the morning, but none in the afternoon. The danger is ulceration of the cornea. Such cases require decision, because ulceration takes place quickly, and often penetrates the cornea in twenty-four hours. The writer washes the eye with milk and water as before; makes a saturated solution of borax in rain water, drops it freely in the eye several times a day, and applies a cloth wet with the same solution over the eyes, removing the cloth frequently to keep it cool. At the same time, if there be much pain, he bleeds freely from the temporal artery, follows the bleeding immediately with a blister on the back of the neck or between the shoulders, and gives Peruvian bark with wine, or quinine with milk punch, as much as the patient can bear, with mild but nutritious diet. If much pain continue after the bleeding, he does not hesitate to repeat it while the tonic treatment is continued, till the dread of light in the morning has been overcome, when he ceases to apply the borax, but continues the tonics, and drops one drop of a saturated solution of sulphate of copper in the eye once a day, which in most cases is sufficient for a cure, as these lids rarely granulate. But this disease has its chronic form which cannot always be prevented if the cornea ulcerate, and then dividing the vessels of the conjunctiva and the internal use of phosphorus with the syrup of sarsaparilla, are sufficient in most cases to effect a perfect cure.

Again, other cases which scarcely belong to this class, though produced by the same causes, and modified by different diatheses, commence and continue without any, or very little discharge. They present a pink circle around the cornea, very distinct, with tears rather copious, without much sensibility to light. In these cases, great danger is to be apprehended from the formation of minute opacities, which are between the lamina of the cornea, and which soon terminate in circular ulcers that penetrate and leave the iris protruding. These cases require the
same treatment as the above, but the pink circle around the cornea becomes the guide. This must first be decidedly changed by arteriotomy, and active purging; commonly wine of colchicum in purging doses is the best. After which the tonic treatment should be commenced, with sarsaparilla if ulcers form. These however can be prevented for the most part, by decided treatment in the beginning, especially by arteriotomy, which will frequently effect more in five minutes, than any other mode of blood-letting in a week. Why this advantage of arteriotomy over any form of bloodletting obtains in the treatment of ophthalmia, the writer is not prepared to say; but he has compared it so frequently, that he can say it is beyond comparison the best, from whatever cause the eye be inflamed; and further, that it is quite as safe, and far less painful than cupping. True, the artery will sometimes bleed after binding up, and so will the arm; but if bleeding recur frequently, it can readily be arrested by passing a straight needle underneath, and securing it as in hare lip.

There is also a pustular form of ophthalmia, commonly, but not always, a sequel to the acute Alms-House ophthalmia. These pustules commence on the sclerotica, at, or near its junction with the cornea, in the form of slight vascular elevations, from the size of a pin's head, to that of a split pea; sometimes solitary, but more frequently numbering three or four, protruding at first semi-circular opacities on the cornea, and finally ulcerations, which half on the sclerotica, sometimes penetrate the coats of the eye. These pustules are freely supplied with vessels from the conjunctiva. These vessels can easily be distinguished from the pink circle of the sclerotica mentioned above, and should be touched daily with blue-stone, or nitrate of silver. The writer always uses the blue-stone, applying it daily to the pustules from the moment he observes them commencing. This application is frequently sufficient without other remedies. In other cases, these pustules enlarge, become more numerous, and encircle half the cornea, while an infinitude of vessels from the conjunctiva surround and elevate their edges. In this stage they frequently affect the sclerotic vessels, and render the eye sensible to light; but notwithstanding this, the blue-stone should be daily applied, for these vessels are extraneous, and must be destroyed. At the same time an emetic should be given every day until the eye begins to
improve, when the syrup of sarsaparilla and nutritious diet will be sufficient, not omitting the blue-stone until a cure is complete.

Finally, there is a form of ophthalmia peculiar to Alms-houses, which the writer thinks ought to be named scorbutic. A child will be confined with dysentery, or diarrhoea, when these diseases are more than usually endemic, and perhaps not much emaciated, or not apparently dangerous, when the cornea suddenly grows opaque at the lower edge, and ulcerates without any other apparent inflammation of the eye, until the ulcer penetrates, and the aqueous humour is discharged; this being followed by a very low grade of inflammation, with much sensibility to light. These cases require tonic constitutional treatment, are connected with a cachectic condition, and commonly portend a fatal termination.

In addition to what has already been remarked, great care should be taken while treating ophthalmia in Alms-houses where there are frequently from ten to twenty confined in a room, that the matter from the eye, in the acute stage, be not communicated to another child, as this adds greatly to the production of relapses, and frequently to the severity of the acute stage. All in this stage should be confined to their beds, and great care be taken that the bed-clothes of the one be not transferred to the other, because this is not a specific disease which passes a certain course and completes itself, but one liable to be repeated at every new infection, and to communicate inflammation to a healthy eye for months if the matter be introduced, precisely as the secretion from an old ulcer excoriates and inflames the surrounding skin, if it be at any time neglected. Hence the physician who hopes to banish the endemic prevalence of this disease from any institution in which he may find himself engaged, must follow it perpetually from the hospital to the school-room, and from the school-room to the dormitories, applying at every appearance of a recurring discharge his blue-stone, which he should carry perpetually in his pocket. He should turn the lids well out, and apply the crystal freely or otherwise, as the state of the eye may demand. Old hardened granulations should be well rubbed, while milder forms should be touched more gently. By steadily pursuing this course, the physician will neither need ointments, nor washes, nor cupping glasses, to cure with almost
invariable certainty and great rapidity Alms-house ophthalmia, the different forms of which have now been considered.

There is however another form of ophthalmia, the purely scrofulous form, to which we may allude. This ophthalmia occurs more frequently in other asylums, and in private families, than in Alms-houses; but still such cases were sometimes admitted, and so varied are their forms that they scarcely admit of classification. The writer attended a case of this kind in consultation with Dr. Sargeant of the Deaf and Dumb Asylum; as the Dr. related, it commenced with several opaque spots on, or behind the cornea, in a girl of 15 who had not menstruated; at the same time he observed a slight pink circle around the cornea, and some, but no great dread of light. The Dr. treated the case antiphlogistically, and continued this treatment for three weeks, when he consulted the writer. At this time there appeared from fifteen to thirty circular opacities, from a line to two lines in diameter, around in front of each pupil. These spots on a closer examination were found to be behind the cornea, probably on the membrane of the aqueous humour, and not sufficient to obstruct the light entirely, but to render vision very imperfect. At the same time the iris remained free, but the pink circle around the cornea was distinct. We directed the patient immediately a nutritious diet with wine, which we continued till the sensibility to light had increased, and the eye became more painful. We then opened the temporal artery, and bled freely, gave Lugol's solution of iodine, in which we afterward put corrosive sublimate, (which is precipitated when put in this solution in the form of an iodide or hydriodate,) in such a proportion, as to give one fourth of a grain four times a day, with two grains of hydriodate of potash, and one of iodine, and continued the nutritious diet. After a time the sensibility to light again increased, together with the pink colour around the cornea, the opacities remaining still the same; we again opened the temporal artery, still the opacities were stationary, yet her general health was improved. We now put her on a course of phosphorus, with the syrup of sarsaparilla, to which while being made, a large quantity of yellow dock root had been added, and continued it for three months, occasionally applying a blister over the forehead or between the shoulders. Under this treatment we had the pleasure of seeing the opacities
gradually disappear, and the patient recover. She menstruated while under treatment, and whether the treatment produced menstruation, and menstruation promoted the cure, the writer will not decide, but the cure was complete.

A man aged 28, a rock-blower by profession, was admitted totally blind. Some years previous he had received a blow on the forehead which denuded the bone over the left orbit, from the external angle to the nose. From this left eye he had not seen since the accident; this eye appeared amaurotic. From the right eye he had not seen in three weeks; this did not appear to be disorganized. A blister was applied over the forehead, and phosphorus administered. After a week the blister was repeated, and the phosphorus continued; in ten days he began to see occasional flashes of light, and in six weeks he was discharged, seeing as well as he had ever done with the right eye.

These are isolated cases, showing the probable benefit to be derived from phosphorus when the capillary system requires to be excited. This remedy has been said to act on the nervous system, but the writer has not observed such action, except on the sixth sense, through which it may stimulate the brain. Of its use in ulcerated cornea, recommendation has already been given. In these cases, after the vessels have been divided which carry red blood to the ulcers, perfect reliance can be placed on phosphorus for the remainder of the cure.

The writer has given phosphorus in many cases, and frequently with great benefit. It excites powerfully the generative system, and renders the lymph when poured out susceptible of quick organization. It probably affects the blood therefore, as much as the capillary system.

When it is decided to give phosphorus, the solution in oil should be made by putting four drachms of phosphorus in eight ounces of olive oil in a Florence flask well corked, and be heated gently in a basin of warm water, till the phosphorus melts beneath the oil, and then well shaken. This is to be repeated until the phosphorus be nearly all taken up, then set by to cool, and afterward decanted and put into a bottle with a glass stopper. It may be given in doses of from five to twenty drops three times a day. It should not, however, be long kept, as by some action which the writer does not understand, the phosphorus loses its strength,
and the physician is disappointed. When thus given in full doses, if the dose be too large, the most common effect is a tendency to faint, while the pulse remains not materially affected or rather slow, or a slight pain in the stomach, with general heat of skin, while the pulse remains still not affected; and when in doses to produce the effect desired, it should be continued till it produces a general glow of redness on the skin, which by gentle friction shall become rose coloured. This effect should be expected, after taking it about thirty days, when if improvement does not commence, it will be useless to continue the remedy farther.

To return to scrofulous ophthalmia. The most common form is characterized by a constantly increased sensibility to light, occasionally augmented in the morning, and diminished toward evening; while at the same period of this periodical exacerbation a pink circle will be seen on the sclerotica, surrounding the cornea. There will be an abundant flow of tears, frequent crops of pustules at the roots of the eyelashes, and a gummy secretion, probably from the glands of Meibomeus, sufficient to cause the lids to adhere in the morning. These periods of periodical exacerbation commonly occur in the spring and autumn. They are always worse in the spring, and endure from six weeks to two months, when they cease, leaving the eye more or less divested of eyelashes, reddened along the lachrymal groove, incapable of much application, and too moist for distinct vision. Now this form is hereditary, and depends on an original deficiency in the power of formation during gestation, and has at each period of exacerbation, as said above, the morning sickness and afternoon excitement of the mother. It cannot therefore be cured, but can be so far improved, that the difference of strength between such an eye, and one perfectly formed, can scarcely be observed; yet the case requires a long course and much perseverance, as well on the part of the patient as the physician. For not till much of the material composition of the eye has been absorbed and reproduced under treatment, can the physician expect to find his patient materially improved.

The writer begins with the syrup of sarsaparilla of the best kind, in doses of a table spoonfull three times a day for a child, and after two months, adds Lugol’s solution of iodine, and con-
continues these yet for two months. If at the end of four months the eye shows a marked improvement, and the pustules are reproduced less frequently, he makes an ointment of Peruvian balsam, two drachms to the ounce of lard, and with this anoints the lids every night on going to bed; he then adds to Lugol's solution minute doses of corrosive sublimate, (which should be decomposed by the solution before being given) and continues for still two months; all the time giving a nutritious diet, and removing the excess of action if there be any, by blisters between the shoulders, or a sot on the arm, and anticipates at the end of six months, something like a cure. But if there still be no improvement, he omits the iodine and corrosive sublimate, and gives phosphorus. From this remedy in some cases, he expects the action will be too high at first, for which the temporal artery may require to be opened. After this he leaves off the phosphorus, and recurs to the iodine; and so alternating with phosphorus or iodine, while the syrup of sarsaparilla is in constant requisition. He continues for a year or twenty months, when he has never yet failed to have the satisfaction of seeing such eyes, if not perfectly cured, well enough for all ordinary purposes of life, and in his experience they have rarely relapsed.

An Essay on the Nature and Treatment of the form of Scarlatina connected with Cerebral Symptoms. By T. F. Cornell, M. D.

During the past year I have been called to about 90 cases of scarlatina. Among this number, the disease appeared in its varied forms and different stages. Some being seized with all the virulence and malignity the contagion was capable of, were hastily consigned to the narrow house. Others were but mildly attacked, and excited only a passing attention. But there was a frightful rapidity in the severer cases, and a mournful fatality attending them, which admonished me that the symptoms might be fallacious, and the treatment erroneous. Guided however by the best authorities in prescribing, and sustained by competent prac-
tioners at the bed-side, I consoled myself with the reflection that the best directed measures of our art had been brought to bear as circumstances suggested. Yet seeing the nullity of remedies, and the melancholy wake which scarlatina left in some families and districts, my views could no longer be subordinate to the dogmas of the schools; and on analogical reasoning, I resolved not to adhere to a practice which experience had proved so unavailing and treacherous. A few days elapsed, and I was summoned to attend a case of scarlet fever, concerning which my forebodings were of the most disagreeable kind. The resolution I had but a short time since made, was shaken; the patient appeared destined for a speedy death; there was no time to be lost. My former treatment, though sanctioned by respectable members of the profession, had proved a signal disappointment, and therefore its continuance must be inexpedient, if not presumptuous. I concluded to adopt the practice which theory proposed, and suffice it to say, the result was highly flattering to my own feelings, and the anxious circle which watched over the patient.

That no confusion of terms may render me unintelligible, I will enumerate the ordinary forms which I encountered in the period alluded to, and then submit (for my own convenience at least,) one which I have not found described by authors. The scarlatina simplex, the anginosa, and the maligna of books, have each been numerous during the last 12 months. But as they are so often treated of by different writers, I will pass them by without comment. Having observed symptoms wherein the brain exhibited the effects of the morbid impression so strongly as to constitute the most appalling consideration, I have thought fit to call this modification Scarlatina encephalica, and shall endeavour to show that it depends upon a deficiency of nervous energy, instead of inflammatory action.

The sudden manner in which the disease invades the system, the high constitutional irritation which succeeds, and the fruitless attempts in many instances to relieve symptoms simulating inflammatory action as phrenitis, by bleeding, leeching, purging, antimonials and the like, excited a belief that scarlet fever was not of a sthenic character, but dependent on irritation, with an exhausted or shattered state of the vital forces, and typhoid in its tendencies. This is the conclusion which a large
share of experience with scarlatina enables me to deduce; and
this inference is further substantiated by comparing some of its
symptoms with those of gastro-intestinal irritation; by contrast-
ing others with those of delirium tremens, also with the puerpe-
ral fever of ill-ventilated hospitals, and those produced by the
constitutional shock of burns and injuries; all, and each of which
will not bear the depletory practice, though adopted under the
most favourable circumstances; and yet all present us with symp-
toms which the most careless observer would insist required the
lancet to subdue. Depletion in these few forms of disease has
been attended with prostration and disappointment. Still in the
majority of instances, the practice though impotent, is repeated
because the prescriber is prompted by habit, or argues that the
frequent pulse, hot skin, parched tongue, painful region, and de-
lierious mind, must depend on inflammation in all instances, and
are only to be relieved by venesection and its concomitant meas-
ures.

If I may here introduce my own impressions concerning del-
irium, I will make it consist of three kinds. First variety; that
depending on increased action of the cerebral functions connec-
ted with inflammatory and strong arterial action, constituting
phrenitis. The second variety, is very similar to the first in its out-
ward manifestations, and very frequently, yes, generally mistaken
for it. Here the cephalic energies are exalted and shattered, with-
out vigour or strength to support them. The delirium is vio-
 lent, the skin hot, face suffused, but the pulse is weak and very
frequent, commonly above 120. In the third variety, there is nei-
ther action nor strength of cerebral energies, and this constitutes the
exhausted state. The delirium is of a low, muttering kind, the skin
cool, pulse weak, and not so frequent as in the second variety.
These two last varieties so often run into each other in scarlatina
cencephalica, that I have endeavoured to delineate them under
one variety, which in general terms I make to depend on a de-
ficiency of nervous energy, with an exhausted or shattered state
of the vital forces; for although there is an excited cephalic ac-
tion in the second variety, there is no energy to support it. The
treatment in the first, should be strictly antiphlogistic; in the sec-
ond, stimulants gradually but perseveringly administered; and in
the third, powerful stimulants must be vigorously given at the beginning.

A perusal of our medical journals emphatically demonstrate that there is a mystic veil to be drawn aside before medical science can boast of parallel success in the treatment of irritative diseases, with those of an acknowledged inflammatory diathesis. Let us turn to the mournful details of Bellevue in 1840, and wherein did puerperal fever meet its antidote? Not in bleeding, cupping, or leeching; and yet what were the symptoms, and what the autopsy? Perhaps you say ecce signum! Pus has already been formed—see how fast the disease progressed. Let us compare it with a decided inflammatory disease. Take croup for instance, and what case need ever die if properly treated with antiphlogistics; and yet where is one more rapid in its course, or one with more marked inflammatory consequences. Behold here the different results of treatment; and what is the treatment, you ask? I respond that in which the profession are unanimous. Are they unanimous in the treatment of puerperal fever? do many recover for whom humanity cries live? Where such discord exists, there must be error; and where science has brought her accustomed armoury to combat unsuccessfully with a ruthless disease, does she not herself injustice to persist with blind prejudice? Post-mortem appearances are not infallible data on which to build our theories, or base our practice. Marshall Hall has advanced the theory, and demonstrated the fact in his "Principles of Medicine," article "Chlorosis," that organic changes may occur in cases of bloodlessness and exhaustion; that serous effusion and the deposits of coagulated lymph, may take place without inflammatory action, and that it is the peculiar effect and unequivocal tendency of some diseases to produce those organic changes which cannot be adduced in proof of inflammatory action. Dr. Stokes, another eminent author, has stated that there is often a period in inflammatory diseases, when it is necessary to use stimulants and tonics to check inflammatory action. Having the testimony of these gentlemen on this important point, may we not fairly say that as our own views have appeared fallacious, or at least doubtful, it becomes us to investigate this matter with more deference to its merits, than what a superficial glance might ascribe to it; and if there is any semblance of plausibility in it, let it be tested by practical applications.
I would describe scarlatina encephalica as that form of the disease in which there is early delirium, either of a violent or of a low muttering kind. When it is violent, convulsions may usher in the attack or soon succeed it; sometimes instead of delirium or convulsions, there is only a drowsiness, or somnolency alternating with delirium. At other times, there is a vacuity of expression in the countenance and an indifference to all surrounding objects. The patient’s attention cannot be arrested unless addressed in an authoritative tone, and then he only notices for a moment and falls into a state of lethargy. In short, his mental faculties seem paralyzed. In the violent form, the eye is glassy and less languid than in the low form; in both, the pupil often becomes insensible to the action of light. The pulse, and heat of skin, however, are the two most important considerations, from which we can form any accurate conclusions. In the violent form, the pulse is very frequent and weak, averaging from 120 to 170. In the low form it is less frequent, but still weaker. The skin too, is much affected in its temperature and colour. In the one it is hot, the eruption fine, distinct, and scarlet; in the other, the skin is of moderate warmth, or there are exacerbations of warmth and coldness; the efflorescence is generally of a mahogany colour, or becomes livid and in patches. The tongue is furred or morbidly red, with the papillae elevated and very sensitive. The digestive functions are often severely deranged; vomiting in some instances, and diarrhoea in others— or both combined, may prove very annoying to the patient, and occasion much pain and exhaustion. The respiration is sometimes much oppressed, and would communicate the idea that the pulmonary organs were much congested.

There is great muscular prostration in the low form, and considerable raving, jactitation, and strength displayed in the violent kind; gritting the teeth and a distressing moaning, are no unusual symptoms. The urine is often suppressed for some hours and even days, for want of contractile power in the bladder to void it. The tonsils present nothing peculiar in this variety of attack; sometimes they are early enlarged, and will often increase instead of diminish under the use of active remedies.

Such are the symptoms which I have attempted to describe as the most prominent phenomena of scarlatina encephalica.
and although rudely grouped together, I trust they sufficiently designate that species of attack to which I desire to direct the reader's observation. The brain, it will be perceived, suffers conspicuously in the deranged economy, and evinces signs of inflammation, which in fact are only the result of prostrated nervous energy, or a collapsed state of the vital forces. That such is the condition, is conclusive from the circumstance that depletion is not admissible, save in the most vigorous constitutions, and then not to that degree which the symptoms would appear to indicate; that stimulants, tonics, and cordials, judiciously administered, prove far more serviceable; and lastly, that the mortality under the antiphlogistic plan, is conclusive evidence that much remains to be developed in the treatment of this variety of the disease, hitherto unknown or imperfectly conceived.

Symptoms, I admit, must be our guide in the management of a disease. But they are not dependent on the same states of system. They may occur as re-active efforts from exhaustion, or from primary difficulties. They may also be produced by diminished as well as by excessive action, and therefore what would be appropriate in the one must be deleterious if not fatal in the other.

I would by no means intimate that phrenitis never attends scarlatina, or that V. S. should not be resorted to under any circumstances—far from it. There are cases which unquestionably demand bleeding—and there are some instances fresh in my own recollection, where it appeared to aid materially in divesting the malady of its most terrific features. But on no occasion have I seen it productive of good where the cerebral organs manifested that derangement of function which was described under scarlatina encephalica.

Routine practice is a deceptive guide for a physician in any disease; and in none is it more reproachful than in scarlatina. The constitution is so affected by atmospheric influence, that what would constitute the character of disease in one region, offers no reason that its type shall be the same in another; and what would be necessary in its management one year, might with propriety be omitted the next.

While attending the ninety cases spoken of above, no favourite remedy was prescribed, and no particular course pursued. Symptoms — the phenomena of nature alone, influenced my pre-
scription. For some an emetic of ipecac. or antimony, acted like enchantment in rousing up the dormant energies, in relieving the throat and preventing congestions in the large viscera; but they were always confined to the forming stage. Laxatives once or twice repeated, with mild diaphoretics and diluents, were all that was requisite to complete the treatment and conduct the patient through an ordinary attack. When the tonsils suffered early in plethoric habits, leeches on the throat were frequently followed by immediate relief. Rubefacients, in other instances, acted beneficially in subduing local difficulty by gently stimulating the vessels; and on the same principle a solution of the nitrate of silver pencilled on the tonsils was found among the most efficient remedies. In two cases V. S. was sparingly used where inflammatory action was suspected to have attacked important organs, but my remaining treatment was altogether passive. In some again, emetics, purgatives, V. S. and leeches, were successively employed to relieve the head or throat; notwithstanding which, the symptoms would increase and a fatal termination ensued on the third or fourth day. I have also known extensive anginose affections to exist, and domestic remedies used by the patients themselves with quite as flattering results, as the practitioner could boast. When such heterogeneous methods are pursued, the reader may wonder that anything is attempted. Doubtless, untimely interference has sealed the fate of many whose constitutional vigour was adequate to have withstood the shock of scarlatina, had it been left to run its course unmolested. When depletion is used it should be done early, and after that the mildest treatment is best. And even when antiphlogistic measures are deemed expedient in the commencement of an attack, it not unfrequently happens, that stimulants and tonics are required in its termination. But leaving these methods of treating the disease for the reader to dispose of as is most agreeable to his judgment, I revert to the treatment of scarlatina encephalica.

The means which the profession are accustomed to rely on in the management of encephalic symptoms, were of no advantage to me in this form of scarlatina. Nay, all the patients died which were subjected to an antiphlogistic treatment. My error in common with many others who have described scarlatina, was in attributing the cerebral symptoms to an approaching or existing inflam-
mation of the brain. But I found the remedies calculated to relieve such a condition of this organ, only aggravated the symptoms and accelerated death. Bleeding was practised in one instance, leeches were used with full effect in five cases, and emetics, purgatives, warm baths impregnated with salt and mustard, together with counter-irritants and frictions were also employed, but with no other effect than that of hastening the victim on in rapid course to certain death. Two cases which had been leeched for tonsillar disease, had every prospect of a speedy recovery, when, without any assignable cause, sudden dissolution occurred. The only unpleasant features previous to death, was in the one case dyspnoea and delirium, which antimonials and a warm bath only augmented; and in the other, a tumefied condition of the whole throat — delirium set in, and defied the use of remedial measures. Had I then reasoned that scarlatina was an irritative disease, and its constitutional symptoms the result of an overwhelming shock which its morbific virus had produced on the symptoms, and that a deficiency of nervous energy, or a reactive effort of exhausted nature, instead of inflammatory action of the brain was the cause of such formidable symptoms, the tomb might have been denied its occupants, and the family circle have remained unbroken.

As two cases are reported in which the treatment is fully detailed, I will merely observe, that when the cephalic disturbance is of the violent kind, that stimulants gradually administered with unirritating drinks, and sinapisms to the extremities were, generally found sufficient to restore the weakened forces. Sometimes frictions and stimulating baths answered a good purpose by inviting a free efflorescence, and relieving nausea and vomiting. Cool applications to the head were grateful when heat predominated, while whiskey and warm water to bathe the forehead and extremities were highly serviceable when there was restlessness. The stimulants used internally were generally of the spirituous kind — and then for the most part I selected the one which the patient's taste preferred. Wine whey, warm gin and water, and brandy toddy, were the preparations used, either in their simple form, or added to arrowroot, or some other drink. During convalescence, I preferred brandy in arrowroot, because its effects are more permanent than the others. The sulphate of quinine,
I found a valuable tonic when no gastric symptoms forbid its use; and in all cases where the prostration was extreme, I prescribed it in the convalescent stage. The quantity of stimulus it is proper to use is better determined by the clinical prescriber than any other person. In one instance I gave an adult a pint of Teneriffe wine in eight hours; while a child from 3 to 5 years will take on an average, about a gill of wine made into whey, daily. The quantity should be increased, diminished, or omitted, as circumstances indicate. Laxatives should be ordered if really necessary, and avoided if not. Enemas will frequently be preferable, and when they will answer should always be selected.

When the tonsils and throat were much tumefied, or ulcerated, I applied the nit. argenti internally, from iv to xx grs. in the ounce of water. Externally the ammoniacal liniment generally had a good effect. In a few cases of scrofulous habits, I used the tinct. of iodine 5 iss. tinct. saponis, comp. 3 i; and bathed the throat every six or eight hours. The result was very satisfactory. On two occasions the pure tinct. iodinæ was pencilled over the tumid portion of the throat. In these instances leeches had been premised, but the throat continued to swell; the tincture checked its progress, and in a short time no fullness was visible on the external parts, and deglutition became easy. I am inclined to think iodine may prove of essential service in dissipating the anginose symptoms, and as opportunity presents, I shall test its efficacy. Should evening exacerbations run too high after stimulants have been freely administered, two or three doses of ipecac. with the sup. tart. potassæ, or syr. ipecac. with spts. nitr. dulc. have in my hands been sufficient to calm the excitement. Sinapisms frequently applied for a short time, over the chest and abdomen, have a remarkable effect in removing pain and uneasiness, and controlling diarrhœa and laborious respiration.

Should the diarrhœa become profuse, or worry the patient, the chalk mixture with the comp. tinct. cardam, and tinct. opii added, has proved a very effectual astringent and sedative. Starch enemas with laudanum will also materially assist in accomplishing our object. As for the articles of drink which will be most proper, as well as agreeable for the patient to have, none can be less objectionable than gum Arabic dissolved in water, and beverages prepared from barley, toast bread, arrow root, rice,
and Indian meal. Acidulated potations have in many instances caused much pain and prostration, and should be indulged in with great caution.

The universal sentiment pervading the profession that scarlatina is a treacherous disease often terminating in sudden death, when only a few hours previous every thing appeared to warrant a speedy recovery, is no doubt established by the numerous instances of unexpected mortality, where active measures had been too boldly used, or too long continued; and stimulants, and even nutriment entirely unheeded, or only resorted to when the cases were moribund. This assertion recalls to my mind many examples which could abundantly confirm the statement. In fact, nearly all the fatal cases of scarlatina which have fallen under my observation, had been subjected to an antiphlogistic treatment either by the lancet, leeches, evacuants, or relaxants. Having myself felt a few years since the indescribable prostration and irritability which this disease produces, I have no hesitancy in affirming that one copious alvine evacuation, or the loss of a few ounces of blood, may be followed by immediate syncope and death.

While penning these lines, I have two children with scarlatina under treatment, who were attacked while enjoying perfect health. Both had fever of the highest grade; both had enlarged tonsils and perfect efflorescence. In each case a laxative was first ordered, then small doses of ipecac. syr. and spts. nit. dulc. every three hours for the first and second day. Delirium alternating with a stupid mien now came on; pulse very frequent and weak; skin burning hot; eyes and face suffused. Recollecting that last winter such symptoms proved to be harbingers of unaccountable and sudden death, I immediately stopped all medicinal articles, gave stimulants freely, studiously shunned alvine evacuations for two or three days; pencilled the tonsils with a solut. nit. argenti; used whiskey and warm water to sponge the forehead and applied tinct. camph. and sinapisms to the abdomen and feet; gave arrowroot and chicken broth, or allowed more liberal diet, if the appetite craved it, until the pulse indicated a rallying of the prostrated forces. After pursuing this plan two days, my fears were removed; the pulse became less frequent, the delirium subsided, and the skin grew moist. These patients are now in
a fair way to recover; one is sitting up, the other is rational and hourly improving.

I will now subjoin a crude report of two cases of scarlatina encephalica, as examples of the condition and treatment for which I have been contending; and for the purpose of farther illustrating my point, I will briefly notice the symptoms and treatment of variola, puerperal fever, and burns, by reporting an instance of each. The two first will be detailed at length, in order that the candid reader may deduce his own conclusions after knowing all the circumstances which controlled them.

Case I. — N. C. a boy five years old, was seized on the eve of Sept. 2d, 1840, with fever. He passed a restless night, and was delirious when morning came. He now took a dose of senna and salts, which operated three or four times. A faint rash was observed on the chest, abdomen, and loins; the throat was swelled, the skin hot, and the delirium increasing. The day advanced and things grew worse. In the evening of Sept. 3d, I was called to the patient.

Found him delirious; head hot; eyes suffused, and he took but little notice of any thing around him. Pulse 150, but compressible; skin warm and dry; rash indistinct; tongue covered with white fur on the middle and posterior parts, while the tip was dry and red; the extremities were of a moderate heat; tonsils were much enlarged, and ash-coloured spots were forming on them.

\[ \text{B. Tart. antimonii, grs. } ij; \text{ aq. font. } \frac{3}{ij}; \text{ ordered a teaspoonfull every 15 minutes, until emesis was produced; after which, one twentieth of a grain tart. emet. was given every three hours during the night. Mustard pediluvium, sinapisms to extremities, and barley water for drink.} \]

Sept. 4th, 9 o'clock A. M. The patient had passed a restless night, tossing to and fro on the bed, gritting and gnashing his teeth, screaming out when at all disturbed, and raving furiously. The emetic operated kindly and relieved his throat, and for two hours the delirium abated so much that he talked rationally. His bowels were moved two or three times during the night, but unattended by tenesmus. He is unable to discern objects this morning; the delirium increases; the pupil is unaffected by light; the
Cornell on Scarlatina. [January,

extremities, skin, tongue, and pulse remain much the same as they were last evening. There appears but little chance for his surviving the day.

3. Lactis recent. ebul. Oj. Vini Hispan. opt. prep. secund. artem, and give $\frac{1}{3}$i every hour; one twentieth gr. of antimony every four hours. Pediluvium capsici, and frictions with infus. capsici on the trunk and extremities; ammoniacal linim. to the throat. He was so unmanageable as to defy our using any application to the tonsils.

4 P. M. Symptoms were decidedly worse; the rash was somewhat more distinct, but he acted like a maniac. The features of the case were truly alarming; venesection was proposed as a dernier resort, although it militated against the theory I entertained, as to the cause of his furious delirium. But as it corresponded with the practice instituted for like symptoms in other cases, and as it was more in accordance with the old school views, three ounces of blood were drawn from the arm. The effect on the pulse was perceptible ere the ligature was removed; the delirium abated for a few minutes only, and then returned; the eruption became less distinct; the extremities grew cold, and a livid hue overspread the whole surface. I felt alarmed at my proceedings, saw my error and was convinced. Stimulants energetically administered would be the only possible method of saving the patient. Wine whey was accordingly given every half hour in as large quantities as he would take, which averaged about $\frac{1}{3}$i at each time. The antimonial was discontinued, frictions with capsicum and flying sinapisms, were attentively persevered in, until reaction should again be established.

10 P. M. The patient lies comatose; mouth open; grits his teeth when disturbed, and screams out; pupils insensible; refuses to take much drink; continued whey and frictions.

Sept. 5th, 9 A. M. He passed a bad night; the nurse was fearful he would not live till morning. He drank but little, and that was one gill of wine whey; notices nothing; groans out and gnashes his teeth. The tongue is moister than it has been during his attack; skin less hot; eruption more full on body and extremities; pulse 140; pupils acted on by strong light; bowels confined.
R. Sulph. magnes $3i$; wine whey and barley water. To keep the room quiet and dark.

9 P. M. Has rested quite well during the day; bowels opened once; drank freely of the whey; eruption complete; tongue moist; throat less tumid; ulcers on the tonsils. He put out his tongue for me when requested; is conscious for a few moments only, and then sinks into a somnolent state. Continued the whey.

Sep. 6th, 9 A. M. Appears decidedly improved. He knew me for the first time since my attendance; is rational; his delirium has subsided; throat bad; deglutition difficult; pulse, tongue, and countenance more natural.

Nit. argenti, grs. vi: aq. dist. $3i$, to pencil the tonsils with it; whey, &c. as before.

8 P. M. Continues to convalesce; has been free from delirium during the day. He has taken three gills of the best Madeira wine made into whey during the last 48 hours, and has had one evacuation from the bowels. To continue the treatment of the morning.

Sep. 7th, 9 A. M. Improvement is progressive; throat is better; left tonsil sloughing; urine free; eruption fading; pulse 140 and soft; tongue moist over its entire surface; skin of natural heat; prostration great.

R. Sulph. quininae, grs. iv, arom. sulph. acid gtt. vi, syr. zingiberis, aq. fort. ââ 5 ss. m. $3i$ every four hours. This boy continued on the quinine and wine whey for several days, and was playing about the room in two weeks from his first attack, and he had no relapse, nor any of the sequelæ incident to scarlatina. Mild but nutritious diet, with an occasional laxative was enjoined, and I ceased to visit him.

Case II. — A. D. a girl aged 4 years, was seized with fever on the evening of June 27, 1840, which was attended with vomiting and purging. The child remained in this state until morning, when it became unconscious of all around her. The vomiting now ceased but the diarrhoea continued.

I was called to the case on the 28th, at 8 o'clock, A. M. I found the girl insensible, head hot, and reclined back; mouth open, eyes rolled up and semi-closed. In a short time, she screamed out and uttered unconnected sentences, tossed about the bed,
and understood nothing that was said to her. Her tongue was red and dry, with a white fur here and there; respiration quick and laboured, pulse 145, and compressible; abdomen was tumid, and tender to the touch; extremities cold, eruption very faint, except on the spine and chest. Discharges from bowels were green, slimy, and fetid.

R Mistuæ cretæ 5ij, Tinct. Cardam. Comp. 5i., Tinct. Opii 3ss. to be given after each stool; vessicat. lyttæ, to the nape of the neck. Cloths wet with cold water to be applied to the head. Sinapisms to the abdomen and the extremities, wine whey and arrowroot with brandy as drink. Starch enemata with Tinct. Opii to arrest diarrhœa.

6 o'clock, P. M. Delirium has increased, heat of head continues, pulse fuller and not so frequent, diarrhœa less urgent, the discharges are passed involuntarily, the extremities are warmer. Has drank a gill of wine whey, and the same quantity of arrowroot, with half oz. of brandy in it. Continued the same treatment.

29th, 9 o'clock, A. M. Passed a poor night, knows no one; is very unmanageable when touched or spoken to, frequently screams out and then falls into a sleep. Continued the whey, chalk mixture, arrowroot, and brandy.

6 o'clock, P. M. She is more composed, and drinks the whey freely; still remains unconscious of anything. Has slept quietly at times during the day; eruption remains indistinct. Throat is not very sore, tongue moist; blister discharges very free from neck; pressure on abdomen excites uneasiness, diarrhœa checked. Continued same prescription.

30th, 9 o'clock, A. M. Passed last night better than any since attack; is rational at times this morning, talks some. Pulse 130, compressible.

6 P. M. Improvement is manifestly great. Continued whey, brandy, &c.

July 1, 9 A. M. There no longer remains any doubt that the patient is decidedly better; she is entirely rational this morning. Rash is out full and complete; uniform warmth of the body, tongue moist. No passage from bowels for last twenty-four hours. Prescription of wine whey, arrowroot, brandy, and chicken broth.
2d, 9 o’clock A. M. Is convalescing finely. Asks for her drink, and takes considerable notice of things, for the first time since her sickness; complains of the blister. Prescription, Ol. Rici- ni .5 iss.; wine whey, arrowroot, chicken broth, soda biscuit, &c.

As no untoward symptoms occurred during her convalescence, I will not detain the reader by a daily report. On the eighth day, the girl was sitting up, and complained only of debility, which a few days improvement counteracted. The quantity of wine used, was one pint in five days; besides one gill of brandy with the arrowroot. The child has passed the summer in good health.

I will now add the cases of burns and variola, because their treatment was on the principle laid down in this essay, and they will assist me in elucidating the subject more fully.

Case I.—A girl 5 years old, had been extensively burned by her frock taking fire. She had a convulsion on the third day, which lasted four hours, and was attended with a hot skin and suffused face. The pulse was frequent and soft, extremities rather cool. The tongue was precisely like that of scarlatina, where the fur would peal off and leave it morbidly red, with the papillæ elevated. Such was her condition when I was called in. I ordered wine whey immediately, and put her under the use of quinine, ½ gr. every four hours. The convulsions ceased after three hours, but delirium continued during the evening and night. On the following day, the cerebral symptoms had subsided, and the febrile condition was removed. The case continued on the use of quinine, with stimulants, and nourishing diet, for several days, and the burns healed up rapidly.

Case II.—A boy 4 years old, was extensively scalded. On the second day, he was seized with apparently high fever, accompanied with delirium and convulsions. The tongue was hot and dry, papillæ elevated and red. Pulse frequent and soft, abdomen tumid, diarrhœa profuse, feet cool. He was treated with brandy toddy, and arrowroot, chalk mixture, and Dover powders, with starch enemas, and then put on quinine. In a few days all the cerebral difficulty had subsided. Profuse suppuration resulted from the deep injury of the scald. A repetition of the quinine was decidedly serviceable in checking it, and causing cicatrization, and the case progressively improved.

Variola—In a girl aged 9 years. On the evening of October 10th, 1810, I was called to the patient, and was informed she had
been vomiting every thing she had taken during the day; she had been purged four or five times by a dose of senna and manna given the day previous. She now complained of intolerable headache, and was delirious the greater part of the time. The face was suffused, the skin of natural warmth, tongue small and coated, pulse soft and frequent, feet cool. R. spts. Mindereri 3i. every two hours. Sinapisms to epigastrium and feet. Cold toast-water in small quantities for drink.

11th, 9 A. M. Vomiting had ceased. She still complains of great headache, and is delirious; tosses about the bed; is very restless and moans much of the time. When examining the tongue, I observed a few small vesicles on the under lip, which inclined me to think some eruption might be making its appearance; and the arm-pits and groins I found evinced some minute livid points, resembling in size and appearance, gunpowder grains. Variola was at once, and for the first time, now suspected. Wine whey was immediately ordered, (one part of wine to two parts of milk,) of which one ounce was to be given every hour; and arrowroot as common drink.

4, P. M. Eruption continues the same in appearance, and is becoming more extensive over the body. Cerebral symptoms no worse; pulse weak; no diarrhoea, nor vomiting.

R Sulph. Quiniae, grs. xij.; Arom. Sulph. Acid, gtt. xv.; Syr. Zingiberis, 3i; Cap. 3i every two hours. Continue wine whey and wine in the arrowroot, as freely as she will drink it.

12th, 9 o'clock, A. M. Eruption still continues livid, and has extended from the body over the extremities. She passed an uneasy night, and was delirious. Bowels confined since the 10th, but no evacuation is desirable. Pulse soft; skin more uniformly warm. Headache somewhat better this morning; tongue cleaning off.

Continue wine whey and quinine in the same dose and interval — chicken broth.

13th, 9 o'clock, A. M. Eruption less livid. Pulse more vigorous, and the general exhaustion not so distressing. No symptoms were present which indicated a change of treatment, and it was continued with the addition of warm gin and water; for she had become tired of whey.

14th. Symptoms are encouraging. She had drank wine in
arrowroot; chicken broth and gin and water; together with the quinine every two hours.

The eruption is filling out, and distinct pox are forming of a natural appearance. The bowels have not been moved since the tenth; nor has any laxatives been given since I was called to the case. The pulse forbade evacuants, although the encephalon might have demanded local relief.

15th, 9 o' clock, A. M. The patient continues to do well. The bowels were spontaneously moved once this morning.

17th. All is going on well. The head is as easy as could be expected, and is somewhat swelled. Eyes are closed; pulse soft, 100; tongue clean; temperature natural; eruption confluent, and pus is becoming visible in the pox. The bowels were spontaneously moved to day.

Up to this time (including six days) the child has taken arrowroot, chicken broth and barley water, as drinks; together with one pint and a half of wine, either made into whey, or used with arrowroot. Also, five gills of gin made into sling; and has taken forty-five grains of quinine. While laxatives, relaxants and evacuants have most carefully been avoided. The case continued improving, and was entirely restored to health before the month was past.

Puerperal Fever.—Oct. 9th, 1840. Mrs. E. at 32, had been confined with her third child. She had an easy labour of three hours, and no unfavourable symptom presented itself during the first week. On the ninth day after her delivery, she was suddenly seized with rigors which almost amounted to an ague, and were soon followed by flushings of heat, great pain in the head, abdomen and loins. The lochiae were suppressed, and the secretion of milk much diminished. The pain continued for some hours unabated, and the febrile action was becoming more violent, when I was summoned to visit the lady.

9 o' clock, A. M. I found the patient as above described, Her pulse was 140, but weak; the skin hot and dry, and the pain intolerable—to use her own expression, she ached all over. A pediluvium was ordered instanter: a fomentation of hops and whiskey across the abdomen, and of Ricini, 3i. These remedies gave transient relief, but the pain returned in a short time and the fever continued. Having resolved to try opiates in large doses when a case approximating to puerperal fever should next
present itself to me, I thought this one was sufficiently decided, and its symptoms required prompt alleviation. Having evacuated the bowels, two of the following pills were ordered every hour and a half until the pain should cease.


6 o'clock, P. M. Nine pills were given before any relief was obtained. The skin is now moist; the pulse less frequent; the pain in the head, abdomen and loins had greatly subsided. The remaining pills were to be given during the night, if the symptoms required them.

10th, 9 A. M. Passed a good night, but the pain returned in the morning—now, she cannot bear the least pressure on her abdomen. The milk remains much diminished, but there is a slight return of the lochiaæ this morning. The pulse is frequent and weak; the tongue furred, and the skin moist. There is no severe pain in the head. Barley water and arrowroot were used as drink. The fomentation and pediluvium are to be repeated, and two of the following pills taken every four hours:


8 o'clock, P. M. The nurse says, the patient is now entirely free from pain, and has fallen asleep; there is a gentle perspiration over the entire surface, and I left her undisturbed to be refreshed by repose.

11th, 10 o'clock, A. M. Rested well during the night; is free from pain and fever this morning, but complains of being very sore. Lochiæ and milk abundant. A laxative was now prescribed; light diet, and Sulph. Quiniaæ, 3i.; Elix. Vit. gtt. xxx.; Syr. Zingiberis, 5ij. m. To take a teaspoonful every six hours. The object of the quinine was to fortify the system, and thereby prevent a return of the pain and fever. In this it succeeded; for she was soon enabled to leave her room with impunity, and during the ensuing month had no relapse.

The above cases are not reported with that nicety which my inclination would have prompted; but, as they were noted in much haste, and at a time when I had no thought of laying
them before the public, I trust the execution will not effect the readers deductions. In remarking on the general treatment adopted in the cases of scarlatina and burns, I have only to say, that formerly I attempted to relieve the brain symptoms by V. S; leeches, warm bath, purgatives, enemas, relaxants, and counter-irritants; and three-fourths thus treated died. I reasoned that there had been a transfer or metastasis of irritation to the brain, or that incipient encephalitis was the fruitful source of so many formidable symptoms. My practice was of course energetic, and the effect speedy, but unsatisfactory. As to the case of puerperal fever, some might question it being genuine—it was such, however, as to satisfy my own mind. At all events, I have been informed by intelligent members of the profession, that these were the symptoms for which a score of leeches over the abdomen, with ice and cups to the head, drastics and blisters, &c., would be continually used, and their cases would die of "puerperal fever!" I am aware it is difficult to reconcile long cherished principles and established practices, with opposite sentiments and different treatment; but, venerable as any sanctioned course may be rendered by time, and plausible as it may seem to a thoughtless observer, yet well attested facts and correct observations are the only true methods of obtaining practical deductions. To clinical observations, I would refer any who are curious on the subject of this Essay; and if the views which it advances should prove hollow and feeble, let them pass into merited oblivion. But, if after a fair and thorough examination, clinical results should demonstrate the correctness of its principles, let them be diffused for the welfare of humanity and the promotion of science.
Among the diseases embraced in the first class, were abortion, amenorrhœa, carcinoma uteri, chlorosis, dysmenorrhœa, irritable uterus, congestion, congestion with hemorrhage, induration of uterus, leucorrhœa, (vaginal and uterine,) menorrhagia, paralysis vesicæ, pregnancy, prolapsus uteri, prurigo pudendi, recto-vaginal fistula, tumour ovarii, tumour uteri, tumour vaginae, tumour labialis, ulceratio uteri, vesico-vaginal fistula, retroversio vesicæ.

In the second class were chorea, hysteria, and neuralgia.

Abortion.—The first case of abortion was produced by the female having exerted herself too much in house cleaning, lifting heavy weights, reaching upwards, &c. The second was the result of an attack of dysentery. We had prescribed small doses of Dovers powders, with injections of starch; and on our next visit, we discovered that she had aborted. We presume in this case, that some drug had been given, (though it was denied,) as we had informed the female that she was pregnant, when she wished us to give her some medicine that would "bring her courses on." She was 18 years of age, and not quite four months advanced. After abortion, a free secretion of milk took place, and she was induced to offer herself as a nurse. The third case also, was the effect of an infusion of pennyroyal leaves. The fourth case resulted from a blow given by a man over the pubes. Hemorrhage occurred, and had continued four weeks when we saw her.

Horizontal position for a few days, mild diet, cooling drinks and a cathartic, constituted the treatment, except in the last case,
when the secale cornutum was administered, which arrested the discharge, and general treatment was then adopted.

While on the subject of abortion, and the influence of drugs on the uterus when a few months advanced in pregnancy, we could mention an instance of the powerful effects of ergot in bread on both the impregnated and unimpregnated uterus.

Mrs. G. said she had partaken of some newly made bread two years ago; she was at that time four months advanced in gestation; in the afternoon she had severe pains around the pelvis, and during the evening aborted. The cook who was five months gone in pregnancy also miscarried, and two females in the house who had been unwell only two weeks before, had their catamenia return.

An examination of the flour was made, when the ergot was discovered in it. The flour was made from grain taken off the farm.

Amenorrhæa. — Of this class of disease there was a considerable number. Many were of the simple form; to whom the following pills were administered with benefit, composed of

- Sulph. zinci.
- Soc. aloes. à à 5 i.
- Pulv. sanguinariae. 3ss.
- P. G. acac q. s.
- f. pilulæ no. xc.

One three times a day.

Several were treated by directing attention to quieting the irritation of the bowels, and were successful without resorting to emmenagogues.

Those of a plethoric nature, were treated by venesection prior to the day for their regular appearance, and senna and salts. In a few instances, leeches were advised to the vulva, and in one case with success. Liquor ammoniæ and milk was also tried, gtt. x. ad. xii. to the 3 i of milk, as injections. Two cases of the same class of the confirmed character, were ordered strychnine, in ¼ to ½ grs. doses three times a day, so strongly recommended by Dr. Bardsly of Manchester, who has succeeded in ten cases out of twelve. No good resulted from this treatment.

Secale cornutum in small doses was also administered without any benefit.
Tonics and emmenagogues, were the remedial agents for those in whom constitutional weakness prevailed. We however, could not calculate much on the success of any remedies in this class of patients, as there is so much uncertainty in their attendance, and as to whether the medicine was taken regularly; besides, the impossibility of regulating their diet; so that no definite conclusion could be drawn respecting the action of many of the medicines.

Carcinoma Uteri. — Only three cases have come under our notice. Four of these cases have died, and the third was under our care for several months. The history of these cases attest their fatality; but much may be done to alleviate the symptoms and sufferings from hurrying them to an untimely grave. It is the most fearful and uniformly fatal disease to which the uterus is subject. It is the most irresistible in its march, and the least amenable to treatment.

We shall only give a sketch of one case, without entering into its details.

Mrs. Fanning, aged 50, residing at No. 193 Hester-street, has had thin, reddish discharges since January 12th, 1840; at times has coagula mixed with it; has had these hemorrhages at intervals for some time. Has severe pains all around the hips, and particularly on the left side; weight in the pelvis, pains in the small of the back, no difficulty in passing water, her appetite variable, and bowels not free. The expression of countenance was not much altered, though the eyes were somewhat sunk, and the skin of a dull, yellowish white.

Touch. — The neck of the uterus is hard, fissured, lobulated; the posterior portion more fissured than the anterior; os uteri patulous, so as to admit the finger. The discharges having a fetid odour, and retaining its smell for some time on the finger.

Speculum gave no special information more than the touch.

She was ordered conium pills two grains each, three times a day, to take a dose of castor oil, to confine herself as much as possible to her bed, and to have warm hip baths twice a week, continuing them a half hour each time.

This treatment was continued for a month with little benefit, when she was placed on the use of iodide of arsenic.

R. iodide arsenicæ, grs. iv.
Ext. conium. grs. xlviii. m.
f. pilule. no. xxiv.

One three times a day.

These pills have been continued ever since, till the last two months, also the hip baths, and rhubarb pills to regulate the bowels, with injections of flax-seed,
per vaginam. Under this treatment she had improved so much, as to take a journey into the country.

Before she left, an examination by the finger was made, and the neck felt much softer, smaller, and the fissures more erased. No hemorrhage or reddish discharge had appeared for near a month; her appearance had much changed, a more lively expression was exhibited, and she felt as she acknowledged, greatly improved and stronger.

During her sojourn in the country at the solicitations of some of her friends, she placed herself under the charge of an herb doctor, who said we had mistaken her complaint, and on her return, she was reduced almost to the same state as when we first saw her. As far as we have pursued the treatment of this case, we are disposed to view it as having been essentially modified in its character through the influence of the iodide of arsenic.

**Chlorosis.** — Examples of the confirmed, inveterate, and incipient forms were met with. In the latter, pills of aloes, zinc, and sanguinaria were given, and in some with leeches. The confirmed cases, with the characteristic marks so ably delineated by Marshall Hall — the paleness of the face, the lilac lip, darkness under the eyes, the white tongue with its elevated papillae, the pains under the left breast, and along the ascending and descending colon given by Addison, were treated by the fresh carbonate of iron recommended by Bland with success.

**Dysmenorrhea.** — Of this class there were five cases. In some of these cases, the pain preceded the discharge, and in others came on after the catamenia were arrested. The treatment pursued in these cases, varied with their different characters. Two points were kept in view; first to palliate the pain before the menstrual action, and second, to regulate the general health during the periods. To insure the first indication, opium, with camphor, hyoscyamus, conium, &c. were ordered; and the second was answered by the direction of tonics.

One of these cases we have still under treatment, and the menstrual secretion is beginning to assume a more healthy character, the last time three days having passed without pain. Generally she had gone but one day, and that with severe pains, before the menses commenced, when there was small shreds of membrane thrown off. We cannot but express the limited success we have met with in these cases, and would only observe, that to alleviate the pains prior to the commencement of the menses, we have found Bateman's drops act the most perfectly, having seen
it where other narcotics had been tried, succeed in arresting the
most severe pains in a few minutes. This is nearly allied to the
tinct. opii camph. of our pharmacopoeia; but we cannot say that
the same benefit has resulted from the use of that preparation.

_Irritable Uterus._—This term, first given to this complaint by
Dr. Gooch, formerly went by the names of painful menstruation,
uterine irritation, chronic inflammation of the uterus.

The exact pathology of this disease of the uterine system, is
still at issue with the profession. Some are advocates of the
opinion first promulgated by Gooch, and others join in that ex-
pressed by Scott, Davies; &c. All the occasional causes
of the disease as enumerated, as well as the great number of its
essential symptoms, would seem to tend, if not to actual inflam-
mation, at least one of no inconsiderable vascular congestion, in
addition to a morbid state of the nerves of the affected organ,
which is not disputed. There appears also, a morbid overdisten-
sion of its blood-vessels during the presence of the disease, and this
appears to us to be the point of the greatest practical impor-
tance; as it bears immediately on the principal feature of the treat-
ment.

The treatment adopted, was local and general bloodletting,
horizontal position, mild diet, cooling drinks, anodynes, injections
per vaginam, &c.

The cases of this disease, have generally occurred in married
females. Dr. Gooch had not witnessed a case in an unmarried
female. We shall offer a case which occurred in an unmarried
person.

Matilda Overden, aged 22, residing at No. 50 John-st. unmarried, of ner-
vous temperament; referred the commencement of her attack to cold. At fif-
teen years and two months, she first became unwell; was regular for two years,
when her menses were arrested. This had occurred three times till 13th Feb.
1840, when she got her feet wet, since which time has been very little unwell,
the discharge being scanty, and of a dark colour, continuing only for half a day.
For six months past, had great pain in the small of the back, (the pains general-
ly however, were confined to the abdomen when about to be unwell,) pains in
the pubic region of a severe character, continuing when lying down or stand-
ing up. Cannot bear to be touched, (but steady pressure on this region gave
relief after being continued) uneasy sensation in the rectum, sometimes sick at
stomach, frequent desire to pass water for the last ten months, burning heat
low down, great pain when walking, starts much during her sleep, cephalalgia
constant for two months, heaviness across the eyes, appetite pretty good, bowels not very regular.

Touch. — Os uteri natural; during the examination when the finger was pressed against the vagina, no pain was experienced, but when barely touching the os uteri, intense shooting pains were experienced.

Pills of camphor and conium were given, with belladonna plaster to the small of the back. To take a 3i of castor oil, and confine herself to the horizontal position.

July 5th. Feels much better, has been unwell, had considerable pain before her catamenia commenced, but none afterwards; discharge continued two days, which has not happened before for two years. Bowels regular. The pills caused considerable palpitation of the heart. *Prescription.* Stop the pills. Hip baths twice a day, of half hour each time, and take pills composed of aloes, mass. hydr. and ipecac.

July 7th. Better. Pills operated once a day, has had no lancinating pains or bearing down, but pain around the region of the liver. Continue prescription.

July 13th. I was requested to visit her as soon as practicable, as she had been very sick during the evening; found her with great pain around the abdomen, hips, loins, sick at stomach, tongue clean, bowels regular, pulse 80.

Touch. — Os uteri natural, but when touched gave severe and intense pain, so as to cause her to cry out with its agony. *Per rectum.* Body of the uterus feels enlarged. *Prescription.* Leeches no. xii to the inner part of the thighs near vulva, and to take conium pills of three grains each, with one sixth of a drop of croton oil.

July 14th. Leeches drew well, and bled freely afterwards, which have weakened her very much; pulse 65, pain in the hips and abdomen gone; continue pills.

July 17th. Better. Touch. Neck of the uteri not so tender; ordered emp, lyttae, 4 by 4 to the small of the back, and mixture of rhubarb, soda, and magnesia, wineglass full every three hours.

July 21st. Greatly improved, wishes to go to work. Touch. Neck of the uterus bore pressure without any pain.

August 1st. Discharged.

*Sanguine Engorgements of the Uterus.* — These engorgements are produced by an excess of blood in the parenchyma of the uterus, and show themselves in the following forms: —

1st. Engorgements by simple congestion.

2d. Engorgement by congestion with hemorrhage.

3d. Inflammatory engorgements.

*Engorgements by Simple Congestion.* — These affections are frequently the precursors of metritis, as well as of hemorrhagic congestion, and slight causes will develope either of these conditions.
The \textit{symptoms} incident to this form, are a sensation of swelling, tension, and weight in the pelvis, hips and loins, pains more or less prolonged, peculiar pains called colics, tenesmus or bearing down sensation. The touch proves the sensibility of the engorged parts.

The indications of treatment are to arrest the disposition of the blood to the organ by removing the causes which have occasioned it, and by directing it to other parts, by means of the lancet, leeches, and counter irritation. If the retention of the discharge is of a nervous character, sedatives, antispasmodics, \&c, with the preceding means, and lastly, leeches may be applied to the engorged part. Congestive engorgements are frequently kept up by a kind of atonic state of the uterus, which indicates astringents, or what is much better, secale cornutum, which has a peculiar tonic action on this organ, promoting the contraction of the uterus, and restoring it to its normal state.

\textbf{Congestive Engorgement of the Uterus. Secale Cornutum. Cure.}

\textbf{Mrs. Donohue}, residing at Brooklyn, applied at the Dispensary, Dec. 5th, 1839. Has been married one year; has been regular until seven weeks past, but at the last two periods, the discharges continued several days longer than formerly; attributes it to cold. She now complains of soreness on pressure on the hypogastrium, of a sensation of fulness above the pubis, pains in the small of the back going down the thighs, heavy weight, and fullness in the pelvis, pains in the knees; has had flooding for six days. Appetite not good, bowels regular, skin dry, pulse 90.

\textit{Touch}. Neck of the uterus swelled and soft, of the size of a hen’s egg. Uterus feels heavy. \textit{Per Rectum}. Body feels much enlarged. \textit{Prescription}. Confinement to the horizontal position; secale cornutum 12 powders, five grs. each every three hours.

December 6th. Hemorrhage diminished; only a thin, reddish discharge passes from the vulva, hypogastrium painful on pressure, pulse 84, skin hot and dry, tongue clean, pains in the back and loins continue.

\textit{Touch} gives pain, cervix uteri feels smaller and harder, pliable.

\textit{Prescription}. Leeches no. xii. to the inner part of the thigh, near the vulva. Take 3\textit{i} of castor oil. Should it not operate, to repeat it; hops steeped in vinegar to be applied to the abdomen. Pulv. Doveri grs. x at night.

December 7th. Improved; abdomen not so tender, leeches drew well, bowels free, skin moist, pulse 82.

December 8th. Still improving.

December 9th. Says she feels quite well, has no pain, skin moist, pulse 80.

\textit{Touch}. Os uteri reduced three fourths, feels natural.
Per Rectum. Body smaller and movable.

December 15th. Quite well, and has returned to her domestic affairs much improved in health and feelings, better than she has been for many months. Discharged.

**Congestive Engorgement with Hemorrhage.**—As respects this form of engorgement, we believe that many cases of it have been viewed as *menorrhagia*, and treated as such, and in many instances, with ill success, the hemorrhage being considered as constituting the disease.

This species of engorgement is termed also soft engorgement, in contradistinction to hard engorgements. The most marked symptom which separates this form of uterine disease from many others, is the *hemorrhage*, variable as to consistency and colour, and sometimes nearly constant, with more or less aggravations. The local and general effects are the same as in simple engorgements, except a more considerable increase in the body or neck, a more or less deep colour of its neck, and an exudation often of a bloody fluid from the neck of the uterus, and increased by the touch.

The same forms of treatment would be here employed with success, as in the former kind of engorgement, as bleeding, general and local, cups, sinapisms, *secale cornutum*, &c.

**Case I. — Sanguineous Engorgement with Hemorrhage; good effects of the Ergot.**

**Martha Hester,** residing at No. 236 Greenwich-street, was visited by me at the request of Dr. C. who was attending her, May 10th 1840. She had had constant hemorrhage from the uterus for six weeks, at times, rather profuse. Various astringents had been ordered, and blisters applied to the abdomen; at present she complains of great pain in the abdomen, hips, loins, and small of the back, fulness and weight in the pelvis, pains shooting down the thighs, is unable to turn herself without difficulty in the bed, it giving her pain; has been confined to her bed for ten days; countenance pale, eyes dull, pain in the head, ringing in the ears, cannot raise her head up, abdomen when pressed gives much pain; when steady and deep pressure is made, does not feel so much pain; more soreness and tenderness over the pubic region. We were undecided whether any tumour could be felt over this part; skin rather moist, pulse 96, small and frequent; tongue dark, furred in the centre, with red edges, nausea at stomach, dejections of a natural colour, urine natural, and passed with ease, position of the limbs extended.

**Touch.** Cervix uteri of the size of a walnut, soft, bleeding; mouth dilated so
as to admit the end of the finger. The finger when it touched the os, could after a few seconds feel the flow of blood passing from the uterus.

This case had been viewed as one of the metro peritonitis. We were not disposed to look upon it in that light, because the organism had not undergone that modification which constitutes inflammation. We therefore proposed the secale cornutum, with Dover's powder; seven grs. of the ergot, with two grs. of Dover's powder. One every three hours.

May 11th. Says her head feels easier; hemorrhage has partly ceased, tenderness of abdomen not so great, bears slight pressure better, skin natural, tongue has lost its redness except at tip, and not so much furred; has only taken six powders, pulse 81. Continue same treatment.

May 12th. Feels better; has had no hemorrhage since six o'clock this morning, except an oozing; skin natural, pulse 64; tongue clean, abdomen bears pressure well, except over the pubes. Has no pains.

May 13th. No return of hemorrhage; looks better; more cheerful than for some length of time, talking does not pain her as at first, as she could only speak in a whisper. Although she was feeble, she was very solicitous to go to the Alms-House, we therefore gave her a certificate. She did not go till next day, when she had improved sufficiently in strength to induce her to make the effort. At this visit felt the os uteri nearly natural, and the body of the uterus did not feel heavier than natural.

Notwithstanding our regret at parting with our patient, still the short time we had her under our charge gave us ample proof of the advantages, and particularly the marked sedative effects of the ergot in such cases; showing also how indispensably necessary it is to explore the uterus, and to establish a correct diagnosis upon the essential, not symptomatic character of the hemorrhage.

Case II. — General engorgement of the uterus of two year's standing; simple ulceration of the neck. Prolapsus uteri; profuse uterine leucorrhæa. Secale cornutum; leeches to the neck.

Cure.

October 3d, 1840. Mrs. A. W., aged 30, residing in Mercer-street, born in England, has resided in New-York five years, has been pregnant four times; 1st, at eight months, was delivered with instruments, and had three miscarriages. Has always been regular; has had floodings for two years steadily, at times profuse, of a light colour, sometimes coagulable; does not confine herself to the bed, her appetite good, countenance pale and of a dingy yellow colour; large blue streaks under the eyes, eyes look dull, heavy; nose contracted, spirits much depressed, subject to attacks of hysteria, bowels regular, pains in the small of the back, and heavy weight in the pelvis; has no shooting pains down the thighs, breasts do not swell, much cephalalgia. Has passed the week, for the first time
without the discharge of blood; had a profuse hemorrhage last night, which came on suddenly, and produced syncope, and still continues. Pulse 93, small and quick.

**Touch.** Neck of the uterus feels like a fibrous tumour filling up the fundus of the vagina, and within an inch of the os externum; feeling also harder than natural. The anterior lip larger than the posterior, the os tincæ pushed backwards, and having a soft crepitating feeling, with a fissure on the left side. Touch gives her much pain when the finger is passed around the os tincæ.

**Speculum.** Colour of the neck of a dark reddish appearance, and shining; only a part of the os tincæ could be seen, (the end of the speculum not embracing the whole,) and of a deep reddish tint.

**Prescription.** To confine herself to the bed, and to take secale cornutum 3i. divided into eight powders, one every three hours.

October 4th. Has taken seven powders; has no hemorrhage, feels sick at stomach, and complains of pains around the hips, and down the thighs, and bearing down pains. Had a bad night, slept little, has different images passing before the eyes, head feels light, twitching of the extremities. Pulse 70, very small.

**Touch.** Neck as before. Six leeches were applied to the neck and drew well.

Ordered — to have her hips elevated and to use injections of warm water, and in the evening to use a thick injection of marsh mallows, allowing it to remain in the vagina all night. Bowels to be be regulated with 3i. of castor oil.

October 6th. Neck reduced very much in size, more than a quarter; tender on pressure. She was ordered Conium pills 2 grs. each, for the pain she had in the head, every evening.

October 8th. Looks improving, no pain in head.

**Speculum.** Observed the neck having still a reddish tint. The os uteri by this examination was brought into full view, which was not accomplished during the first examination; os tincæ depressed in centre, slight hemorrhage from the neck, and also from the leech bites; whitish thick discharge from uterus; eight leeches applied.

October 9th. Passed a bad night, nervous, pulse natural but very small.

Neck smaller and harder, all around; the anterior portion more so than the posterior portion; os uteri when touched causes pain.

October 10th. The patient is in better spirits, more cheerful, neck feels much softer on the anterior portion than yesterday; os tincæ crepitating. By the speculum the os uteri looks of a natural colour; around the os tincæ there is an ulcer the size of a shilling, with an oozing from its surface, superficial in its character. Free leucorrhœal discharge from uterus; injections of starch and sugar of lead small quantity, and to take a 3 i. of castor oil.

October 11th. The hemorrhage returned last evening, does not feel so well; neck feels pliable, anterior still harder than the posterior portion. **Per Rectum,** body much enlarged, so that the finger could not reach the fundus; feels hard.

Secale cornutum 3 i. in 12 powders, one every three hours.

October 12th. Much improved, very little discharge, no pain any where,
countenance bright, pulse 68. Continue the ergot only, made into pills of $2\frac{1}{2}$ grs. each, with one sixth gr. of opium, one three times a day.

October 17th. Has had no hemorrhage since the 14th. The uterine leucorrhœa increased so much by the 23d, that four powders of the ergot were given, which arrested it, and the injections of Nit. Argenti, were used, with Sol. Hydriodide Ferri, 5 gtt. three times a day, till the 26th inst., when the neck of the uterus felt natural; no hardness except a small point of the right side; and no pain was experienced during the examination. She has been sitting up, and has increased her diet; has had no hemorrhage since. The speculum was used on the 25th, and the neck was discovered natural, with very little leucorrhœa from the uterus.

She has now continued for three weeks without having had any discharge, and is much improved in appearance, and has been fully requited, she says, for the term she confined herself to the bed and the rigid diet; and is pleased that she can once more enjoy herself in the social circle of her friends.

November 7th. Her catamenia at their usual period, returned on the 1st, and had continued till this day. Her appearance is much altered, she is exceedingly nervous; much impressed with the idea that she would not recover entirely, or be considerably benefited.

By the touch we found the neck of the uterus as large as a good sized walnut; rather firmer than it was during the first time we made the examination. She was ordered to her bed, and to take the secale cornutum in 5 gr. doses every three hours.

November 9th. Discharge arrested, and the patient is much improved in spirits.

Continue the ergot in $2\frac{1}{2}$ grs. pills, three times a day.

November 8th. The touch discovers the os uteri natural in size, and pliable. Body free and movable.

November 26th. Very cheerful and lively; spirits buoyant, good appetite, and nothing new to mar her enjoyment; no return of hemorrhage.

In this case, we presume the disease will for a few months exhibit some disposition to return, till the constitution shall have gained sufficient strength. The ease with which the discharge is arrested, and the evidence we have of its time being reduced to its normal state, except the tendency to relapse at the expected period, encourage us to believe that it will eventually be restored to its natural integrity; and we doubt not that the patient will recover her former embonpoint.

**Hard Engorgement of the Uterus.** — This form of engorgement is characterized by the form, colour, and consistence of the tissue affected, the character of the pains, and the disturbances they create in the uterus.

Engorgement of the uterus, whatever may be its colour, is only to be recognised when it occupies the neck of the organ. The colour is a rose-white, which is the chief diagnostic mark be-
tween hard and soft engorgement. Either the whole or only a part of the uterus may be affected, but generally the disease is situated in the cervix; and more frequently in the posterior than in the anterior portion.

The most prominent symptom indicating this form of engorgement, is vomiting; independent of gastric derangement, swelling of the abdomen, impaired digestion, occurring at various periods, so that it is considered as almost a certain diagnostic sign, particularly when it exists in connection with dysmenorrheae. The prognosis in many cases is favourable, particularly in those that occur before the critical periods; after this time they are more difficult of resolution, although still susceptible of cure; if it passes this period without any further progress, it scarcely makes farther advances. It is also more easy to produce resolution of the neck than the body of the uterus. The treatment consists in acting on the vascular system, by means of general and local bleeding, cups, derivatives, and by the aid of cooling drinks, horizontal position, the affected part being more elevated than the other parts of the body; leeches to the neck of the uterus, &c.

Case I.—Hard engorgement of the neck; leeches to the neck; cure.

Mrs. Brown, 111 Reade-street, of nervous temperament, July 20th, has complained for the last three years of a weight in the pelvis, pains around the hips, dragging in the loins, pain in the thighs, symptoms increased on walking, feels easier when in the horizontal position; has had one miscarriage three years ago; menses regular, leucorrhoea, flashes of heat, countenance pale and spirits depressed; she has been treated by several medical gentlemen, but no examination was made or proposed. Bowels regular, appetite not good.

By the touch discovered the posterior portion of the uterus, of the size of an hen's egg, and hard; anterior portion natural. By the speculum the os uteri appeared of a rose colour; discharge of leucorrhoea from uterus. Leeches No. vi. were applied to the neck; horizontal position, confinement to the bed, injections of tepid water several times a day, hips elevated, and in the evening thick flaxseed injections, to remain in the vagina all night.

July 21st. Bleeding from the leeches did not stop till 3 A.M.; feels no pain, complains of lightness of the head, feeble, skin natural, pulse 72, small; tongue clean.

Posterior portion of cervix uteri reduced in size, and softer.

Continue the same treatment, and take 3 i. of castor oil.

July 23d. Better; head feels comfortable; no pain in hips; medicine acted well.
Continue as above, except the oil.
July 28th. Patient feels quite well, but has slight leucorrhœa; uterus feels still further reduced in size, almost natural; softer and pliable.
Continue the horizontal position, and the other general directions, and to take 5 gtt. of Sol. Hydriodide Ferri, three times a day.
August 10th. Quite well, no leucorrhœa, and is so much improved as to be engaged in her domestic avocations.
Discharged cured.
Leeches were applied three times in this case over the pubis and along the sacrum. Blisters also were used, but without any avail.
This patient was attended the latter part of September for dysentery, and was then comfortable respecting any symptoms of the uterus.

Case II.—Hard Engorgement of the Cervix Uteri, with prolapsus; leeches to the neck; relapse; cure.

Maria Dodge, aged 32, residing at No. 396 Cherry-street, March 28th. Has always been regular, has been married three years, had one child. Has been troubled with leucorrhœa for two years; has considerable pain in the small of the back, shooting pains down the knees, and bearing-down pains. Bowels regular, no difficulty in passing water, appetite tolerably good, sick at stomach at times.
Cervix uteri feels much harder than natural, all round; uterus prolapsed. By the speculum the neck of the uterus appeared full, large, and rounded, and thickly papillated, resembling scarlatina where the small points are very red; os uteri red and nearly closed with a glairy discharge from the uterus; vaginal secretion yellow.
Six leeches to the neck, and the bleeding to be promoted by the use of injections of tepid water; low diet, horizontal position.
March 29th. The bleeding from the leeches was considerable; feels little better, pulse 78.
Cervix uteri not so hard; os uteri not so red; papillae becoming paler.
Injections of flaxseed to be used freely during the day, allowing them to remain all night; to take a 3i of castor oil.
April 3d. Patient having a good appetite, and feeling much improved, left her bed contrary to my directions, and to-day does not feel so well; the symptoms are returning. Uterus reduced very little, and becoming nearly as red as formerly. Six more leeches were applied with the same directions as before.
April 5th. Uterus much smaller, and more pliable; high up; leucorrhœa still continuing; very little redness perceptible except around the os.
Injections of a weak solution of nit. argenti. was ordered; continue in other respects as before.
May 2d. Patient has improved very much, and has little of the leucorrhœa. Os uteri feels natural, soft, and pliable; no redness, except very little at os uteri. Discharged.
Case III. — Congestion of the Body of the Uterus, with disposition to Induration of the neck. Simple Ulceration. Cure.

Mrs. Kennedy, March 11th, 1840, aged 34; married, the mother of several children; has had hemorrhage for 12 months; more the last six months. Sometimes coagula passed from her; at one time, something resembling thick skin, of an inch in length, of a fibrous character. Has shooting pains down the thighs, and in the small of the back; sometimes resembling needles running through the lower part of the abdomen; feels at times as if she were pregnant; swells very large occasionally in the stomach; motions like a child in the abdomen; no leucorrhœa; breasts swell and are painful; pains in the head; eyesight failing; appetite tolerably good. Has had profuse hemorrhage since the 7th; pulse 108; much excited and irritated; bowels costive; hypogastrium tender on pressure. Uterus high up, hard, anterior portion little larger than the posterior, and thickened; os uteri closed, soft to the extent of one eighth of an inch. Hemorrhage during the examination.

Per Rectum. Body feels large. Neck of the uterus of a rose white colour, and a small erosion around the os tincæ. Horizontal position, cooling drinks of barley-water, &c.; and the secale cornutum 5 ss in six powders, one every three hours; enema of soft soap.

March 12th. Hemorrhage is diminished, but still continues; slept better last evening than for several nights; less pain in the hypogastrium; bowels costive; pulse 66, small and weak; neck not so large and hard. Repeat the ergot, with enemata of warm water and soft soap; also rhubarb pills of five grs.

March 13th. Hemorrhage ceased early this morning; much improved, more cheerful, and spirits lively; no pain in hips; pulse 70, tongue clean, nausea at stomach. Neck rather softer; injections of starch per vaginam.

March 15th. Was so much better as to be dismissed from our care, still having a small hardness left of the anterior portion of the neck. She continued engaged in her work, being a tailoress, till June, when hemorrhage occurred again. We were a third time consulted. Previous to this treatment, leeches had been applied with partial benefit.

Induration of the anterior portion of the neck; posterior ulcerated; antimonial frictions; conium.

June 29th. Mrs. R. has had five hemorrhages in seven weeks, each lasting five or six days, the last seven days; sometimes sanguinolent and sometimes thick, alternating from one to the other; easily fatigued; not able to work much; pains as formerly; appetite not good; bowels costive. By the touch the anterior portion of the neck much elongated, to the extent of one and a half inches, with the posterior hard also and tuberculated. Posterior lip ulcerated, anterior of a rose white colour. To be confined to the bed, to take a 3 i of castor oil, and to have light nourishment. Frictions of tart. antim. 3 i to the 3 i of simple cerate; a piece the size of a hickory nut to be rubbed on the calf of the legs in the evening, and the same to be repeated to the inner part of the thighs in the morning, next day on the forearm, the day following on the arm, and then to be renewed over the same course again.
This treatment was pursued for one week without any benefit resulting from it; on the contrary, it produced fever.

The ext. conii was then substituted in its place; three grs. three times a day in pills. This was continued till July 17th, when an examination was made; her appearance had much improved. Anterior portion diminished one half, and softer; posterior not having that crepitating feel of ulceration. Anterior portion of the cervix smaller; posterior much improved; a small, reddish tubercle like a blood blister on the right lateral anterior part of the neck.

The conium was renewed only in the form of a mixture, with croton oil one sixth of a drop to a dose.

July 28th. Has been engaged at work, and appears quite improved. Ordered still to keep the horizontal position, and continue as usual. Anterior portion still reduced in size. Speculum not used.

August 6th. The speculum discovers the os uteri ulcerated more than it was when we commenced our third trial of treatment, which we presume resulted from her not obeying the strict injunctions laid upon her not to engage in her domestic affairs, and to live "absque marito." It was apprehended that the small tubercles might become a nucleus of serious alterations, provided she persevered in her active duties, and co-habited with her husband.

In this case we notice the decided effects of the ergot in hemorrhage from the uterus, and also its sedative effects; reducing the pulse in this case, 42 beats, from 108 to 64, in 24 hours, and with only 30 grs. of the remedy.

Although this case is incomplete, it still proves the success that may be obtained from rigid diet, absolute repose, and the use of the resolvent treatment. We are disposed to believe that the cure might in the course of time have become complete, had she been more just to herself, and kept quiet, and obeyed a short time longer the strict injunctions given her. As the case at present rests, we fear it will prove, should it still proceed without treatment, one of confirmed cancer, which will admit of little aid from treatment.

Leucorrhea, vaginal and uterine. — These cases occurred as well in the unmarried, as in the married females. Frequently it was the result of catamenial derangement, and with some of debility. The general symptoms were pain in the back, impaired appetite, pale countenance, easily fatigued, with more or less hysteria. The remedial treatment consisted in the administration of medicines to act on the bowels, and afterwards tonics, particularly the metallic; sol. hydriodate of iron, and injections of
nit. silver, copper, zinc, sugar of lead, &c. to the cases of vaginal leucorrhœa.

The uterine leucorrhœa was treated with the secale cornutum, and with success; and by cups to the small of the back, and horizontal position.

Menorrhagia. — Under this term are included those cases in which the menstrual secretion was mixed with pure blood. The ergot proved of inestimable value in these cases.

Chorea and Hysteria. — These affections assumed their usual variety, and were treated in the usual manner. In a case of chorea, Fowler's solution continued for a month produced no benefit.

Neuralgia. — A number of cases occurred under this class, and were of that character where no special cause could be assigned, and where the practice must therefore be in a great measure empirical. Neuralgia is for the most part a chronic affection, and it is seldom that the antiphlogistic treatment is put in requisition.

In many cases, the endermic plan was resorted to, and as far as we can form an opinion, we have been much gratified.

Case I. Neuralgia of the head and face.

Mrs. Haggerty, aged 30, Nov. 1st, 1839; had been attended by Dr. V. for some time, and was passed to my care when he resigned his duties in this institution. She has severe shooting pains extending through the anterior part of the head, and along the side, and back part also, so severe at times as to cause her to cry out most violently; coming on in paroxysms, and at other times lasting two or three days. General health tolerable; appetite pretty good. She has taken quinine in small and large doses, carb. ferri. strychnine, arsenic, &c. Under this latter remedy she seemed to improve the most, when she discovered the teeth were becoming loose, for which the ordinary remedies were given; after this, we placed her on the endermic treatment.

Dec. 1st. Emp. Lyttæ to each temple, the size of a dollar; after vesication to have the cuticle separated, and dress with sulph. morphiae, one half grain to each temple. B. Senna and salts.

Dec. 2d. Slept better last night; pain much relieved; repeat the sulph. morphiae.

Dec. 3d. Did not sleep so well last night as the evening before; Sulph. morphiae one grain to each temple.

Dec. 4th. Slept better than she has for three months. Repeat the same.

Dec. 5th. Has but little pain; blisters healing; sulph. quinine, three grains three times a day.
Dec. 7th. Has had no pain since.
Dec. 13th. Continues as on the seventh; having now passed one week without any pain. Discharged.

Case II. Miss. C. Cassidy, aged 20, Sept. 14th; complains of a severe darting pain, extending from the top of the head to the posterior part of the ear, and on the anterior part of the parietal bone, passing down the neck; the pain is partially intermittent, it having no special period of exacerbation. Has been treated formerly for the same, and cured by strychnine internally; has this time been prescribed for by several medical gentlemen, one of whom tried electricity, and another insisted on the nerve being divided by making a free incision on the top of the head.

Granville's lotion to the back of the neck, five minutes; no relief.
Sulph. quinine pills, three grs. three times a day.
Tuesday, Sept. 15th. No improvement.

C. C. ad. nucham, ʒ vi.
B. Strychnine, grs. iii; to be made into eight pills.
One three times a day.

Friday, 18th. Has had but slight relief. B. Emp. lyte size of a dollar to the back of neck; and after vesication to be sprinkled with one half grain of morphia, and repeated every evening.

Tuesday, 22d. Slight improvement, but says she feels better, pain not so severe. Repeat the blister, and sprinkle the surface with strychnine one half grain for three evenings.

Friday, 25th. Better, and says she feels improved when the blister is kept open. Seton to the arm of a single thread; and to take ext. aconite, one half a grain, three times a day in a pill.

Wednesday, 30th Sept. Still improving; has little pain. Continue same treatment.

Oct. 2d. Has had no pains since, and looks very well. Stop the pills and remove seton.

Oct. 10th. Has had no return of pain. Discharged.

Paralysis Vesicae—This affection was the result of a long, protracted labour, which was benefited by a blister to the small of the back, and relieved by the catheter introduced frequently. Strychnine and aconite did not produce any good.

Prolapsus Uteri.—The cases of this class were numerous, and little benefit could be afforded to the patients, as the greater number were too poor to procure either trusses or the pessary. In those cases where it resulted from any irritation of the uterus, the usual antiphlogistic means were adopted. Leucorrhoea, more or less, accompanied the cases, and was treated accordingly.
Prurigo Pudendi. Herpes Labialis. — This case was under treatment for some time by general and local treatment, and with benefit, when she was obliged to leave for England, without being entirely relieved.

Tumour Uteri. — This has been of considerable standing, (six years) the patient still engaged in working. It is of a globular shape, resembling a female six months advanced in gestation, and hard. Her health has lately suffered much; her catamenia are regular; she has great pain in the small of the back and pelvis. The "bruit de soufflet" is heard over the whole tumour; a fact which we have never known when pregnancy has existed, as it is chiefly confined to one side, and very rarely is there a resonance, though we have heard it in one or two cases.

The hydriodate of potass and iodine, internally, and by ointment, was used for three months, when the tumour appeared to be rather softer; at this period we discontinued the medicines, as she complained so much of the stomach not being able to retain much food, and being also much thinner. It was renewed a few months ago. The tumour can be distinctly felt per rectum. The only benefit we presume the iodine will produce, will be the preventing the increase of growth, and the renewed activity of the morbid process.

Tumor Vaginæ. — This was a white, fibrous tumour, extending from the neck of the uterus, along the anterior portion of the vagina, to the meatus urinarius, protruding out of the vulva, and was of the flatness of an oyster; an operation was proposed, but the female declined.

Tumor Labialis. — This occupied the left labium, and extended a considerable distance down the thigh. She had had hypertrophy of the clitoris, which had been excised, and the tumour afterwards appeared. She did not wish to have it removed.

Tumor Ovari. — One of these cases has existed 12 years, the patient being married, and never had children. No treatment was recommended.

Vesico-vaginal Fistula. — This was a case of four months standing, resulting from a severe labour of four days. Instruments were employed.

An attempt to close the fistula was made, but when we had dissected up the vaginal mucous membrane, and thought of ap-
plying the ligatures, a second fistula was discovered an inch higher up, adjoining the point where the membrane joins the os uteri. The os uteri was in a state of ulceration; under these circumstances, we preferred dispensing with the operation, and were obliged to leave the patient to her distressed and miserable condition during her life.

Pregnancy.—Under this class may be included those cases of concealed or unconscious pregnancy, in which the patients declared themselves to have amenorrhœa. Their true condition was discovered by one or more of the signs incident to the gravid uterus.

The particular signs we have directed our attention to, are the areola, with the papillæ, secretion of milk in the urine, called kiestine; fetal circulation, and the "Bruit de Soufflet."

Numerous cases were examined for this latter sign, and as a general rule, it was heard. Our attention, however, was more particularly directed to the "brewing sound."

As respects the areola, and the enlarged papillæ, so strenuously advocated by Montgomery, we have not found it so characteristic as his language would seem to prove it to be. We have discovered pregnancy where there was no areola, no enlarged papillæ. It has on the other hand been observed in the young female, where no pregnancy existed. It occurs also in nurses, and in females who have had children; and we think it is almost impossible before the end of the fourth month or fifth month, to decide positively as respects the sign; we are therefore disposed to believe from our examinations, which have been numerous, that this sign of pregnancy cannot be relied on with any great confidence.

Blueness of the Vagina.—We have in a few cases too, examined this test, so positively asserted by Kluge of Berlin, as a sure test of pregnancy in the earlier months; we thought we saw it in one case at three months, in one at five months.

The fallacy of this test may be inferred from the source of it; vascular congestion, a determination of blood to the part. It has been observed in the vagina during menstruation. We would only remark as respects this test, that in Mr. Cruikshank's experiments to discover ova in rabbits, we have these words: "I took a female rabbit, hot, (as the feeders term it) that is ready to be
impregnated, and disposed to receive the male." This they find out not by exposing her to the male, but by turning out part of the vagina. Its orifice and internal surface are then seen, as black as ink, from the derivation of blood to the parts.

We would therefore only observe, that if healthy pregnancy, is invariably attended by such an appearance in the earlier months, it would certainly be one of the most important additions the diagnosis of early pregnancy, and particularly as at this period, we have no positive means of discovering the existence of that condition.

As respects the test of the formation of the caseous pellicle called kiestine, in pregnancy, I cannot speak confidently; a sufficient number of experiments, only twenty-five, have yet been made; but from the little evidence we have, we think it may be a good corroborative sign, but not of much dependence as a sign per se, from the limited knowledge we yet have of it.

"Bruit de Soufflet.—Numerous cases were examined, and those in which the ordinary signs of pregnancy did not exist; our attention was more particularly directed to the earliest period we could ascertain the sound.

It has been heard at eleven weeks; we have heard it at the thirteenth week, and also the fifteenth. In this latter case, the female was uncertain whether she was pregnant or not; we informed her she was, and that she would quicken in a week, which she did; proving the diagnosis to be correct. The extent over which this sound was perceptible was various. We have most frequently heard it on the left side, about the superior part, and opposite to the side where the foetal heart was; sometimes they were heard together. The females were examined in various attitudes: as standing, lying down, on the back, and leaning forwards; thus the abdomen was protruded as much as possible, and all pressure of the uterus on the aorta was prevented; still the murmuring pulsation was audible in many cases.

Wherever fixed pain has been felt over the uterus, we have given our attention to this point to ascertain if it marked the seat of the placenta, and in some cases with success.

Authors are not agreed as to the true cause of the sound under notice, and not a few of the most eminent explorers, suppose it resides in the iliac arteries, where the gravid uterus exercises a
compression on these tubes. Some object to it because it is intermittent, and heard over the whole tumour. If the sound is produced by the compression of the iliac arteries, why is the phenomenon not uniformly observed in the case of pelvic tumours? And why, when it is thus heard, it is perceptible over the whole tumour, and not intermittent? whereas in pregnancy it is heard only on one side or a part, and is intermittent; a sign which we feel disposed to think might be considered as one of its diagnostic characters, instead of an objection to it.

Besides, how can the fact be explained that the same sound can be heard over only that part where the placenta is attached? These facts have been repeatedly proved by manual examination, where it was necessary to introduce the hand into the uterus to remove the placenta.

We have ourselves met with two cases where we had ascertained beforehand the exact seat of the placenta, and were obliged to remove it. The placenta corresponded to the seat we had marked beforehand by our auscultation, and this course was adopted in many other cases we attended, particularly for this object. There are sounds it is true, that many simulate the placental souffle, derived either from the chest, or from the abdominal viscera, or from the aorta, and the large arteries. Independent, however, of the dissimilar character of these sounds, they occur during the breathing, and are not synchronous with the pulse; a coincidence which necessarily accompanies the brewing sound. The more difficult sounds to discriminate, are those that have their seat in the larger vessels. These cases are, however, we believe rare. We are enabled to discriminate where it occurs in aneurism, hemorrhages, hysteria, or nervous diseases of the system, by the concomitant signs; and to use the words of Laennec, "when the bellows sound exists in the aorta, particularly the ventral portion of it, there is always a marked state of disorder of the nervous system, produced by the slightest cause, and an habitually quick pulse.

Kergaradec supposed that the intermittent sound was owing to the foetus changing its position; but this point is only conjectured. It is true there were examples where it could not be heard; but in these cases it may have been located in the posterior part, when the sound might not be audible by the examination.
The sounds of the \textit{fetal heart}, were in nearly all instances heard, where the pregnancy had advanced to the fifth month. It is seldom heard before this period; we have heard it during the latter part of the fourth month.

Hitherto auscultation has been confined chiefly to the chest and the larger arteries; and like every other discovery, the extent of its value has never been duly appreciated. Its true advantages increase with our inquiries; and one of its noblest claims to our favour is the light which it has so unexpectedly shed upon obstetrical science.

When all the ordinary signs of pregnancy are absent, or so obscured as to afford scope only for conjecture, if the fetal heart can be heard but once, this decides the nature of the case beyond dispute.

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\textit{Select Cases of Remittent Fever, and other Diseases, occurring in the New-York Hospital.} Reported by E. T. Richardson, M. D., Resident Physician.

On the first of September there were remaining in the Medical Department of the Hospital, 82 Patients.

Number admitted from Sep. 1st to Nov. 30th, 295 "

377 "

Of these there were discharged,

Cured, 231 "
Relieved, 14 "
By request, 10 "
As improper objects, 15 "
Died, 33 "
Eloped, 3 "

306 "

 Remaining Dec. 1st, 71 "

The following is a list of the diseases:

Intermittent fever, 110 "
Remittent fever, 64 "

377 "
1841.]

Hospital Reports.

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Of each of the following diseases, there has been a single case, viz:—apoplexy, asthma, chlorosis, cyanosis, carcinoma, cephalalgia, hematemesis, marasmus, otitis, poisoning, pericarditis, scarlatina, tonsilitis, tumour of the uterus, neuralgia.

Case I. — Remittent Fever. *

John Latimer, (coloured) native of Bermuda, aged 30 years, seaman, was admitted to the N. Y. Hospital, Oct. 6th, 1840. He is very stupid, and unable to give any account of himself, except that he arrived in port yesterday from Wilmington, N. C. From the captain I learned that he performed his duty up to the time the vessel arrived. Has but little heat of skin; pulse 96, full and

* The most interesting fact connected with this, and the five other cases of remittent fever contained in this report, is the enlargement, and in some cases, the ulceration of Peyer's glands. This occurrence has been supposed to characterize the typhoid fever, and its existence in our Southern remittent fever, has, we believe, been distinctly denied. In one of the cases here reported, and in which the intestine was perforated by ulceration, the fact of its being a case of remittent fever may be questioned by some. But the other cases were unequivocally of this form, and the lesions they presented equally distinct. We have recently been informed that a pathological
soft; tongue moist, covered with a white fur; has no pain; bowels not open.

P. M. Has an accession of fever.


Oct. 7th. He is quite free from fever this morning; skin moist, pulse full and soft. His bowels have not moved.

Oleum ricini, $\frac{1}{2}$; diet farinaceous. P. M. Has an exacerbation of fever. Bowels not moved. Give him an enema, and continue spts. Mind.

Oct. 8th. Was restless through the night; since last evening has been troubled with singultus. Feels quite easy this morning; skin moist, tongue rather less furred, pulse 96. Another enema was administered, which operated favourably. Continued spts. Minderi, with p. Dover, grs. x. at night.

Oct. 9th. The singultus still continues; skin moist; tongue more furred, particularly at the base; bowels not moved since yesterday morning; abdomen tumid, and rather tender on pressure. Continue Spts. Minder. R. Pulv. camph. gr. ij; pulv. opii gr. j. every two hours, while the singultus continues. P. M. Singultus relieved; exacerbation of fever less severe.

Oct. 11th. Singultus returns occasionally; in other respects feels comfortable. Skin cool, moist; pulse full, soft; tongue beginning to grow clean; bowels open; is free from pain. Sulph. quinine, gr. j. (in solution) every two hours.

Oct. 12th. The patient inclines to stupor, and moans frequently. Pulse maintains its strength, and the impulse of the heart is distinctly felt. Continue sulph. quinine, and apply sinapisms to the extremities.

13th. The stupor is increased so that he is roused with difficulty. Has no increased heat of skin; moderate strength and frequency of pulse; bowels not open. Died at 12 o'clock M. very suddenly.

Autopsy 24 hours after death. Thorax. The inferior lobe of the left lung was congested and softened. The upper and middle lobes of the right were solidified, and of a uniform dark purple colour. In structure and appearance they resembled very much a spleen. The mucous membrane of the bronchi was very much congested in both lungs. There was a small quantity of serum in the pericardium. The heart was normal.

Abdomen. The mucous membrane of the stomach was highly reddened, thickened, and softened, especially along the lesser curvature.

The oval plates of Peyer were enlarged through the whole course of the ileum, but none of them were ulcerated. In the upper portion of the colon, were numerous small ulcers, and highly inflamed spots.

The liver was very much enlarged, of a slate colour and softened.

The kidneys presented a mottled appearance; on cutting through them, the cortical substance was found hypertrophied. In the pelvis of each were found numerous ecchymosed spots. On the convex surface of the left kidney, beneath

anatomist in Philadelphia has of late paid great attention to the morbid changes which occur in remittent fevers, the anatomical characteristic of which he thinks he has discovered. We hope that the profession will soon be favoured with the result of his inquiries.
the peritoneum, was an irregular laceration about one inch in length, the edges of which were glued together with coagulated blood.

The spleen was enlarged and softened to a pulp.


Case II. — Remittent Fever.

James Kelly, seaman, born in Ireland, aged 35 years, was admitted to the N. Y. Hospital, October 22d, 1840. He has within a few days arrived from Richmond, Va. At R. he got wet while out fishing; afterwards he was taken sick, and had, as he says, remittent fever.

On admission, he appeared evidently to have suffered much from sickness. His countenance was sallow; lips and tongue pale, and the latter coated in the middle and back part with a brown fur. He is exceedingly feeble, and has constant tremor; his tongue trembles when protruded; his pulse is feeble. He has no fever, and complains of no pain. His bowels are costive, and he says he sleeps none at night. He took at bed time B. calomel, and p. Dover. ½ gr. x, to be followed by ol. ricini in the morning, and was allowed a nutritious diet.

Oct. 24th. He feels much more comfortable. The tremor has diminished; pulse still feeble, not accelerated; no increased heat of skin; tongue clean; bowels regular; appetite improving. He took last night p. Dover, gr. x. The same to be repeated to-night, and continue nourishing diet.


Oct. 28th. Still improving, but slowly. His bowels having become constipated, he took last night pil. rhei. comp. No. ij, which operated freely. In addition to his diet, he is allowed to take, daily, one bottle of porter. (One pint.)

Nov. 8th. He has continued to improve slowly till to day; the tremor has returned, and he is quite feeble, scarcely able to walk. Complains of headache, and is quite dull and stupid. His bowels are regular. P. M. The above symptoms are aggravated; his head is hot, and his feet cold. Applied sinapisms to feet and legs, and cold to his head. Allowed him wine.

Nov. 9th. He appears better; has less tremor; head cool, pulse quite feeble. Has slight yellowness of the eyes, and complains of pain and soreness in the region of the liver. Continued the wine, and gave him pil. hydr. gr. v.

P. M. The stupor has returned, and is more profound than last night. The tremor is also increased; he is unable to speak. His bowels were moved once to-day; stool of a natural appearance. Repeat the pil. hydr. gr. v, and apply sinapisms to abdomen and feet.

Nov. 10th. He aroused from the stupor after a time, and passed the night pretty comfortably; this morning he is quite bright. His bowels have not moved. Repeat pil. hydr. and continue wine. P. M. The stupor returned; apply sinapisms to feet, and a blister over the region the liver, and repeat pil. hydr.

Nov. 11th. Symptoms all aggravated; stupor very profound; skin hot; pulse very feeble; respiration hurried; swallows with difficulty; passes his urine involuntarily.
His bowels were moved by an enema, and brandy substituted for the wine.
Nov 12th. Died at nine o'clock A. M.

Autopsy four hours after death. The skin was slightly yellow, especially where the epidermis was removed by the blister.

Head. There was slight opacity of the arachnoid at the base of the brain. The substance of the brain was firm, not congested; no effusion in the ventricles.

Thorax. There were old fibro-cellular adhesions, binding the right lung to the pleura costalis, slight emphysema of both lungs. The inferior lobe of the right lung was solidified, and when cut, resembled a spleen. The pericardium contained from four to six ounces of straw-coloured serum. The heart was healthy.

Abdomen. The liver was considerably enlarged, of a dark slate colour, and softened. The gall bladder was full of thick, tenacious, tar-like bile.

The spleen was enlarged and softened.

The stomach was normal.

In the lower portion of the ileum the oval patches were enlarged but not ulcerated. In the cæcum, the solitary glands were very much enlarged, but less so as they were removed from the ileo-cæcal valve.

The kidneys were normal.

J. M. Smith, M. D., Attending Physician.

Case III. — Remittent Fever.

James Malloy, a native of Ireland, aged 21 years, entered the N. Y. Hospital Nov. 3d, from the Croton water-works, having been sick nine days. The attack was ushered in by a chill followed by fever, headache, pain in his back and limbs, thirst, and loss of appetite. On admission his face was flushed; skin hot and dry; pulse soft, 84 per minute; tongue white in the centre, with edges and tip red; increased redness of the throat and fauces, with painful deglutition; he complains of severe pain in his head, back, and limbs; his bowels are open; has no pain in the abdomen, or soreness on pressure. There are no petechiae. Stimulating foot-bath, spts. Mind. and farinaceous diet.

Nov. 5th. A. M. Countenance less flushed; heat of skin moderate; pulse 84, soft; bowels regular; stools have a natural appearance; tongue moist; complains still of his head and throat. He has an exacerbation of fever every evening. Rep. Pediluvium, and continue the other treatment.

Nov. 6th. No material change, except that his bowels have been moved several times during the day; stools thin, in other respects natural; has no pain in the abdomen.

Nov. 6th. Treatment not changed.

Nov. 7th. He was last night seized suddenly with pain in the abdomen, just above the pubis, which had continued and increased through the night. This morning he is suffering intense pain through the whole abdomen, but more especially at the lower part. The abdomen is swollen, tense, and very tender when touched; hands and feet cold; pulse rather frequent and very feeble; counte-
nance anxious; intelligence perfect; tongue dry and clean; complains very much of thirst. His bowels have not been moved since yesterday, P. M.

Enema communis, sinapisms to the extremities, and hot fomentations to the abdomen. Wine to be taken freely.

Noon. The enema passed away without inducing a faecal evacuation. The pain and tension of the abdomen are increased; extremities still cold; pulse scarcely perceptible.

Continue wine and fomentations, and give Calomel, gr. v.; P. Opii. gr. 1 mix. every three hours.

Evening. There has been no abatement of the symptoms. Since 3 o'clock, he has vomited several times; at first a green, afterwards a brown fluid. The enema has been twice repeated with no benefit. The other treatment has been continued.

At 10½ o'clock, P. M., he died.

Autopsy 12 hours after death.

Body not emaciated; abdomen tumid and hard. On opening the abdomen the intestines were found distended with gas. Their external surface, as well as every other part of the peritoneum, was of a deep crimson colour, with here and there flakes of yellow lymph gluing the folds of intestine together. In the cavity of the abdomen, was found about a quart of a brownish thick fluid, consisting partly of faecal matter. On raising up the folds of intestine, the ileum was found to be perforated at a point about four inches from its juncture, with the cecum. The opening was large enough to admit the end of the little finger. On laying open the whole track of intestines, the aggregate glands of Peyer from the middle of the jejunum to the termination of the ileon, were found in the different stages of disease from simple enlargement, (as in the jejunum,) to ulceration with elevated inflamed irregular edges; and in one spot, as above referred to, perforation of all the coats. The mucous membrane between the inflamed patches appeared to be in a healthy condition, except in the lower portion of the ileum, (about three or four inches,) where the whole circumference of the intestine, including the ileo-cœcal valve, was in a state of inflammation and superficial ulceration. Many of the solitary glands were also inflamed and ulcerated. In the cœcum also, were numerous scattered ulcerations, similar to the above, but much smaller. The mesenteric glands were swollen, and some of them contained pus. In none were there any traces of tubercular matter. Those most diseased corresponded to the lower portion of the ileum.

The internal surface of the stomach was reddened, but its mucous membrane was not softened.

Liver of rather light colour; not softened. The gall bladder contained about an oz. of yellow watery bile.

The spleen not much enlarged, but softened.

Thoracic viscera were found in normal condition; except that on one side were traces of an old pleurisy.

Brain, not examined.

J. M. Smith, M. D., Attending Physician.
Case IV. — Remittent Fever.

Joseph Gilpatrick, a native of Maine, aged 26 years, seaman, was admitted to the N. Y. Hospital, Nov. 3d, 1840. About one week ago, while on the passage from Darien, Geo., he was taken sick. Several of the crew sickened at the same time; one of whom died at sea. Nothing definite can be learned in reference to his symptoms previous to his admission.

On admission he was extremely feeble and prostrate. Skin yellow; countenance sunken; body emaciated; intelligence pretty good; has no pain, tenderness, or swelling of the abdomen; bowels open; no diarrhoea; tongue white; pulse very feeble and frequent; extremities cold; he is very restless and tosses himself about.

Sinapisms and bottles of hot water to the feet and legs. Wine and beef tea freely.

P. M. He is sinking. Carb. Ammon. gr. v. in solution, was ordered to be given every hour through the night, in addition to wine, &c.

Nov. 4th, A. M. Slight improvement; pulse rather firmer; lies more quiet, and expresses himself better.

Continue wine and strong beef tea.

P. M. He inclines to sink, but his strength and pulse are both better than last evening. His bowels were moved once to-day.

Continue the wine and allow in addition brandy.

Nov. 5th. Continues about the same.

Treatment not changed.

Nov. 6th. About three o'clock this morning, he became insensible and unable to swallow; in which state he continued till evening, when he died.

Autopsy fifteen hours after death.

Surface of body yellow; considerable emaciation.

Viscera of Thorax normal.

Abdomen. The internal surface of the stomach reddened; mucous membrane not softened. Through the whole length of the ileum, the oval patches of Peyer were enlarged, and for the space of about twelve inches from the ileo-ccecal valve, were in a state of ulceration. The ulcers were of irregular shape, with elevated edges. In the cœcum were numerous scattered ulcerations, of a similar character of the size of a pea and upwards. Throughout the greater part of the colon, the solitary glands were enlarged.

Liver congested; gall-bladder filled with very thick tenacious bile.

Spleen enlarged and softened.

J. M. Smith, M. D., Attending Physician.

Case V. — Remittent Fever.

Robert Green, seaman, aged 14 years, native of England, was admitted into the N. Y. Hospital, Oct. 19th, 1840, P. M. He was at the time in a state of stupor; the temperature of the surface of the body was rather below the natu-
Hospital Reports.

ral standard; feet cold; pulse of moderate force and not frequent. He complained only of feeling cold.

The following history of his case was obtained from his friends. On the 17th inst. he came to his boarding-house complaining of slight illness. (He had arrived only a few days before from Darien, Geo.) On the morning of the 18th, he went out and obtained some medicine which purged him; that same evening he became delirious and stupid.

His feet were immersed in a hot foot-bath, made stimulating with mustard, and mustard poultices were applied to his feet and abdomen.

Oct. 20th. The stupor still continues, but is rather less than last evening. His bowels were moved twice last night; the evacuations have a natural appearance. He has no increased heat of skin, or acceleration of pulse. Repeat the sinapisms.

P. M. He remains about the same; has no febrile excitement, nor are there any indications of sinking. Repeat stimulating pediluvium, &c.

Oct. 21st. He became very restless during the latter part of the night, and had frequent copious discharges from the bowels. This morning he is quite prostrate; his pulse is very feeble; he is delirious, and very much disposed to toss about; complains of pain in the abdomen; the diarrhoea continues.

Wine and brandy were freely administered, and a sinapism applied to the abdomen, as well as bottles of hot water to his feet: but, notwithstanding, he continued to sink, and died at about 12 o'clock.

Autopsy twenty-two hours after death. External appearance not remarkable. The vessels on the surface of the brain were turgid with blood. The cortical substance was of a dark gray colour; the medullary portion was studded thickly when cut through, with red points, and in some places was a little softened. There was no effusion, either in the ventricles, or on the surface of the brain.

Abdomen. The stomach presented nothing remarkable. In the ileum, the oval patches of Peyer were found enlarged throughout its whole course, and most so in the lower portion near the ileo-cæcal valve. One of these patches presented numerous small ulcers. The mucous membrane was not altered between the patches.

In the colon numerous small ulcers were seen, surrounded by a bright red areola.

The spleen was about three times its normal size, and very much softened.

The liver was enlarged; of a dark slate colour, and very much congested with blood.

The kidneys were not altered.

The viscera of the thorax were normal.

F. U. Johnston, M. D., Attending Physician.

Case VI. — Remittent Fever.

Peter Slocum, coloured seaman, native of Massachusetts, aged 33, was brought to the N. Y. Hospital, Oct. 9th, 1840, in the evening, in a state of complete stupor. After the application of sinapisms to the abdomen and extremities, he revived and took some nourishment.
Oct. 10th. Rested pretty well through the night; complains of no pain; his skin is warm and moist; intellect not perfectly clear; pulse 108, feeble; tongue slightly furred. His bowels were moved yesterday. He arrived on the 5th inst. from Wilmington, N. C. Has been unwell since a day or two before his arrival, but continues to perform the duties of cook, till yesterday. Says he has had no chills, “but felt hot and thirsty,” and disinclined to eat.

Barley-water and gruel. At night, calomel, gr. v.

Oct. 11th. His bowels have not moved. He is rather stupid, but free from fever. Enema stim. At night Calomel, gr. v, P. Dover, gr. x. mix.

Oct 12th. Debility increased; tongue more furred; pulse 108, soft; skin moist; has no pain. He has slight fever with increase of stupor in the afternoon. Serpentaria Inf. and barley-water at night; calomel, gr. ii; P. Dover, gr. v. mix.

Oct 13th. Stupor increased; tongue dry and cracked; skin hot; pulse 120, rather fuller; has had but one passage from his bowels since the enema was administered.

Oct. 14th. Died between two and three o’clock this morning.

Autopsy ten hours after death. External appearance not remarkable.

Head. The dura mater was strongly adherent along the edges of the great fissure. The vessels on the surface of the brain, as well as in its substance, were congested with blood. Slight effusion of serum at the base of the brain.

Thorax. Both lungs were bound down by old and firm adhesions. Lungs congested with blood and serum. In the pericardium was found about two oz. of yellow serum. The left ventricle of the heart slightly hypertrophied; the mitral and tricusped valves thickened.

Abdomen. The stomach was very much congested on its internal surface, and covered with tenacious mucus. At the pyloric extremity, was a circumscribed surface about three or four inches in diameter, which was red, and elevated distinctly above the rest. Beyond, towards the cardiac extremity, were several large spots, from which the mucous membrane was entirely removed (as if it had been scraped off) The mucous membrane was very much softened.

Intestines. The mucous membrane was reddened and softened throughout the whole track. In the ileum the oval patches of Peyer were enlarged. In the colon there were numerous small ulcers.

Liver enlarged; of a dark chocolate colour and softened. Bile in the gall bladder thick like tar.

Spleen enlarged and softened.

F. U. Johnston, M. D., Attending Physician.

Case VII. — Intermittent Fever.

Edward White, native of Mass. aged 39 years, seaman, was admitted to the N. Y. Hospital, Nov. 6th, 1840.

About ten days ago, while on the passage from Savannah, Ga., he was attack-
ed with a chill followed by fever and sweating; has had a similar paroxysm every second day since.

He went on board the vessel at Savannah in a state of intoxication, and during the first part of the passage had "delirium tremens." He is now very much prostrated and broken down. Has constant tremor and occasional convulsions resembling epilepsy.

Had a chill followed by fever and sweating this afternoon. He is very restless, and shows symptoms of approaching "delirium tremens." Cap. calomel gr. v. P. Dover, gr. x. mix.

Nov. 7th. Rested tolerably quiet last night and appears much better this morning. Cap. Ol. Ricini. 3 ss. At evening Tr. Opii. gtt. xl.

Nov. 8th. Is more feeble and prostrate; feet cold, inclines to stupor and breathes with a stertor when he sleeps. Pulse feeble.

Sinapisms to extremities and take brandy freely.

He continued to sink till evening when he died.

**Autopsy** 18 hours after death.

**Head.** The arachnoid over the whole surface of the brain presented a milky appearance from disposition of lymph beneath it. There was also an effusion of serum beneath the arachnoid, particularly at the base of the brain, also a small quantity in the lateral ventricles.

Brain very much congested.

**Abdomen.** The internal surface of the stomach was very much reddened; mucous membrane not softened.

In the ileum the oval patches of Peyer were distinctly enlarged; in the lower portion they were very prominent but not ulcerated.

The Liver was of a dark colour and congested.

The Spleen was very much enlarged and softened to a mere pulp.

Thoracic organs normal.

J. M. Smith, M. D., Attending Physician.

**Case VIII. — Aneurism of the Aorta.**

James Newman, a native of England, aged 45 years, seaman, of dark complexion, short and stout, entered the N. Y. Hospital, Oct. 29th, 1839, with a pulsating tumour in the right side of the chest; the most prominent point of which is at the juncture of the third rib with the sternum. A portion of the cartilage of the third rib and also of the sternum have been removed by absorption and at this point the pulsation is very distinct and superficial. The integument over this part is red and tender. The whole tumour, externally, is about three inches in diameter, and about three fourths of an inch above the level of the surrounding parts; but at the point above referred to, the prominence is much greater. He suffers constant severe pain in the tumour, and also in the back opposite the tumour.

Percussion over the part gives so much pain that the exact size of the tumour internally cannot be readily ascertained. By auscultation two sounds are heard synchronous with those of the heart. The first is accompanied by a blowing
sound; the second is sharp and clear. The rough sound is most distinct over the point where the cartilage of the rib is deficient.

The impulse of the heart is moderate; the pulse natural in volume, but increased in frequency.

He suffers at times very intense pain in his chest; his general health is very considerably impaired; his mind is peevish and fretful, probably the effect of long continued suffering, and very free use of opium.

I have been kindly furnished by a friend with the following history of this case taken about nine months since, when he was a patient of this institution for some three or four months.

"On his admission he complained of severe pains in his chest, shooting occasionally down the course of the spine. On questioning him, this was all that he complained of. He has never had palpitation of the heart, or swelling of the feet. On examining the chest, however, a pulsation was distinctly felt, and even visible to the eye, about one inch to the right of the sternum, and on a line drawn between the nipples; over this point there was a slight dilatation. On percussion, the chest was dull all around this point for the space of two inches in diameter; percussion directly over the pulsating point, though performed gently, was quite painful. With the stethoscope two sounds were heard corresponding with the sounds of the heart. The first was rough and blowing, ("bruit de soufflet," ) the second was clear, short, and quick, and synchronous with the second sound of the heart. Pulse natural as to size and force, but in frequency 110 per minute.

"About one year ago he had an attack of pain similar to the present, but has never before noticed the pulsation. His respiration has never been embarrassed. About four months ago he accidentally fell from the rigging of a vessel to the deck lighting upon his feet. At the moment of striking he felt as if something had given away in his chest, and from that time has had a sensation of some rough body moving up and down in his chest."

The following diagnosis was at that time made. (December, 1838.)

"Aneurism by dilatation of the aorta near the heart."

He remained in the Hospital till March last, when he left to go to the Seaman's Retreat, Staten Island. While here his treatment consisted in the occasional application of cups and leeches to his chest and back, anodynes and laxatives, with a regulated diet and rest.

The only change in his condition at the time he left, was a slight increase in the size of the tumour, and aggravation of the pains.

Oct. 29th. Treatment. Opium to allay the pain, and procure sleep; occasional venesection; and rest with a mild, nutritious diet.

Note. While at the Retreat he was bled from the arm frequently.

Dec. 16. Nothing worthy of remark has occurred since his admission, except a gradual increase of the tumour externally, and also internally, as indicated by embarrassment of respiration, and displacement of the heart to the left. The apex now strikes just without, and two inches below the nipple. The functions of the heart do not appear to be disordered.

The following is the diagnosis given to-day by the attending physician:
"Aneurism by rupture of the internal coat of the aorta within an inch of the valves, with no obstruction to the calibre of the vessel, the tumour extending downward and forward, and pressing the heart to the left."

Sept. 18th, 1840. He has continued to support a life of extreme suffering and pain, till to-day he was delivered by death. Opium, though taken in large quantities, (from 3ij to 3ss of tinct. opii at a dose, daily, and sometimes twice a day,) has afforded him only partial and transient relief from his pains, which have been at times so severe as almost to drive him to despair. The increase of the tumour has been very gradual, but has not seriously embarrassed his respiration, or induced cough. There has been no oedema of the extremities, or serous effusions in the large cavities of the body. The pulse has maintained its strength, and the circulation throughout the body and limbs appears to have suffered no interruption.

No symptoms worthy of note different from those already mentioned, have occurred in the course of the case, till about three hours before death, when he began to sink apparently from internal hemorrhage.

Autopsy 24 hours after death. The external tumour which has become somewhat flattened since death, now occupies the space from the upper edge of the second rib, to the lower edge of the fifth on the right side, and is about equally extensive in the transverse direction. Its diameter is about six inches, its elevation about two inches.

On opening the cavity of the chest, the right pleura was found filled with fluid and coagulated blood, and the lung was collapsed. Both lungs were in a normal condition, except that they were bound to the walls of the chest by strong cellular adhesions. Immediately behind the sternum, the internal tumour was found to occupy a space rather larger than the external one, and to be about three and a half inches in thickness. The heart was crowded considerably to the left of its place; it was not enlarged, or otherwise diseased. The aorta was dilated as far as the arch; at one inch above the valves its circumference was six and a quarter inches. Its internal surface presented a very rough and wrinkled appearance, with deposition of earthy and bony matter beneath its inner coat. At one and a half inches above the valves, there was an opening one inch in diameter, through the anterior side of the artery, nearly circular, with smooth, rounded edges, communicating with the cavity of the aneurism.

On the right side of the tumour, between the fourth and fifth ribs, there was an irregular, lacerated opening communicating with its cavity, from which the blood doubtless escaped.

A very considerable portion of the sternum was deficient on the right side, involving the articulations of the cartilages of the third, fourth, and fifth ribs.

Case IX. — Cancer of the Stomach.

Nicholas Krimpfe, a German farmer, aged 46, was admitted into the N. Y. Hospital, July 16th, 1840. He has been a man of very intemperate habits. Twelve months ago he was attacked by severe pains in the scrobiic cordis. At the same time he found that he was unable to retain any food upon his stomach.
for more than an hour or an hour and a half. This has continued ever since, though there have been intervals varying from one to seven days, during which he has not vomited at all.

July 16th. He is very much emaciated; his countenance very sallow; his tongue is smooth and glossy; he complains of severe and almost constant pain in the epigastrium; he has frequent vomiting, especially after meals, of undigested food, and brownish flocculi, floating in a transparent mucus. His bowels are constipated.

One drop of the Hydrocyanic Acid was prescribed, three times a day. His diet to be arrow root. Bowels kept open by enemata.

Under this treatment the vomiting was checked for nearly three days; when on having been allowed to take some soup by the nurse, it again returned.

July 22d. Is still unable to keep any thing on his stomach. On the right portion of the epigastrium, a very distinct tumour, hard and resisting, can be felt through the abdominal parietes. The hydrocyanic acid is still continued. He was allowed some milk. Diagnosis, Carcinoma of Pylorus.

July 24th. The vomiting still continues; not being in the least checked by the Prussic acid. To relieve the pain at the “pit of the stomach,” enemata of Opium were administered.

July 26th. His extremities are cold; his pulse small, frequent, and feeble; he is continually inclined to sleep, and expresses no desire for food. There is some œdema of the hands and feet.

August 5th. He sunk gradually and died to-day. The œdema has increased considerably. The only nourishment he took was, occasionally a little milk punch.

Post-mortem examination. The arachnoid was slightly opaque at the base of the brain. An extensive effusion of serum existed, both on the external surface of the brain and in the ventricles. The vessels of the pia mater were perfectly bloodless.

The heart was of a lighter colour than natural. Considerable infiltration of serum in the posterior and inferior part of both lungs.

The pyloric extremity of the stomach adhered closely to the under surface of the right lobe of the liver. This viscus was filled with a reddish fluid of a nauseous odour, containing particles of undigested food. Its mucous membrane was white and elevated, by effusion of serum into the sub-mucous cellular tissue. At the pylorus was an ulcer of an oval form, about one inch and three quarters in length, and one in breadth, with irregular elevated edges of carcinomatous matter. Its base was formed by the liver. The pyloric valve was very irregular and thickened.

The remaining viscera were healthy. The only thing worthy of remark concerning them being their bloodless appearance.

Jas. Macdonald, M. D., Attending Physician.
Select Surgical Cases. By Alfred C. Post, M. D., one of the Surgeons of the New-York Hospital, &c.

Case I. — Injury of the head.

J. O. Kemp, sailor, born in Holland, aged 60 years, admitted into the New-York Hospital, Nov. 20th, 1838. Two hours before his admission, he fell from the deck into the hold of a ship, about 15 feet. It is not known upon what part of his body he fell. He was insensible from the time of the accident. There was vomiting and slight bleeding from the nose. The following symptoms were observed when he was admitted into the hospital. He was insensible, his pupils contracted and motionless, and there was strabismus. The extremities were rigid, and the whole surface of the body pale and contracted. Pulse regular, but small and feeble. Breathing somewhat stertorous. Constant moaning. The patient muttered to himself, and when roused by a loud call, answered in an inarticulate manner. He vomited after his admission, and there was an alcoholic odour in the last instance which was rejected. He moved his extremities freely. He had been bled before he was brought to the hospital.

After his admission, bottles of hot water were applied to the soles of the feet and sinapisms to the epigastrium, legs, and wrists. Warm and stimulating drinks were administered.

9 P.M. Since the last report, (two hours ago,) the respiration has become more decidedly stertorous, and the stupor more marked. He has vomited several times, and has brought up blood.

11 P.M. Some reaction has taken place. The pulse is fuller and more frequent, and the skin has become warm. Apply cold to the head. Let him have Croton oil, two drachms, followed by a cathartic enema. Sinapisms to different parts of the body.

21st, 2 A.M. — Rattling respiration.

4 A.M. Died.

Autopsy. Over the left ear about a drachm of coagulated blood was found, between the integuments and the occipito-frontalis muscle. On raising the cranium, a slight effusion of blood was found on the surface of the dura mater, beneath the upper part of the occipital bone on the right side. On raising the dura mater, coagulated blood was found beneath it, extending over the principal part of the right temporal region, and the right side of the frontal region; and, in a slighter degree, over the vertex and the occiput. Also in large quantity beneath the left middle lobe of the cerebrum. The inferior portion of the right anterior lobe of the cerebrum was lacerated and reduced to a pulp, which was intimately mingled with coagulated blood over a space of two and a half inches in length, one and a half in breadth, and three-quarters in depth. Slight laceration and softening of the outer side of the right middle lobe. Coagulated blood also upon the inferior surface of the right hemisphere of the cerebellum. A fracture without depression, extending through the roof of the orbit on the left side, from the crista galli to the middle of the lesser wing of the sphenoid bone.
Case II. — Injury of the Head, with Fracture of the Cervical Vertebrae.

John Welch, coachman, born in Ireland, aged 35 years, admitted into the New-York Hospital on the 31st December, 1838, at 11 A. M. Two hours before, he was riding one horse and leading another by means of a chain halter fastened around his wrist, when the horse which he was leading started, and dragged him from his seat. He was then dragged a considerable distance by the wrist, with his head on the ground. The following symptoms were observed at the time of his admission. The patient lay in a state of insensibility, with his eyes closed, and his mouth open. On examining his pupils, they were found to be nearly natural, moving freely when a lighted candle was brought near them. Respiration irregular and gasping, without stertor, but attended with constant moaning. Pulse slow, and so small as to be hardly perceptible. Skin nearly of natural temperature. The patient moved his upper extremities, while the lower ones remained perfectly still. The upper extremities were somewhat rigid, while the lower ones appeared to be relaxed. There was priapism when he was admitted, but this soon subsided. Respiration almost entirely abdominal; no vomiting. The head was shaved and carefully examined, but no fracture could be detected. Extensive ecchymosis was found beneath the integuments of the head. There were, also, several lacerated wounds of the scalp, not extending to the bone.

Sinapisms were applied to the legs and epigastrium, and bottles of hot water to the feet. Sulphuric ether was administered in small doses with water. Warm brandy toddy was also given.

6 P. M. More heat of skin; pulse somewhat fuller; respiration and deglutition improved.

10 P. M. More reaction: temperature of the surface above the normal degree. Apply cold lotions to the head: omit stimulants. Bowels opened by means of an enema.

January 1st. Died at 7 A. M. The frequency of the pulse, and the heat of the skin continued to increase until a short time before his death. No other remarkable change was observed.

Autopsy. On dividing the integuments of the head, several ounces of extravasated blood were found between the skin and the aponeurosis of the occipito-frontalis muscle, extending over nearly the whole arch of the cranium. The ecchymosis also extended down the back of the neck. On removing the upper part of the cranium, eight or ten ounces of fluid blood escaped, apparently proceeding from the sinuses. Two small lacerations of the dura matter were seen, one on each side of the superior longitudinal sinus, near its middle: the substance of the brain protruded through these lacerations. About twelve ounces of fluid blood were found at the base of the brain within the dura mater, supposed to have proceeded from blood-vessels which had been cut during the examination. On pressing upon the neck or face, venous blood passed back into the cranium. No fracture of the cranium was detected, nor any laceration
of the substance of the brain. On cutting down to the cervical vertebrae, a large quantity of semi-fluid blood was found surrounding them, and infiltrated through the substance of the muscles which seemed to be reduced to a pulp. The infiltration of blood extended in a less degree, through the whole mass of spinal muscles. The spinous processes of the 3d, 4th, and 5th cervical vertebrae were broken off.

**Case III. — Gunshot Wound of the Head.**

**James Hooker**, aged about 50 years, was brought to the New-York Hospital on Saturday, January 25th, 1839, at 7 P. M., with a wound in the head, which he had inflicted on himself with a ball from a small pocket pistol, about four hours before his reception. The ball had passed through the squamous portion of the right temporal bone, leaving a smooth round hole in the bone, considerably larger than the ball itself; the bone around this hole was not shattered, but the portion which was driven in was broken into a number of fragments, which were removed through the wound. The dura mater was lacerated, and a portion of the cerebral substance was found protruding at the seat of the injury. The middle meningeal artery was wounded, and there was considerable hemorrhage from it. A probe was gently passed through the wound, to the depth of three inches, without encountering any resistance. The patient was speechless, and nearly insensible; but when he was loudly called by name, he turned his eyes towards the person who called him. His pupils were slightly dilated, but were quite sensible to light. His eyes were sometimes open, and at other times closed. Pulse 130, small and feeble. Respiration laboured, but not decidedly stertorous; expiration attended with a puffing, like that of a person smoking a pipe. He had occasionally, slight convulsions, when the respiration became more hurried, and the eyes prominent and glaring, attended with foaming at the mouth, and general tremor of the body. The limbs were rigid: the patient sometimes moved the upper extremities, but the lower ones appeared to be motionless. The abdomen was much distended and tympanitic.

A crucial incision was made at the seat of the injury, and lint and compresses, saturated with cold water were applied to the wound; soon after which, the hemorrhage ceased. Sinapisms were applied to the epigastrium, legs and wrists, and bottles of hot water to the feet. Weak brandy toddy was occasionally given, and a stimulating enema was administered. The patient died on the following day at 4 P. M. No remarkable change had been previously observed in the symptoms.

**Autopsy** on Monday, at 12 M., about 20 hours after death. It was found that the ball had passed in a straight line from the point where it entered, in a direction to the left, upwards and backwards, to the opposite side of the head, and had been arrested by the dura mater lining the posterior part of the left parietal bone. In its course it had left a canal, which was filled with coagulated blood. The ball had passed through the entire thickness of both hemispheres of the cerebrum, and above the corpus callosum, having slightly opened the up-
per part of the right lateral ventricle, but having passed entirely above the ventricle of the left side. The ball was of lead, and weighed about a fortieth part of a pound; it was quite jagged on one side. A considerable quantity of coagulated blood was found on the surface of the cerebrum, and in the lateral ventricles.

The deceased had once been a respectable merchant, but intemperance had reduced him to poverty and wretchedness.

**Case IV. — Gunshot Wound of the Head. Recovery.** (I am indebted for the report of this case, to the politeness of G. W. Hulse, M. D. of the U. S. Army.)

*James Graham,* aged about 22 years, a private in the Regiment of Creek Volunteers, in October, 1836, near Fort Brooke, in East Florida, was wounded by a rifle ball, which struck the right parietal bone a little above the lower anterior angle. After receiving the ball, he rose from a sitting posture, and exclaimed to those near, that some one had shot him, but soon fell down into a state of insensibility. I saw him within fifteen or twenty minutes after the injury. He was then insensible, and in a comatose state, and could give no account of himself; the pupils were dilated and immovable, and there was stertorous breathing, with a slow and soft pulse. From an examination of the wound, it was evident that the ball had passed into the cavity of the cranium, though it had not penetrated the dura mater. The symptoms clearly indicated that there was undue pressure upon the brain. The direction that the ball had taken after entering the skull, was found to be upwards and forwards under the os frontis; and the place where it had lodged, as nearly as could be ascertained, was an inch or a little more, from the place where it entered.

A convenient flap was made at the wound, so as to expose the opening into the skull, and to make room for trephining. The projectile had made through the bone a complete perforation, which was smaller than sufficient to admit an ordinary rifle ball, although no fissure could be observed extending in any direction from the opening, and no portion of bone was found depressed.

A trephine was applied, and on removing that portion of bone-under which it was supposed that the ball had lodged, it was found lying upon the dura mater considerably flattened, and its diameter so much increased that it would have been impossible to have removed it by the same opening through which it had entered. In the subsequent treatment of the case, there was nothing unusual. The day following the operation, there was increased velocity and hardness of the pulse; about sixteen ounces of blood were taken from the arm, and a saline cathartic ordered. On the second day, pulse softer and less frequent; the medicine had operated well, and there was less insensibility. The patient conversed a little, and asked for something to eat.

In consequence of a march into the territory, I did not see him again for about ten weeks, when he rejoined his regiment perfectly well. But I was informed by Assistant Surgeons Low and Byrnes, who had charge of him in the mean time, that nothing unusual had occurred. The wound of the soft parts
healed slowly, a circumstance which has long been observed in gunshot wounds, especially where balls enter when their velocity is great.

Case V. — Iritis cured by Lugol's solution of Iodine.

Shepherd Cumberland, sailor, aged 23 years; admitted into the New-York Hospital, on the 15th January, 1838, with iritis of both eyes. The disease commenced two weeks before his admission. About four months before, he had had gonorrhœa, which had continued for three weeks. He had employed no remedies for the inflammation of his eyes, except the application of scraped potatoes, which relieved the pain. When he entered the hospital his gums were in a very spongy condition, although he had not taken any kind of medicine since he had been treated for the gonorrhœa. The inflammation of the iris was not very acute at the time of his admission; there was not much pain; the pupils were a little contracted, the left one slightly irregular; vision considerably impaired.

Treatment. A cathartic dose of calomel and rhubarb. C. C. temporibus, several times at intervals of two days. A blister to the back of the neck. Extract of stramonium smeared over the lids. Eyes fomented with a watery infusion of opium. The pupils became much dilated, the left one quite irregular. Three days after his admission, Lugol's solution of iodine, was directed in doses of five drops three times a day.

January, 29th. The symptoms have gradually subsided: there is now no pain nor abnormal vascularity; the irregularity of the pupil has nearly disappeared; the sight is almost perfectly restored. Discharged at his own request.

Case VI. — Iritis occurring soon after the exhibition of a mercurial course; cured by a subsequent course.

John Patrick, seaman, born in England, aged 23 years, admitted into New-York Hospital, November 17th, 1838, with phymosis and chancres within the prepuce. The prepuce was slit open, blue pills were given internally, and black wash applied to the sores. The mouth became sore, the chancres healed, and the mercurial remedies were discontinued.

December 19th. The patient was attacked with iritis. Ordered calomel gr. ij. and opium gr. ½ every three hours. Emp. Epispast. nuchæ. On the 21st, the gums became sore, and the iritis began rapidly to subside.

25th. Profuse salivation; excessive soreness and swelling of the mouth: the symptoms of iritis have nearly disappeared. The mouth was directed to be washed with a weak solution of the acetate of lead, and pills of acetate of lead and opium were given internally. In a few days the mouth became well, and there were no traces remaining of iritis.

Case VII. — Sequel of Iritis.

John Sutton, seaman, born in England, aged 39 years. Admitted into the hospital on the 3d February, 1838. In October 1837, he was exposed in a wreck-
ed vessel, to the changes of the weather, and was in water up to his arm-pits for four or five days. His right eye became inflamed and continued so until he came ashore, when he applied some eye-water without relief; in two or three weeks he went to sea again, and was wet all night in a leaky forecastle, in consequence of which his eye became more inflamed, and he became unable to see with it. He has been in the habit of drinking spirituous liquors freely while on shore, and has had several attacks of delirium tremens. When he was admitted into the hospital, the left eye was in a healthy condition: in the right eye the following appearances were observed. The iris was of a pale green colour, whereas that of the opposite side was of a clear blue: the distance between the cornea and iris on the right side, appeared to be twice as great as on the left: the anterior surface of the iris in the right eye, appeared concave instead of convex. The iris of the right eye was also somewhat tremulous; both pupils were contracted; the vision of the right eye was very indistinct, so that the patient could not count a person's fingers with accuracy when the other eye was closed.

Treatment. C. C. Temporibus. Pill. Hydrarg. gr. v., morning and evening. Extract of Stramonium to be applied to the eye-lids and their vicinity.

February 11th. The pupil of the left eye has dilated freely, while that of the right has remained in the same state of contraction.

During the month of February, the iris came forward to its normal situation, and acquired nearly the same colour as that of the opposite side, but it was not as bright; the pupil remained in a state of contraction. Vision appeared to be very slightly improved. In this state he left the hospital for the "Seaman's Retreat."

Case VIII. — Wound of the Throat.

George Waldron, wheelwright, born in New-York, aged 35 years, was brought to the New-York Hospital on the 15th January, 1839, at about 12 M., having attempted to commit suicide by cutting his throat with a penknife, about three quarters of an hour before his admission. The following symptoms were observed at the time of his reception. Face pale; eyes and mouth closed; pulse small and feeble. The wound was about four inches in length, opening into the upper part of the larynx between the os hyoides and the thyroid cartilage. A small portion of the upper edge of the thyroid cartilage on the right side, was cut off and drawn up by the thyro-arytenoid muscle. The wound was somewhat deeper on the right than on the left side. The right sterno-cleido-mastoid muscle was half cut through. The right superior thyroid artery was divided; but neither of the carotids was wounded. The patient breathed through the wound. The divided sup. thyroid artery was tied at both ends; and the lips of the wound were brought together by sutures and adhesive plasters. Aq. Ammoniac was applied to the nostrils; bottles of hot water to the feet, and sinapisms to the legs. The patient was laid upon his back with pillows under his head, so as to bring the chin towards the sternum, and thus to assist in keeping the edges of the wound in apposition. Moderate reaction soon came on, and the patient became able to speak and to swallow. Three days
after the injury the sutures were removed. Ten days after the injury the ligatures around the sup. thyroid artery came away.

From the time that reaction first came on after the injury, he had no unpleasant symptoms. About a fortnight after his admission, he had a slight attack of bronchitis, which yielded in a few days, to expectorant medicines. On the 9th February, he was discharged cured, the wound having completely healed up.

Case IX. — Inflammation of the Cellular Tissue of Throat.

Peter Clark, a robust Irish labourer, aged 38 years, was admitted into the N. Y. Hospital on the 1st May, 1840. Extensive phlegmonous inflammation of the right side of the upper part of the neck, extending over the base of the lower jaw, attended with a great degree of tumefaction and induration of the affected part; inability to open the mouth beyond half to three quarters of an inch; some pain in the part, but not very severe; an anxious expression of countenance, dyspnœa, &c. The inflammation commenced eight days before his admission, in consequence of his sleeping near a window which had a broken pane of glass. At the time of his admission I could not discern any fluctuation in the tumour. Pulse full and bounding. Venesection performed twice during the day; quantity of blood drawn, about thirty-two ounces. Two dozen leeches applied to the throat, followed by emollient poultices: cathartic medicines.

I saw him again on the afternoon of the same day, and detected deep and obscure fluctuation in the tumefied part. I made an incision, and found a small collection of purulent matter at the depth of about three quarters of an inch from the surface. On the following day I found the urgent symptoms much relieved; the discharge of matter was not however very free, and there was considerable induration remaining. After an interval of a day or two, a blister was applied over the surface of the tumour, after which the swelling rapidly subsided, and a marked improvement of all the symptoms took place. On the 12th May, when he appeared to be convalescent, he imprudently sat up, and exposed himself with his coat off, when he had a chill followed by an increase of the swelling and a return of the dyspnœa attended also with difficulty of swallowing. On the morning of the 13th I directed another blister to be applied over the swelling. On the evening of the same day the symptoms were more severe; dyspnœa and dysphagia increased, right tonsil and right side of the velum swollen and of a dusky red hue. Pulse full, strong, and frequent. Ordered a full venesection, to be followed by Tartarized Antimony, in doses of one grain every fifteen minutes until vomiting should take place.

May 14th. About twenty-four ounces of blood were taken last night, and seven doses of tartarized antimony were administered, which produced vomiting and purging. Pulse this morning soft, and skin moist. Ordered eight leeches to the throat, followed by poultices.

9, P. M. Little or no relief was given by the leeches. The general condition of the patient this evening appears worse; there is not so much dyspnœa, but more dysphagia and pain in the fauces. Pulse soft and compressible, skin moist. Finding a fullness on the right side of the velum, I punctured it with
a lancet, and gave issue to some purulent matter by which partial relief was given. Directed hot poultices to be applied and renewed every hour. If urgent dyspnœa should occur, let him take an emetic of sulphate of zinc and ipecac.

May 15th. Between one and two o'clock in the night a collection of purulent matter burst into his mouth, and he spit out a large quantity by which he was greatly relieved. He is in every respect very comfortable this morning.

25th. He has continued to improve since the last report: the tumefaction has nearly subsided, and no unfavourable symptoms have occurred.

Discharged cured.

Two or three years ago, a patient came into the hospital with inflammation of the cellular tissue of the throat, presenting a train of symptoms almost precisely resembling those of the case above detailed; but no fluctuation was detected at the time of his admission. He expired very suddenly during the following night; and on examination after death, a large gangrenous abscess was found in the immediate vicinity of the larynx.

It is a matter of great importance in cases of this kind to ascertain the existence of pus, and to give issue to it, at as early a period as possible.

Case X. — Injury of the Chest followed by Delirium Tremens and Pneumonia.

Benjamin Franklin, seaman, born in Massachusetts, aged 41 years, admitted into the N. Y. Hospital Nov. 16th, 1839; with injury of the thorax from a fall while he was intoxicated. The accident occurred two days before his admission. He had been on shore two weeks; during which time he had made free use of ardent spirits. The day before his admission he had been bled to 3xxj. When he was admitted, he complained of pain at the seat of the injury, which was at the lower part of the thorax on the right side; there was also difficulty of breathing and cough, which occurred soon after the injury. He was directed to be cupped freely over the seat of the injury: the cupping was performed in the afternoon, and in the evening he exhibited symptoms of delirium tremens. Laxative medicines were administered, and an anodyne draught containing thirty drops of the solution of sulphate of morphine. The anodyne was repeated in the course of the evening.

17th. The patient had a restless night. Ordered two ounces of brandy with one drachm of tincture of opium every hour, until he should become quiet. When he had taken four doses, amounting to half a pint of brandy and half an ounce of tincture of opium, he became quite comatose, with his pupils excessively contracted, and continued in this state until I saw him on the following day.

18th. Finding the patient suffering from the narcotic effects of opium as above stated, I directed sinapisms to the legs and epigastrium, epispastics to the thighs, and cold applications to the head. Strong and hot coffee to be administered very freely. He took about a gallon of the coffee during the day. — At 10 P. M., the pulse was full and tense, and the skin hot. Spt. Minderer.
35 ss. with Spt. Æther Nitros, 3ss. directed to be given every two hours. Solution of superthtartrate of potass to be taken freely as a drink.

19th. The febrile excitement has subsided, and the coma and extreme contraction of the pupil have ceased.

20th. Complains of an aggravation of the cough and pain in the right side, and is not able to take a full inspiration. Ordered a large blister to the side.

22d. Continuance of pain in the side; moaning; pulse feeble and rapid; rusty expectoration; dulness on percussion at the right and inferior part of the chest; bowels constipated. Ordered Calomel, gr. v. Cap. Ant. Tart. gr. ʒ; quay. hora.

23d. "Appears somewhat better.

25th. As the tartarized antimony acted on the bowels, it was combined with small doses of sulphate of morphine. The dose of Ant. Tart. has been gradually increased, and he now takes gr. j. every two hours.

26th. Continues to improve; rests better at night; cough not so urgent; sputa still tenacious and rusty. Ant. Tart. gr. j. every hour. Flaxseed tea with liquorice.


30th. Complains of pain in the shoulder. An abscess has formed near the knee, and has been opened to-day.

Dec. 20th. The patient has improved very much in his health, but he has still some cough, with dulness on percussion and feeble respiration on the right side; also pain in the right hypochondrium. Ordered pill Hydrarg. grs. v. noct. et mane.

Jan. 21st. Pain in right hypochondrium has ceased; bowels regular. Omit blue pill.

Feb. 1st. Applied tartar emetic ointment to the chest.

9th. Discharged, much relieved, but not entirely cured.


Martin Packard, seaman, born in Massachusetts, aged 27 years, was admitted into the N. Y. Hospital on the 16th November, 1838, with syphilitic pustules upon the limbs and scrotum. The pustules on the scrotum were numerous and umbilicated, resembling those of small-pox. The patient complained of pains in the joints, which were most severe at night. About eleven months before his reception, he had had primary syphilis, for which he took mercurials until his gums were affected. About five weeks after the soreness of his gums had ceased, he began to have pains of the bones, which was preceded by headache, and which were aggravated at night. The pains in the bones subsided, and an eruption appeared on different parts of the body. He described it as consisting of red pimpls, which afterwards formed scabs and left pits similar to those which are left by small-pox. He went to the hospital at New-Orleans, where he was apparently cured. While he was at New-Orleans, he had an attack of fever, which was probably of a remittent character.

The following treatment was adopted after his admission into the N. Y.
Hospital. Low diet; warm bath three times a week; antimonial solution followed by decoction and syrup of sarsaparilla, with Dupuytren's pill (containing deuto-chloride of mercury one eighth of a grain, and guaiacum two grains) three times a day. Under this treatment he appeared to be gradually improving, when, on the 16th December, he was attacked with the following symptoms. Chills, followed by severe pain in the back, head and legs; countenance flushed; skin somewhat hot; tongue coated with a yellow fur; bowels constipated; urgent thirst; tenderness of abdomen on pressure, especially in the right inguinal region. The patient lay on his back with his knees drawn up. Pulse frequent, but rather feeble. Respiration laboured, and performed chiefly by the intercostal muscles. He was directed to have mustard pediluvia, followed by sinapisms to the feet, and to take ten grains of calomel, with a drachm of pulv. purgans.

17th. Had passed a very restless night and without sleep. Complained of great pain in the head, back, and abdomen; eyes suffused; slight strabismus; ringing in the ears; occasional delirium; pain in the abdomen increased by pressure; respiration thoracic and hurried; slight cough, but no pain in the chest on taking a full respiration; countenance anxious; tongue thickly coated and dry towards the tip; pulse more frequent and feeble; urine scanty. The cathartic, which was administered yesterday, has produced one full evacuation. The patient vomited a green fluid about an hour after he had taken it. Dullness on percussion at the posterior part of the thorax on both sides, and in the same region, I was unable to detect the respiratory murmur. Ordered two grains each of Dover's powder, Antimonial powder and Calomel, every three hours; and a table-spoonful of the following mixture every hour:

Spt. Æther Nitros, . . . . . ⅓ss. mix.

Also small pieces of ice to be taken internally; iced water to be applied to the head, and sinapisms over the abdomen to the extremities, and between the shoulders.

Evening. No important change. Apply camphorated poultices over the abdomen.

18th. Seems better this morning; has some cough, and decidedly rusty expectoration; much less tenderness of the abdomen; pulse still feeble, but much less frequent. He has had three small, consistent evacuations from the bowels, of a dark colour; after which an enema was administered, which brought away a stool of a more healthy appearance. The pain in the head has nearly subsided.

19th. Patient obtained some sleep during the night; the tenderness of the abdomen continues to subside; slight cough continues, with rusty expectoration; pulse more full; omit powders. Ordered antimon. tart. gr. one fourth, in solution every two hours.

21st. Profuse salivation; saliva mixed with blood; mouth excessively swollen and sore; in other respects, the patient is much better. I directed the mouth to be washed frequently with a lotion composed of Goulard's extract, 3ss. and water ⅗viiij. Ten grains of Dover's powder to be given at bed-time.
30th. Mouth nearly well, since the salivation commenced; the cough, expectoration, and tenderness of the abdomen have entirely disappeared.

Jan. 15th. Discharged cured.


The number of patients remaining on the first of October, amounted to 69
The number received from that time to the first of December, amounted to 84
Making in all, 153
Of these there were discharged, cured, 60
" By request, 8
" Improper objects, 3
" Relieved, 1
" Died, 7

Remaining December 1st, 1840, 79
74 — 153

The following is a list of diseases of those patients who were discharged cured: —
List of those who were discharged by request: —
Fractures, 2 cases. Ulcers, 2. Excrema of leg, 1. Syphilis, 1. Talipes varus, 1. Total, 7 cases.
As improper objects: —
Ulcers, 2 cases. Scrofula, 1. Total, 3 cases.
Discharged relieved: —
Disease of skin, 1 case.
List of those who died: —
Severe injuries, 2 cases. Tumours, 2. Tetanus, 1. Hemorrhoids (attacked with dysentery,) 1. Disease of knee, (amputation performed,) 1. Total, 7 cases.

In this report, I shall give a few of the most interesting cases which were in the house during the months of October and November.
Case I. — Sub-maxillary Tumour. Tracheotomy.

John Ulabroph, 6 stat 21, milkman, born in New York, was admitted May 23d, 1840, with a swelling under the lower jaw which very much impeded his respiration. As far as could be ascertained, the first symptom he had of the disease was enlargement of the tonsils; one of these was removed last January. From that time, a hard, but not very tender swelling seemed to spread, until it reached its present size. It occupied the whole sub-maxillary region from one ear to the other, and reached down to the os hyoides, which was depressed by it. In the buccal cavity it had encroached very much, so that the tongue was protruded, and raised up. It was firmly fixed to the jaw and os hyoides. The patient could not open his mouth more than one third of an inch; deglutition was very difficult, and respiration exceedingly embarrassed. His face was very red, approaching round the lips to purple; countenance expressive of the greatest anxiety. The tumour had only affected his breathing for four days previous to admission, and as he had not slept during the whole time, he was very drowsy. He could not endure the recumbent posture for a moment.

May 24th. Slept none last night; breathing even more difficult than yesterday, each act of respiration accompanied with a loud moan. In consultation, laryngotomy was unanimously advised. It was performed by Dr. A. C. Post, at two P. M. in the crico-thyroid space. As soon as a free opening was made, the air rushed in with a hissing noise, and with great relief to the patient. The edges of the wound were drawn apart with threads passed through the skin, and this tied behind the neck. A few minutes after the operation he had a paroxysm of coughing, and threw out of the opening a large quantity of mucus. Soon after this he fell asleep, and during the afternoon was comfortable; occasionally however, throwing up a quantity of bloody mucus. He slept soundly until four o'clock next morning.

25th. Countenance improved; breathing easy, about 20 per minute; feels quite comfortable; bowels opened in the evening by an enema.

26th. Slept very well; breathing very easy; nearly every hour since the operation he has had a paroxysm of coughing, in which he would throw up blood mixed with mucus; after the paroxysm he would be comfortable. The tumour having previously been moistened, was touched to-day with the solid nitrate of silver.

27th. Doing extremely well; appetite very good. Is allowed milk and soft custard, which he swallows easily. A canula was introduced into the opening in the larynx; at first it created some irritation, which soon afterwards subsided. It remained in until 12 at night, when it became clogged with mucus and was removed.

28th. Canula introduced again early in the morning and kept in until three P. M., when it was removed, cleansed, and again reapplied — kept in until 10 P. M.

29th. Canula introduced again.

30th. The tumour coated over with tinct. iodine; canula still remaining.

June 8th. Keeps the instrument in for 24 hours without any difficulty.
10th. After removing the instrument to be cleansed this morning, the granulations seem to swell and close the opening, and nearly stopped his breathing. It was instantly put back again and he breathed with ease.

15th. The tumour under the jaw has diminished very much since last report and has become softer. It would probably present no difficulty to his breathing now, but there exists in the back part of his mouth a large projecting tumour which seems entirely to close the fauces. He opens his mouth so little yet, that the exact nature of the tumour cannot be ascertained.

19th. To-day he hawked up from the back part of his mouth a very large bad smelling slough, of a grayish colour, and as large as a good sized oyster. After the discharge of this slough he found he could breathe more easily through his mouth. It was not accompanied or preceded by any discharge of pus other than the usual muco-purulent discharge. On examination of the fauces, a small pendulous tumour can be seen on the base of the tongue, which has its origin on the right side, anterior to the tonsil. Posterior to this, and where the tonsil should be, is a cavity apparently the situation from which the slough proceeded. The external swelling has almost entirely subsided.

30th. Since last date he has improved rapidly. By closing the orifice in the trachea, he is able to speak, whistle, blow his nose, and breathe freely. His general health is pretty good. Since last report he has been out of bed most of the time, and several times out of doors. The sore is contracting. Granulations touched with caustic and dressed with simple salve.

July 1st. The tube was removed to-day and the orifice allowed to commence healing.

3d. The orifice has closed and he breathes freely through the natural passage.

9th. There is some slight increase of the swelling. Tinct. iodine applied over its whole external surface.

16th. The swelling has continued to increase very rapidly. It is principally confined to the parts immediately under the tongue and the anterior part of the jaw. It is very hard, but not painful. It does not yet affect respiration. On the 13th a dozen leeches were applied, but with no marked benefit. Ordered tobacco poultice.

20th. Tumour has not increased a great deal. He feels a throbbing pain in it to-day for the first time, and says he had occasional rigours all day yesterday. All kinds of local applications were made without benefit: leeches, blisters, ung. hyd. pot., &c.

Aug 4th. After a consultation, two deep incisions were made on the left side of the jaw, and one on the right side, penetrating through the genio hyoid fascia. These incisions bled very freely, and it was necessary to apply nitrate of silver to their surface; lint wet with cold water was then applied, and afterwards a large poultice. These measures were attended with but little benefit.

9th. The tumour has continued to increase so much, that there is now the greatest oppression of the respiration, and at times suffocation is imminent. Dr. Post opened the larynx in the same situation as before, and with immediate relief to his breathing. The disease still continued steadily to advance,
pushing upwards and protruding the tongue, which was itself very much swollen. His bowels were kept open by laxatives: his diet was principally milk.

17th. Two incisions were made, one into each side of the tongue: they bled freely. This gave temporary relief. The patient breathes very easily through the tube. A bread and milk poultice was applied over the tongue and mouth.

23d. His condition is somewhat improved: the swelling has somewhat diminished, especially under the jaw. The incisions are nearly healed, and he is able to walk about the ward. He complains of severe smarting in that part of his tongue which is protruded. This was relieved by the application of linseed oil and lime water.

Sept. 16th. Last night a considerable hemorrhage took place from the mouth, about 3 viij. of blood were lost, by which he was much weakened. On introducing the finger along the side of the tongue, it was imbued with a most disgusting smell, which could scarcely be washed off. He has now become much emaciated and feeble; he has also a severe catarrh, and the tube is almost constantly obstructed. His appetite continues very good, and he is able to be up occasionally for a time. The edge and lower surface of the tongue has become deeply ulcerated by the pressure of the teeth.

23d. Was attacked with severe diarrhoea, which weakened him very much, but was checked without much difficulty. His appetite lately has been enormous.

Oct. 2d. Without any change in the symptoms, he was found by the patients dead in his bed. For some days past he has appeared somewhat better; the tongue had diminished a little, but on the lower part the progress of ulceration and sloughing had nearly separated it.

Post-mortem examination. Emaciation extreme: the whole of the tongue back to its root was greatly enlarged, and of a cartilaginous hardness. The under surface of the tongue was much destroyed by ulceration and sloughing. All the surrounding parts were involved in an almost uniform enlargement and induration. The swelling was greatest on the right side, and had pushed the epiglottis backwards and to the left. The jaw against which this tumour had so long laid in contact, was very much thinned by absorption; and the teeth could not be brought together after all the soft parts had been removed, from the change in the ligaments and glenoid articulation. The edge of the opening in the trachea was slightly ossified, and the mucous membrane for an inch below the orifice was ulcerated, exactly of the shape and size of the side of the tube he had worn. There were no traces of inflammation of the air passages. High inflammatory redness of the cæcum, colon, and lower part of the small intestines. Head not examined.

A. C. Post, M. D., Attending Surgeon.
Case II.—Disease of Cartilage connecting the body with the lower epiphysis of the thigh-bone, and extending into the knee-joint. Amputation of the thigh.

John Ollsen, a farmer's boy, 15 years of age, was received into the New-York Hospital, on the 8th day of August, 1840. Nine months before his admission he was in good health, and able to attend regularly to his work. About that time, without any injury or other evident cause, he began to be affected with pain and swelling about the left knee, which continued to increase until ulceration took place, and the lower part of the os femoris was denuded and exposed to view. General and local bleeding, blisters, &c. were resorted to, but without any apparent benefit. When he was received in the hospital, he was in a state of extreme emaciation, like a person in the very last stage of phthisis. He was suffering also from hectic fever complicated with diarrhea, having five or six watery stools in 24 hours. Tongue clean and free from redness at tip or edges. The whole of the left lower extremity, from the groin downwards, was oedematous and enormously swollen; it was also painful and tender to the touch. A large ulcerated opening existed at the inner part of the knee, through which protruded what appeared to be the whole articular extremity of the os femoris, denuded of cartilage, and in a state of necrosis. A thin band of integument covered a portion of the bone at the time of his admission, but within three days it gave way. There was a very profuse discharge of thin and imperfectly elaborated pus issuing from the ulcer, and bathing the whole limb. A common probe could be passed up its whole length along the thigh bone, which was divested of periosteum. There were ulcerations over the sacrum, the left trochanter, and the left heel.

The following treatment was directed on the day of his admission: five grs. of Dover's powder and one grain of camphor, to be taken three times a day; the whole limb to be smeared with extract of stramonium, and his diet to be restricted. After a few days the swelling and pain of the limb were considerably diminished, but the discharge from the ulcerated parts continued to be profuse and unhealthy.

In addition to the treatment before recommended, a grain of sulphate of quinine was directed to be given three times a day. About this time he was much annoyed by the presence of great numbers of maggots, which increased the pain and irritation of the limb, and from which it was found impossible wholly to relieve him, as they concealed themselves in the deep cavity which extended along the thigh bone. These symptoms remained nearly stationary, until August 29th, when it was determined in consultation to remove the thigh. Accordingly, on that day, Dr. Post amputated the limb at the inferior part of the superior third: he made two flaps, one on the inner and the other on the outer side of the thigh. Very little blood was lost during the operation. The incisions were found to have passed through an abscess, which extended upwards an inch or two along the posterior part of the bone, the surface of which was in a state of necrosis. After securing the vessels, the flaps were covered.
with lint dipped in cold water, and kept moist for four hours, when they were brought together and retained in contact by means of sutures and adhesive plasters. At the posterior part, a tent of lint was inserted to drain off the discharge.

Dissection of the amputated limb. On examination it was ascertained that the projecting portion of the thigh bone was not the articular extremity; but the end of the shaft of the bone which was detached from its epiphysis, which remained in situ, attached by its ligaments to the head of the tibia. There was ulceration of the articular cartilages, but not to any great extent. The ligaments were entire. The principal mischief seemed to have existed in the cartilage connecting the body of the thigh bone with its lower epiphysis. Nearly the whole of that portion of the os femoris which was amputated, was rough on the surface, and a large portion of it was entirely denuded of periosteum. The same morbid condition existed to a certain extent in a part of the stump which was left. There was a large abscess in the thigh extending upwards, beyond the place where amputation was performed. There was also a large abscess in the leg.

Aug. 30th. Passed a comfortable night: feels better than before the operation. Has had but one evacuation from the bowels; pulse 104.

31st. The dressings being moistened by a purulent discharge, were removed, and fresh ones applied; but little adhesion had taken place; there was a free purulent discharge of an unhealthy quality.

Sept. 4th. Since the last report the patient has taken ¾ gr. of opium and ½ gr. of camphor once in four hours, and two ounces of compound infusion of gentian, three times a day; farinaceous diet, with a small quantity of meat in the middle of the day. The wound has been dressed daily, and the discharge has decidedly improved in quality. Pulse 90. Three or four evacuations from the bowels in 24 hours.

Oct. 16th. After the last report, the patient improved in appetite and strength: the looseness of his bowels were diminished, but never wholly restrained. The ulcer on his back, however, increased in number and in depth; and within the last week or ten days, he has had cough with free expectoration and profuse night sweats, and has been gradually sinking. To-day he died. No post-mortem examination was permitted.

A. C. Post, M. D., Attending Surgeon.

Case III.—Fall from a window in the fourth story; death several hours after the accident; fracture of the ribs; laceration of the liver, diaphragm, and pericardium; singular displacement of the stomach, and a portion of the intestines in the pericardial sac, &c.

Michael Burk, aged 45, Ireland, labourer, was brought to the Hospital on the evening of the 1st of October, having fallen from a fourth story window to the ground, striking upon an out-house. He was cold, almost insensible, nearly pulseless, and moaning constantly. As soon as he was put to bed, a large sina-
pism was applied to the abdomen, and bottles of hot water to the feet. Warm brandy toddy, with carb. ammon. were administered. He rallied a little in an hour, warmth began to return, and he could speak. He was very restless, pulse irregular and small. Several ribs on each side were broken. Stimulants were freely given until he died, which was at two A. M. of the 2d Oct.

Autopsy eight hours after death. On opening the abdomen, a large quantity of bloody fluid flowed from it. The liver was found ruptured in several places. Some of these lacerations were superficial, and did not include the peritoneum; one just to the right of the gall-bladder, on the anterior edge of the liver, was about an inch in depth. The cellular tissue of the abdomen was much infiltrated with blood. On turning up the sternum a most extraordinary displacement was seen. The diaphragm was lacerated to the extent of four inches at that part where it is in contact with the pericardium. Through this opening the entire stomach, the transverse arch of the colon, and some folds of the small intestines had been forced into the pericardium. Another rather smaller laceration of the pericardium existed at its upper part, through which the colon and small intestines had passed into the left side of the chest, and lay in contact with the left lung, which was collapsed. The lesser curvature of the stomach lay against the left side of the heart, which was pushed very much backwards, and to the right. The cellular tissue of the mediastinal space were filled with blood. Most of the ribs of the right, and several on the left side, were fractured at different points. The other organs were healthy. Head not examined.

Case IV. — Tetanus.

William M. Clark, aged nine years, born in New-York, admitted Oct. 3d, with compound fracture of the right fore-arm. He had fallen but a short time before admission from a tree to the ground, a distance of 45 feet. There was a compound fracture of the radius about three inches above the wrist joint, and a simple fracture of the ulna. The lower fragment projected about an inch. Finding that it was impossible to reduce the bones, Dr. Cheesman sawed off a small portion of the radius.

Oct. 5th. Swelling very considerable, with much pain. Splints applied to the limb, and the whole placed in an arm-bath of tepid water. Pulv. Dov. gr. v at night.

6th. Cold opiated spirituous lotions constantly applied. Arm supported in a splint.

12th. Swelling so much reduced that the wash was discontinued, and the sore dressed with Ung. Peruv.

15th. Has complained for a day or two of much pain about the arm, though otherwise he has been quite well. Last night he was very restless, with a great deal of pain in the arm; occasionally something like convulsions occurred. This morning he has every symptom of tetanus. His jaws cannot be opened more than a half an inch; the abdominal muscles are hard and contracted; slight spasms occasionally occur, during which the body is bent backwards; complains of pain shooting from the arm to the neck, and of pain in his back
Pulse 96, moderately full; skin moist; tongue somewhat furred, and bowels constipated. A poultice was applied to the arm instead of the Peruvian ointment.

_β_. Protochlor, hydr. gr. vj.
Pul. jalap, gr. x. Mix.

This to be given immediately.

An opiated cerate, ʒi, to ʒi, was ordered to be rubbed along the spine three times a day, for 15 minutes, and ung. stramon. in the same manner on the anterior part of the body; also carb. ferri. grs. x. every two hours; the dose to be increased as rapidly as he can bear it.

4 P. M. Had a severe convulsion, which assumed the character of opisthotonus. Complains of much pain. Pulse 100; no heat of skin.

16th. Countenance much changed; has assumed the expression peculiar to tetanus; can scarcely separate his teeth a quarter of an inch. During the morning he had several very severe spasms. Pulse 120, weak.

12 M. An enema ordered, as the purgative medicine ordered yesterday had not moved his bowels but once, and that very slightly.

6 P. M. Appears to be rather better than he was this morning; the enema operated freely. Pulse 120, weak.

17th. Passed a very bad night; slept very little, as he had frequent and severe spasms nearly all the time. This morning he complains of headache and pain in his chest. The carb. ferri. has been regularly continued; he now takes fifty grs. every two hours.

12 M. Sol. sul. morph. gtt. v. to be added to the powder; this to be increased one drop every two hours. During the afternoon the spasms were less frequent, and he slept some. His diet throughout has been unrestricted, soup, custard, milk, &c.

18th. Passed a very bad night; spasms very frequent and severe; he slept however a good deal. This morning the effects of the morphine are evident. Contracted pupil, and stertorous breathing. It was omitted for a short time, and again resumed, commencing with gtt. iij. and slowly increased.

2 P. M. Spasms very severe; the severe ones occur every hour or two; the slighter ones every few minutes. In the interval the muscles are relaxed.

5 P. M. A simple enema ordered, which operated freely; he has had no spasms this afternoon, and seems in every respect better; he is brighter, and talks freely.

9 P. M. Had an exceedingly severe spasm, in which he seemed to be almost gone. The spasms recurred more and more frequently until about 5 A. M. of 19th, when after lying in a convulsion about 20 minutes he was found to be dead. His friends would not allow a post-mortem examination to be made.

John C. Cheesman, M. D., Attending Surgeon.

**Case V.—Wound in the Abdomen.**

George Stevens, aged 24 years, Connecticut, tailor, admitted Oct. 4th, with several wounds received a few minutes before in a fight. There were severa
small cuts in the face, one or two on the left side of the chest and abdomen, not penetrating deeply however. The principal wound was about half an inch long, situated two or three inches to the right of the umbilicus; this penetrated very deep, having been inflicted with a long Spanish dirk knife. The wound had been closed before his admission by a stitch, and adhesive plaster. On removing the stitch the direction of the wound was found to be obliquely outward; a portion of omentum was also protruding. The probe passed freely from the external wound into the cavity of the abdomen. He complained of being very cold; and experienced great pain in breathing. Pulse small and frequent. The omentum was returned, and a deep suture passed through the edges of the wound; a compress was applied, and a firm bandage round the belly. Took some warm tea and had bottles of hot water applied to his feet. During the day he complained of great pain over his whole abdomen, principally however in the epigastric region.

10 P. M. Pain had become very severe; abdomen swelled and tender to the touch. Pulse 120; two dozen leeches were applied, and the bleeding kept up by warm poultices. Ice allowed freely with effervescing draughts.

Oct. 5th. Has experienced much relief from the leeching; abdomen still slightly tender, but without much pain. Pulse 80. Has had two natural free passages.

6th. Continues comfortable, no pain on pressure of the abdomen. He however complains of pain on breathing in the right hypochondrium. Low diet and rest.

15th. Appears perfectly well; wound dressed to-day, nearly well.

18th. He was discharged cured.

John C. Cheesman, M. D., Attending Surgeon,

Case VI. — Malignant Tumour of the Neck, containing scirrhus, encephaloid and melanosis. Operation. Rapid re-production of the morbid deposits.

Michael Saxton, aged 53, Ireland, cartman, admitted July 7th, with a tumour on the left side of the neck, extending from the lobe of the ear to within an inch of the clavicle, measuring over its most prominent part five inches. Behind it overlaps the mastoid process; in front it extends nearly to the larynx and trachea. It is divided into two portions, of which the uppermost is prominent, and adhering to the skin covering it, which is of a red colour. The transverse measurement over this part of the tumour is four and a half inches. The tumour itself is painful. The lower portion is less prominent; the skin over it is loose and not discoloured; transverse measurement over it three and a quarter inches. No part of the tumour seems to have any strong adherence to the subjacent parts. The general health of the patient is good, although he has been in the habit of drinking freely of ardent spirits. Says that two years ago he noticed a black wart, of the size of a pea, just below the lobe of the ear. About a year ago he cut it off with a razor, after which time the tumour began to be developed. It has only been painful for a few months past.
11th. Dr. Post removed the tumour with the integuments: the separation of the tumour from the surrounding parts, was chiefly effected with the handle of a scalpel and the fingers. After removing the principal tumour, two others of a smaller size were discovered, more deeply situated, which were also removed in a similar manner. The patient seemed to be considerably exhausted at the close of the operation. The lower part of the wound was brought together by sutures; the lips at the upper part could not be brought into contact, in consequence of so large a portion of integument having been removed. The principal tumour consisted of three portions, of which the largest was situated above, and presented the character of true scirrhus; the lowest bore the marks of the encephaloid degeneration, and the smallest portion which was between and behind the others, was a perfect specimen of melanosis. Of the two smaller tumours, one did not exhibit any traces of malignant disease, whilst the other, which was about the size of a hickory nut, had the character of melanosis.

12th. Pulse 130, force moderate; skin moist and of natural temperature; complains of some soreness in the wound and in the throat, otherwise comfortable.

13th. Rested well. Pulse 84; tongue moist, yellowish fur in the middle; complains of difficulty in swallowing. No stool since the 11th. Ordered a cathartic enema.

14th. Pulse 76; difficulty of swallowing diminished.

15th. Able to sit up; wound dressed; healthy suppuration.

Aug. 1st. Every thing has apparently gone on favourably until to-day, when, for the first time, a prominent mass was discovered in the midst of the granulations. It was the size of half a small filbert, of a slightly livid colour, and a soft elastic feel.

2d. Punctured the prominent mass; some bloody fluid flowed out. Applied nitrate of silver freely.

Aug. 5th. Fungal growth increasing — nit. argent. again applied.

Oct. 22d. A few days after the last report, grs. v. of Per. Chlor. Hyd. was applied to the protruding fungus, and the application was repeated at intervals of two or three days, until the 1st of September, when the fungus was reduced below the level of the skin. The application at first was not painful, but after a few days it began to be so. A glandular swelling, about the size of a large filbert, covered by discoloured skin, appeared below the fungus growth. On the 1st of September he left the hospital, but returned in ten days with great increase of fungus growth. One or two applications of corrosive sublimate were again made, but without any beneficial effect. The fungus has since increased rapidly, and has attained an enormous size, discharging a large quantity of offensive sanies, and attended with much pain and constitutional irritation. To-day he died. No autopsy was allowed.

ALFRED C. POST, M. D., Attending Surgeon.
Case VII. — Wound of the Labium.  Poisoning by an over dose of Tinct. of Cantharides.

Margaret Davis, aged 29, born in Massachusetts, married: admitted October 24th, with a wound of the labium, which had been received about seven hours previous to admission. It had been inflicted by a pointed instrument which entered the left labium, dividing part of the nympha, and penetrating backwards into the vagina. The wound had been dressed before she came in. On removing the dressings, the parts were found to be much swollen and covered with blood. She, herself, was in a state of intoxication.

Treatment. A cold poultice was applied to the wound, and a catheter after some difficulty passed into the bladder, and her urine drawn off.

25th. Has become sober and in a better condition. Complains of much pain and soreness in the injured parts. Anodyne at night.

26th. Slight symptoms of delirium tremens showed themselves this morning. Ordered porter and whatever food she seemed disposed to take: still unable to pass her water.

10 P. M. Quite restless and flighty; ½ ss. of tinct. lupulin added to a half pint of porter, was given. Water drawn off with a catheter.

29th. In every respect better; fell asleep soon after taking the lupulin and porter, and did not awake until 7 A. M.

10 P. M. Water drawn off and lupulin given again.

Nov. 1st. Symptoms of delirium tremens subsided. She complains of no pain in the wounded parts.

Nov. 12th. Since last report she has been walking about, and indeed is well in every respect, except that her urine has to be drawn off. ½ j. of tinct. canthar. ordered gtt. x. of which to be taken three times a day.

13th. At half past six this morning, the patient first made known that she had taken the whole of the tinct. canth. (½ j.) ordered yesterday. She took it about mid-day. When questioned as to the cause of her doing so, she said she thought it would cure her sooner. It was remarked by different persons in the house, that during the afternoon she appeared as if intoxicated or crazy. Her condition this morning was as follows: excruciating pain over the whole abdomen, which is increased by pressure; the pain, however, is most severe over the hypogastric region and scorbiculus cordis. The abdomen is swollen to the size of a woman's at the full period of utero-gestation, tense and tympanic. Pulse not much accelerated; tongue rather pale and dry; face flushed, with an anxious expression of countenance. During the night she had passed about a pint and a half of urine, which was mixed with organized lymph and a substance resembling what is called mother of vinegar. Ordered hip bath, and the following prescription every two hours.

R. Pulv. opii. gr. j.
   " camph. gr. ij.
   ft. pill.

Flaxseed tea to be drank plentifully.
Grisolle on Pneumonia. [January,

6 P. M. Patient very feeble; pain still severe, worse if any thing than in the morning; extremities cold, pulse scarcely perceptible. Ordered bottles filled with hot water to be applied to the feet, and hot fomentations to the abdomen.

11 P. M. As her pulse had become more full, and the pain continued very severe, especially in the hypogastric region, xx leeches were applied, and afterwards a large poultice. Pill of camphor and opium to be continued throughout the night. Urine drawn off with a catheter.

14th. Patient delirious. The swelling of abdomen slightly diminished; on pressure she seems to experience no pain; during the night passed some urine.

Flaxseed tea continued; pill stopped; fomentations of hops applied to the abdomen.


15th. Patient comparatively comfortable. Swelling of the abdomen entirely gone; pain in the region of kidneys and bladder still continues, though in a less degree; urine drawn off at night, and 20 drops of morphine given.


17th. Patient much better; pain subsiding.

27th. Patient entirely well of all her difficulties; her urine has still to be drawn off by a catheter.

Discharged this day by request.

J. C. Cheesman, M. D., Attending Surgeon.

A Memoir on Pneumonia. By A. Grisolle, M. D. late Clinical Chief to the Medical Faculty at Hotel Dieu, Paris. Translated from the French.

The labours of Laënnec, Andral, Chomel, and Louis, have contributed a great deal to illustrate the subject of pneumonia. Indeed the history of this disease is more complete than that of most other diseases. There are, however, many obscurities connected with the causes, the diagnosis, the prognosis, and the treatment, which yet remain to be investigated and explained. It is my intention to attempt the explanation of some of these disputed points, and for this purpose I will offer a summary of some of pneumonia that entered the clinical wards of the Hotel Dieu, from Nov. 1835, to June 1836.

I observed and noted everything relating to the actual condition of the patients on the same day they were admitted into the Hospital. I also
inquired carefully and particularly about their age, their general health, their previous diseases, their mode of living. My attention was particularly directed to the exciting causes of the disease, and to the precise period when it commenced. In noting the actual condition of the patients, I examined the state of all the functions, except that of the urinary organs, which I unfortunately too often neglected. I watched with attention all the changes in the disease, and if any thing of importance escaped my notice, or was misunderstood, it was always easy to correct my errors by the assistance of the skilful professor, (M. Chomel) in whose service I was employed.

I do not pretend to write a complete history of pneumonia — the materials I possess do not warrant such an attempt; I only intend to present the facts I have observed, in a practical point of view.

Influence of temperature. — It is a received opinion both with the profession and the common people, that the principal cause of pneumonia is a sudden change of temperature. The only way to establish the truth of this opinion is to state the facts of each case numerically. And here I would remark that the loose way in which most authors have examined the subject, entitles their opinions to very little respect. If these observers found that their patients were unable to state the precise time, place, and circumstances under which an exposure to cold caused the disease, they were still willing to admit its existence by supposing that their patient had forgotten it, instead of declining to form any opinion on a subject unsupported by facts.

In examining a patient to know if he has been exposed to a sudden chill, the inquirer should take care that he is not deceived. If he simply ask the patient, were you exposed to cold? he will commonly answer in the affirmative. But if the inquirer is a little more precise, he will commonly find that the patient has mistaken the chill that marks the invasion of most acute diseases, and particularly of pneumonia, for an exposure to cold. Again, other patients mistake that increased sensibility to cold, which attends the commencement of acute diseases, for an actual exposure. Another source of mistake is that many patients acting under the general impression that an exposure to cold is the exciting cause of the disease, are willing to state its existence, while in fact they remember nothing of the kind. In order, therefore, to arrive at the truth, it is necessary to establish in the clearest manner how this exposure took place, and what were its immediate effects. For the action of cold being almost instantaneous, its effects cannot be regarded as real and indisputable, unless the precursory symptoms of the disease appear within 24 hours after the exposure. I examined my fifty cases of pneumonia with
these precautions, and I found that only ten, one fifth, had been subjected
to this exposure; all of whom were sweating when the cold acted upon
them. In four of these cases, the symptoms of pneumonia developed
themselves immediately; in four, after an interval of several hours; in
two only, after an interval of 24 hours. I have also examined my patients
in relation to exposure to cold, and to every other supposable cause of
the disease that might have occurred during the week preceding the at-
tack, and with the exception of the ten cases already mentioned, I never
could detect the operation of any cause. It follows from this, that the
causes of the disease are commonly unknown. I agree entirely with M.
Chomel in the opinion, that what are commonly supposed to be the exci-
ting causes of pneumonia, have really very little to do with the produc-
tion of the disease. In this, as well as in most other diseases, the essen-
tial cause is beyond our reach.

Influence of Age. Authors do not agree as to the influence of age in
the developement of pneumonia; but this important fact is established,—
that age has a very great influence upon the mortality of the disease:
this, the following tables prove.

Age and Mortality in 1836.

<table>
<thead>
<tr>
<th>Years.</th>
<th>Cases</th>
<th>Died.</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 16 to 20</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>20 to 40</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>40 to 60</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>60 to 77</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Age and Mortality for

<table>
<thead>
<tr>
<th>Years</th>
<th>1832</th>
<th>1833</th>
<th>1835</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 16 to 20</td>
<td>0 in 6</td>
<td>0 in 7</td>
<td>0 in 5</td>
</tr>
<tr>
<td>20 to 40</td>
<td>1 in 7</td>
<td>1 in 8</td>
<td>1 in 5</td>
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<tr>
<td>40 to 60</td>
<td>1 in 4</td>
<td>1 in 7</td>
<td>1 in 3</td>
</tr>
<tr>
<td>Above 60</td>
<td>1 in 2</td>
<td>2 in 3</td>
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</table>

It must appear evident, after an examination of the above tables, that
the younger the patient the less the danger. I wish, however, to re-
mark in this place, that I do not pretend to establish the fact that the dis-
ease is less dangerous in proportion to the youth of the patient; indeed
my friend M. Ruiz, and also Dr. Gerhard of Philadelphia, have remarked
that pneumonia in children, after the age of 6 years is a mild disease,
while before that period it is far more dangerous.

It must now appear very evident that the age of patient is a point of
the greatest importance in estimating the effects of different modes of treat-
ing pneumonia. Prof. Bouillaud has paid no attention to this circum-
stance in the construction of the tables which he has published to prove the superiority of his mode of treating the disease. This is an important omission, for we thus want the means of forming an accurate prognosis, and of course of judging of the real value of the proposed mode of treatment. This omission of Prof. Bouillaud, is the more extraordinary, because to use his own expression, his object is to overcome those who oppose his mode of treatment, with their own weapons, i.e. by figures. But this skillful physician ought to have known that his opponents employ, at the same time the numerical and the analytical method. Their tables contain every thing relative to the age, sex, constitution, &c., of their patients. I wish to remark here, that the numerical method is not a mere business of adding up figures, a task that a common shallow-pate might accomplish — but requiring the exercise of great intelligence, embracing problems that demand for their solution much honesty of purpose, zeal, judgment, and a degree of perseverance that no obstacle can overcome.

**Influence of Sex.** It is probable that sex exerts a certain degree of influence upon the favourable termination of pneumonia. The male sex is more subject to this disease than the female, but the mortality is less. Thus 6 of 14 females died: while of 36 males, only eight died. The same difference in the result was noticed during the years 1832–33–34 and ’35, although the same plan of treatment was adopted. It is important, however, to notice, that during the year 1836, the medium age of the female patients who died was 58 years, with the exception of one who was 24 years old; and that in three of these cases, the disease had reached its third or suppurative stage, before the patients entered the Hospital. These circumstances undoubtedly had great effect in increasing the mortality.

**Seat of the disease.** Twenty-six of the patients were affected with pneumonia of the right lung; in 16, the left was affected; in 8 cases both lungs were affected. Pneumonia affecting the summit of the lung, was frequently noticed, occurring 20 times in the 50 cases: of which number 4 proved fatal; a proportion not larger than that noticed when other portions of the lungs are affected. The age of the patient did not appear to have had any influence in localizing the disease, for more than half the patients thus affected were between 16 and 40 years of age — but not so with the mortality. The medium age of those who died with pneumonia of the superior lobe, was 48 years.

Pneumonia affecting the left lung was observed to be rather more fatal than where the right was the seat of the disease. The same fact was noticed in the cases that occurred in 1832–33–34 and ’35. This therefore, can hardly be an accidental circumstance. Pneumonia affecting both lungs is the most fatal form: in 1833 and ’35, half these cases terminated fa-
tally; in 1832, the proportion was one in four; in 1834, it was seven in eight; and finally in 1836, it was five in eight.

*Symptoms.* — The symptoms of pneumonia in the first and second stage of the disease are, more or less severe pain in the side, the crepitant rattle, the bronchial respiration, bronchophony, high febrile excitement.

Notwithstanding the just importance of auscultation and percussion in the diagnosis of this disease, still there are cases, especially at the commencement, when they afford us no assistance. Indeed, in order that these signs may exist, it is necessary that the disease should affect a superficial portion of the lung; if it affects the central portion they are wanting; if the characteristic expectoration and the stitch are wanting also, then the true nature of the case must be doubtful. The different organs examined with care exhibit no signs of inflammation, and yet the chills at the commencement, the high febrile excitement necessarily lead to the suspicion that inflammation exists. In a case attended with difficulties like this, the practitioner may gain some light by remembering (if such be the fact) that inflammatory affections of the chest are prevalent at the time, and will thus direct his attention again to the lungs. During the past winter I have seen Prof. Chomel, guided by this fact, decide that a pneumonia existed when no physical sign to indicate it was present, and which afterwards became evident to every one, when the disease extending from the centre to the surface of the lung developed the crepitant rattle, and the bronchial respiration. In obscure cases of this kind, every part of the chest should be examined; it frequently happens that the physical signs make their appearance in the axilla, or above the spine of the scapula. A slight degree of feebleness, or of harshness or dryness in the respiratory murmur are important points to establish, not as fixing the diagnosis beyond a doubt, but as presumptive evidence sufficient to direct us in the treatment.

It is by a close attention to points like these, which to some may appear of no consequence, that Professor Chomel constantly displays that remarkable tact in detecting dangerous and complicated disease of the thoracic viscera.

The bronchial respiration was observed in 42 of the cases the day they entered the Hospital. In a great majority of the cases it had the well known blowing character described by Laënnec. There is however a variety of the bronchial respiration which has not yet been accurately described; it is much less loud than the common blowing respiration, and giving the listener the idea of the tearing of a piece of silk (*bruit de taffetas*) which post-mortem examination has led me to suppose is produced by a superficial condensation of the pulmonary tissue (2 or 3 lines.)
In these cases, the air enters into the small and superficial bronchi, and the consequence is that the sound produced by its passage, is far less intense than in those cases where an entire lobe is condensed, the air passing only into the bronchi of the largest size. Again, egophony, as I have heard M. Chomel remark, is not unfrequently noticed in cases of condensation of the pulmonary tissue from pneumonia, so that it cannot be regarded as a diagnostic sign of pleuritic effusion; and in like manner bronchophony, and bronchial respiration, may exist in cases where there is only a moderate effusion into the cavity of the pleura. This fact I have established in the case of a female who died of double pleuro-pneumonia. The middle and inferior lobes of the right lung were in a state of hepatization, except about two inches of the lowest portion, which was simply compressed by a sero-lymphatic effusion. During life, the inferior and middle portions of this side of the chest, behind, were perfectly dull on percussion, accompanied by a bronchial respiration and bronchophony, as if both portions of the lung were in the stage of hepatization.

It is the opinion of Laënnec that the absence of the crepitant rattle, and of the bronchial respiration in pneumonia, are often the only signs of the stage of hepatization. I have often noticed this fact in cases that I have examined only a short time before death. In one case, in which for 24 hours before death, I had noticed an entire absence of all respiratory sound, accompanied by flatness over the whole posterior part of the right lung, I discovered after death that nearly the whole right lung was in the commencing third stage of pneumonia, (hepatization grise,) while in the centre of the organ, near the root of the lung, there was a portion more than three inches square which was flaccid, not aerated, and of a dark red colour, resembling the enlarged and softened spleen so often found in examining cases of typhoid fever that have terminated fatally at a certain period of their progress. This splenisation existing in the centre of the lung, and having obliterated the larger bronchi, prevented the entrance of air, and of course the generation of sound.

It commonly happens that pneumonia passes rapidly from the first into the second stage: indeed, M. Louis in studying the disease in the adult, and M. Rufz in children, have not met with a case which did not present the bronchial respiration on the first examination. I have met with eight cases which were examined two and a half to three days after the attack, which presented only the crepitant rattle; but after the fourth day, I have always found the bronchial respiration existing with the rattle; these facts are sufficient to establish the conclusion that the disease passes rapidly into the second stage, at least in some of the affected portions, if not in all.

There is no physical sign that can indicate positively when a pneu-
monia has passed from the second into the third stage — we may suspect its existence, but nothing more.

The third stage sometimes supervenes with great rapidity, especially during the puerperal state. M. Chomel has related in his clinical lectures, the case of a lady who was delivered of a child without difficulty. The next day she complained of feeling a little unwell, but this did not excite the least suspicion on the part of her physician, who was a man of experience. M. Chomel saw her during the day, and discovered flatness on percussion and bronchial respiration all over one lung; in twelve hours she died. The lung was inflamed in the second and third degree.

Inflammation of the lungs does not progress from the portions first affected to the healthy portions in their neighbourhood with the same rapidity in all cases; and even when the most superficial portions are about to be affected, this change is not indicated by any appreciable sign. This is not to be wondered at when we remember how other inflammations spread, erysipelas for example. If we examine a case of erysipelas of the face, we discover nothing unusual in the skin bordering upon the inflamed portion, and which is about to be attacked in its turn — no increase of sensibility, no change of colour, no swelling. However, in many cases, I have been able to foretel, and to mark out with precision, those portions of the lung that were about to become inflamed in six to twelve hours. I was able to do this when I could notice that the murmur of respiration was less strong and pure than natural, and that over a limited space; there was no dulness on percussion in these cases. The feeble respiration probably indicated the commencement of simple congestion, the subsequent presence of the crepitant rattle, the existence of actual inflammation.

It is not a common occurrence for inflammation to attack both portions of a double organ, as the testicles for example; but inflammation of the lungs is an exception to this rule. In about one fifth of the cases, both lungs are inflamed; but in these cases the progress of the disease is the following. In almost every case the inflammation commences in one lung, the other is subsequently affected, commonly after several days, and in a milder degree. To establish this fact, it is necessary to watch the disease from its commencement, and when it terminates fatally, we discern that in the lung first affected, the inflammation is perhaps in the third stage, while in the other lung we find only hepatization, or simple congestion. Pneumonia appears to me to resemble in this respect inflammation of the conjunctiva, which first attacking one eye, afterwards attacks the other, but with less intensity.

Double pneumonia is always developed in this way, so far as I have
observed it. In some cases when the lung last affected becomes the seat of inflammation, it is accompanied by a marked chill, pain in the side, rusty expectoration, and an increase of the dyspnœa and febrile excitement; but commonly this new attack of inflammation is only indicated by an increase in the dyspnœa and by an acceleration of the pulse.

It is not my intention to dwell upon the pain in the side and the dyspnœa, two symptoms that are seldom absent in this disease; I would however remark, that in one case, the pain was in the left side, while the right lung was inflamed: in two cases, while the pain had its seat in the side affected, still, instead of fixing itself in the mammary region as is common, it was located along the free edges of the ribs.

I shall omit also what I have to say in relation to the expectoration until I come to speak of the prognosis. Let me here however remark, that this is not a constant symptom, for it was wanting in ten cases, and in six of these the pneumonia was seated in the superior lobe: this would appear to confirm the opinion of M. Bouillaud, that the expectoration is oftener wanting in pneumonia of the superior lobe. But there is another circumstance to be regarded, and that is the degree of weakness in these cases—in the six cases alluded to above, the prostration was very great, in some instances dependent upon the age of the patients, in others upon the violence of the disease. I am confirmed in this view of the subject by the fact that the expectoration is also almost always wanting in the wide spreading and latent pneumonia that so frequently attends the close of acute and chronic diseases. Thus it may still be considered very doubtful whether the absence of expectoration has any connection with pneumonia of the superior lobe—even admitting that facts support the opinion of M. Bouillaud, I do not think that his explanation of them is consistent with correct physiological principles.

"It is evident," he remarks, that "expectoration is the result of a motion and shock by which the secretion contained in the air vesicles is expelled. This shock is much less marked in the upper than in the lower lobes." My opinion is that as the lung fills completely the cavity of the thorax, every shock the consequence of compression, must act equally upon every part of the lung.

Again, the mucus secreted by the superior lobe of the lung would be expelled more easily into the larger bronchi, being less retarded by the influence of gravitation. But I will not occupy myself any longer with speculative matters for which I have no fancy—for I am of Sydenham's opinion that they are of no more use to the practical physician than a knowledge of music to a skilful architect.

Progress of the disease. I shall not dwell upon this part of the sub-
ject, for it is already well known. I wish however to establish this fact as of almost constant occurrence, that the febrile excitement diminishes and even ceases, while percussion and auscultation reveal to us that the resolution of the disease is not yet complete. As we frequently observe in erysipelas that the affected portions of the skin remain for a long time swollen and oedematous, just so the portions of a lung that has been the seat of inflammation, do not immediately regain their natural condition: so that although the fever and the dyspnœa may have entirely subsided, we continue to notice in one or more parts of the chest a crepitant rattle, a bronchial respiration, or the bruit de taffetas. These patients enjoy a good appetite and an easy digestion, they are gaining flesh and strength, they appear convalescent, and yet the study of the physical signs alone, would bring us to quite a different conclusion. This state of passive congestion continued in some cases for 23, 33, 35 days. All the patients had been bled, some moderately, others profusely, according to the formula of M. Bouillaud, so that the mode of treatment, probably, had very little to do with this condition of the lungs. The medium age of this class of patients was 50 years, and they were commonly individuals whose constitutions were feeble, or had been impaired by some excess, &c. These appear to me the principal causes of this delay in the progress of resolution. We may establish then this general conclusion, that in pneumonia the febrile symptoms first disappear, while the physical signs revealed by percussion and auscultation continue for a variable period. I have never noticed an exception to this law, which is in fact much more universal than that of Baglivi, who states "that the febrile excitement first disappears and afterwards the pain in the affected side."

**Crisis.** I have never witnessed a critical termination of pneumonia, either by a diarrhœa, a profuse sweat, an increase of the urinary secretion, or by hemorrhage. But I must confess that my observations in this particular point of view are not very complete, having especially neglected to notice if the urine deposited any sediment. I have however carefully analyzed the cases that I have observed with reference to the time when they terminated fatally or favourably, and I have found so little uniformity in this respect, that I do not hesitate to deny, in relation to them at all events, and contrary to the opinion of the father of medicine, the existence of critical days.

**Complications.** If an acute pain in the side were sufficient to indicate the existence of pleurisy, I would say that this complication existed 43 times in the 50 cases. But only in six of these was I able to observe the physical signs of effusion, which continued 15 days, three
weeks, a month, after the symptoms of pneumonia have completely ceased.

Arachnitis, indicated by delirium and by a sero-purulent infiltration beneath the arachnoid was observed in four cases. This only made its appearance during the 36 or 24 hours before death. In one case, I observed a series of symptoms which reminded me of what authors have described as malignant, or *typhoid pneumonia*. The patient was very much exhausted after the first venesection. The prostration soon became extreme, the tongue dry and black, diarrhoea ensued, unaccompanied by meteorism, or gurgling, or pain on pressure in the region of the cæcum, or eruption upon the skin: finally the patient became delirious and watchful with subsultus tendinum. In this case the pneumonia did not probably pass the second stage, but its resolution took place very slowly, owing to the great prostration that had existed.

In one fourth of the cases, I observed a spontaneous diarrhoea, sometimes attended with colicky pains, and generally commencing with the pneumonia for a few days afterwards. In one of these cases the abdomen was tense and painful on pressure; in this case there can be no doubt that inflammation existed. Diarrhoea occurring alone cannot be regarded as indicating the existence of inflammation, for three of the patients who had suffered from diarrhoea died, and the mucous membranes of the small intestines and of the colon when examined after death, were found remarkably full, and unchanged in thickness and firmness. From these facts I would draw the inference, that diarrhoea occurring alone does not contra-indicate the free use of the tartar emetic; but in such cases it would be well to combine it with a certain proportion of opium.

Jaundice was present in five of my cases. The fact that no pain existed in the right hypochondrium, and the result of the post-mortem examination of three cases in which the liver was found perfectly healthy, led me to conclude that the affection of the liver was entirely sympathetic. It is worth remarking, that in four of the five cases the pneumonia affected the right lung — but if we argued from this that the neighbourhood of the liver to the inflamed lung was the cause of this sympathetic affection, it could hardly be supported; for in three of the cases the pneumonia was seated in the superior portion of the lung. The bilious symptoms, even when the yellow tinge was universal, did not appear to be more strongly marked than they commonly are. They disappeared at the same time with the pneumonia, and did not indicate any particular treatment.

Rheumatism existed as a complication in three cases. In one, it affected the muscles of the right side of the trunk, and the pain was great-
ly aggravated by the least motion or pressure. In another case, both shoulders were affected, and in a third, both knees. Was the rheumatism in these cases a simple coincidence? this is possible: but it attacked three individuals who were not subject to it. It is very probable that under certain circumstances these two diseases may stand in the relation of cause and effect, just as Stoll observed certain cases of dysentery or even of scarlatina, cause articular rheumatism in persons who had never suffered from them before.

Prognosis. All practitioners agree in the opinion that pneumonia is a severe disease. "The prognosis is always in some degree doubtful, says M. Chomel, (Dic. 21 vols.) for a case that begins in the mildest manner may in its progress become dangerous and finally terminate fatally." As a general rule an inflammation is less severe and less lasting when it attacks the same organ repeatedly: this law is constantly illustrated in the erysipelas which attacks the face, but is not so general in its application to pleuro-pneumonia which attacks repeatedly the same lung. Twelve of my patients, all of whom were from 40 to 60 years old, had been attacked with pneumonia two, three, or even four times, and yet one-fourth of them died, which is about the usual proportion at this period of life. Relapses occurring during the convalescence are often attended with great danger. One of my patients had four relapses in the course of a month and each increased in severity: the last came very near proving fatal.

The dark coloured expectoration, resembling the juice of preserved prunes, is a dangerous symptom, as is also a dirty red or grayish expectoration which is coughed up with difficulty. I do not, as some observers do, consider the greenish sputa as an unfavourable symptom. My opinion is, that practitioners have given too much importance to certain circumstances attending expectoration in pneumonia. According to Hippocrates, the rusty or characteristic sputa which he regards as favourable early in the disease, become less so if they continue after the seventh day. I will observe on this point that the viscid rusty characteristic sputa continued at least five days, and that their medium duration was seven or eight days. This expectoration having been also regarded by the followers of Hippocrates as a natural crisis of pneumonia, its absence was considered by them as a fatal symptom. I think that this opinion is worth something, for of ten of my patients who expectorated nothing, or very little during the whole progress of the disease, five died. But we must not attach too much importance to the absence of expectoration in pulmonary inflammations: as a general rule it would be bad practice to attempt to induce it by the use of expectorants. These remedies which are more or less stimulating in their
nature, ought to be used only in those cases when the accumulation in the lung is so great as to produce a rattling in the throat.

The blood taken from the vein of a patient with pneumonia, commonly presents a buffy coat varying in thickness. Baglivi states that it is an unfavourable symptom in pleurisy and in peripneumony, when this buffy coat is not thus formed: that it is on the other hand a favourable symptom if it presents itself after the second venesection, but if it does not appear even then, the practitioner must be careful how he repeats the operation, for it will destroy his patient." This fearful prognosis which Lancisi was the first to make, and which Huxham afterwards confirmed, does not I think, notwithstanding the imposing authority of these great names, admit of general application: for in four cases where venesection was practised from three to six times, and after which no buffy coat ever presented itself, two only terminated fatally, and in these the disease seemed to be passing into the third stage before this treatment was commenced. The two remaining cases, although very severe, became rapidly convalescent. I do not believe, therefore, that the absence of the buffy coat after venesection is an indication against the repetition of the same mode of treatment, or that this circumstance warrants an unfavourable prognosis.

Mortality of the disease. Fourteen of the fifty cases terminated fatally. This proportion of fatal cases would be very great if every case had been the subject of treatment. But of the fifty, there were six who presented the symptoms of the third stage of the disease at the time of their admission into the hospital. Four cases were complicated with arachnitis, a fact established by post-mortem examination. These cases remained in the hospital only 12. 48 hours, and in one instance, three days. The mortality among those patients who offered the least chance of success in the treatment, was one in five and a half cases. I would remark also that the mortality is always greater, in proportion, in the clinical wards, because the most severe cases are sent to them, and this is particularly true in relation to the clinical wards of Hotel Dieu, which are situated very near the office at which patients must apply for admission into the hospitals.

Pathological anatomy of the disease. I have nothing of importance to notice under this head, except the fact that I have never observed any appearances of inflammation of the stomach or intestines in those fatal cases in which the tartar emetic had been exhibited according to the method of Rasori. In two cases in which the dose was carried to 12 grs. the patients complained of pain in the throat and of difficulty of swallowing, and after death I observed a number of small ulcers about the size of a pin’s head, which were very superficial, and seated at the
posterior part of the pharynx, accompanied by a secretion of whitish mucus covering the parts in the neighbourhood.

TREATMENT. Bloodletting. The abstraction of blood practised according to certain rules, has been regarded as a kind of panacea in all inflammatory diseases. I have already expressed my opinion in another essay, of these established rules which ignorance and empiricism in latter ages have so much abused. If, in truth, there is anything new in them, it is in the universality of their application; for bloodletting repeated at short intervals, coup sur coup, except in certain cases, has been recommended by many practitioners, and among others, by Prof. Chomel, in his Art. Pneumonia, Dic. of 21 vols. "There are but few practitioners," says he, "who are accustomed to bleed their patients three times during the first day of the disease; but I have no doubt that this treatment might be repeated even oftener, in cases where the debility of the patient did not forbid it." The point I wish to maintain, however, is this: we cannot determine, or even approximate beforehand the quantity of blood a patient should lose. "Any attempt of this kind," says M. Chomel, "is not only useless, but it may be injurious. While we are willing to admit that bloodletting is the principal remedial agent in the treatment of pneumonia, still we must not forget the precept of Boerhaave, and of his distinguished commentator Van Swieten. "The treatment of pneumonia must vary according to the stage of the disease, and the character of the symptoms, so that remedies which might be very appropriate at one period, would be highly injurious at another." Every judicious practitioner will also agree with the advice of Huxham in his Essay on Fevers — "That as a general rule the quantity of blood to be drawn should be determined by the strength of the patient, the force of the pulse, the intensity of the febrile excitement, by the violence of the symptoms, particularly of the pain, and the dyspnœa." To this I would add that we should be guided also by the signs afforded by auscultation or percussion. I would ask, can those practitioners who determine beforehand how much blood should be drawn, be governed by these rules, the propriety of which is established by every day's experience? But some will say, these practitioners cure their patients, they publish accounts of success in practice such as was never known before; they go so far even, as to point us to their statistical tables which show a degree of mortality less than our own. This is a weighty objection, and we must examine and see upon what foundation it rests.

In order to properly apply the numerical method to the treatment of diseases, it is not enough simply to add up in columns the number of successful and of fatal cases, as is practised by some persons. "That
this method should have every appearance of being the correct one," says M. Louis, "that it should be truth itself, it becomes necessary to take into the account all the circumstances that may exert any influence upon the disease, as for instance, the age, the sex, the temperament, the constitution of the patient. But above all it is necessary to be sure of the diagnosis. Even Laënnec was sometimes wrong in the diagnosis of pneumonia, and after him the best observers may also be deceived." These sentiments expressed by one of the most distinguished physicians of the age, I mean to adopt as my guide in examining the merits of the rules of treatment recently laid down by Prof. Bouillaud, in his Medical Philosophy;* and the truth is, if we look over the nine tables of pneumonia which this learned professor has published, we shall find that no mention is made of the age, or of the constitution of the patients. In a majority of the cases, no mention is even made of the severity of the disease, or of the time when it commenced; so that accordingly the tables of M. Bouillaud establish these facts only — so many cases of pneumonia, so many bloodlettings, by which I have cured more cases than any of my fellow practitioners — therefore, my mode of treatment is the best. But the doubting reader will ask to be convinced that every case has been so noted as to guard against mistakes; I have mentioned already what points of importance appear to me to have been neglected, and which prevent me from placing much confidence in the results. It is possible that Prof. Bouillaud will accuse me of acting unjustly in this matter, and will say that he has taken into account all the accessory particulars of age, &c. which exert so great an influence upon the duration and progress of every disease. But if it is true that he has always noted these particulars, how does it happen that he makes two columns for the degree and duration of pneumonia in his ninth table, while nothing of the kind occurs in any of the preceding tables? Is it not evident that M. Bouillaud has at last discovered the importance of these details which he now carefully enumerates? and would it not have been better for him, as the same course was not pursued in his earlier tables, to have omitted them altogether? for as they now stand, they must fail to convince any one. And again, has he been sufficiently careful in establishing the diagnosis? I have my doubts on this point even in relation to the ninth table, which is the most complete of all. In examining this, we find that there are cases of pneumonia marked as in the first stage, and which have reached the sixth, seventh, ninth day of their progress. I have given in the first

part of this essay, my reason for thinking that these were either cases of pneumonia in a state of resolution, or else cases of simple bronchitis. If Prof. Bouillaud had always mentioned in his eight first tables the stage and period of the disease, I might in them also, have discovered some cases of doubtful diagnosis. Finally, in examining the majority of these tables, what do we find to be the duration of the disease? we cannot say, for the reason that the period of its commencement is not mentioned. If now I am told that the disease always is dated from the time when the first symptoms appeared, I will refer to the seventh table, in which the only datum of the duration of the disease, is from the time the patients entered the Hospital, to the time when they died or were cured.

I am satisfied that the same method has been adopted in the other tables; the reader may convince himself of this fact if he will examine the ninth table. He will find in the second column the figures which indicate the period of the disease at the time of entrance, and among the patients is one who entered on the 30th day of the disease, and another who entered on the 20th. Again, in the last column are placed the figures which mark the period of cure or of a fatal termination; and here the two cases already alluded to are marked, the one as having died on the second, the other on the seventh day of the disease. There can be no doubt then, that M. Bouillaud has calculated the day of death from the day when the patient entered the Hospital. The same calculation if applied to the cases which recovered, would extend the period when convalescence commenced to the fifteenth, instead of the ninth day, the period indicated by M. Bouillaud. The same remarks are equally applicable to many of the other tables.

In order to form a just estimate of the value of different modes of treatment in the cure of pneumonia, the first point to establish is the progress of the disease when left to the unaided efforts of nature. It is true that we occasionally see in our hospitals severe cases of the disease terminating favourably with no other treatment than rest and demulcent drinks. But we require a much larger number of such cases than we now possess, to draw any definite conclusions from them. I would not, however, advise any one to pursue such experiments, for I am well convinced that bloodletting is useful in pneumonia, and that we ought not to neglect its use, except is certain cases, where its use in contra-indicated.

The numerical method still finds many opponents, and some among those who call themselves the followers of Hippocrates, as if they were ignorant of the fact that Hippocrates recommended to his son Thesalus the science of numbers. It very seldom happens that the student even
reads, much less examines with care, the statistical tables that illustrate the most important points of a case. I think, therefore, that the best course, especially in presenting to the reader the results of what I have observed in the treatment of pneumonia, will be to arrange the facts that we wish to study in separate groups, that they may be examined by themselves. For this purpose then, I will arrange my cases in three groups, according as the pneumonia existed in the first, the second, or the third stage of inflammation.

First group. In this group are included eight cases of pneumonia in the first stage. Six of these were men of vigorous constitution, and two of them were delicate females. Four of these patients, (three men, one female,) were from 40 to 59 years of age: four were from 22 to 37 years old. The antiphlogistic treatment was commenced in these cases from the first to the third day from the commencement of the disease; they were bled from two to four times in the space of two days, and each patient lost about two pounds of blood. In two cases the pneumonia was double; in the others, it occupied from a quarter to one half of the surface of one lung. In four of these cases, no perceptible improvement followed the use of the lancet. In three others, the convalescence evidently followed the second or third bleeding. But as in one of these latter cases the tartar emetic was administered at the same time, it must remain doubtful to which of the two remedies the most value is to be attached; besides, in two of these latter cases, the disease was less in extent than in the others. Finally, in the last of these eight patients the disease continued to progress, notwithstanding he had lost three pounds of blood in the course of two days. He died on the eighth day of the disease with double pneumonia. In the cases that were cured, the convalescence commenced, the medium time, on the 11th day. And here I must notice an important fact, that the two patients who were bled the most largely, were those who became convalescent the last; one on the 18th day, the other on the 15th. I do not mean to infer that the bleeding was the cause of this delay, for I think the age of the patients, the one being 47, the other 59 years old, and also the severity of the disease, for one was a case of double pneumonia, account sufficiently for the inefficacy of the bleeding.

The conclusions I draw from the above facts are: first, that the lancet when resorted to with energy, was useful in two, and perhaps in three cases: that in one case it may be said to have removed of itself the disease which was disposed to remain stationary; but that the effects of this treatment were never so instantaneous as to authorize the expression that the disease was strangled. Besides, in three of these cases
it was found necessary to combine bloodletting, with the free use of the
tartar emetic.*

Second Group. This includes 36 cases, (27 males and 9 females,) all affected at the time of admission, with pneumonia in the second stage, presenting the bronchial respiration, the crepitant rattle, bronchophony, with more or less dulness on percussion over the part affected. I mean to make four divisions of these 36 cases, according to the effect produc-
ed upon them by the antiphlogistic treatment.

I. In 11 of these cases, bloodletting had no effect whatever in removing
the disease. This was repeated as often as the state of the pulse would
permit, and it was only after it had been found of no use that the tartar
emetie in large doses was administered. Seven of these cases terminat-
ed fatally; (4 males and 3 females.) Of these, four were from 24 to 40
years old — three from 46 to 58 years old — and one 70 years old. All
of these patients possessed vigorous constitutions, except the old man
70 years old, who was very decrepit. The pneumonia was double in
two cases ; in two cases also, it affected the whole of one lung, and in the
remaining three cases it was confined to the superior lobe. These pa-
patients were bled about the fourth day of the disease, which was repeated
twice, so that they lost about three pounds of blood in two days. They
died upon the eighth or ninth day from the period of attack. The four
patients who recovered, (3 males, 1 female,) were of good constitution,
with one exception; in two of the cases the inflammation affected the up-
per lobe, in one case it was double, and finally, in the fourth it affected
almost the whole of both lungs. Three of the patients were between 33
and 40 years old, one was 53 years old. They were all of them bled
two or three times in the course of three days, commencing about the
fourth day of the disease; the quantity of blood taken was rather more
than two pounds. The period of convalescence commenced about the
nineteenth day.

The conclusion to be drawn from the comparison of these facts is this :
the patients who died were bled more largely than those who recovered,
although in both these classes there were many patients whose disease
was equally severe and extensive. It would, however, be very unjust to
attribute the mortality in these cases to the bloodletting — for although
it was large, still it was proportioned to the strength of the patient.
But the patients who died were placed in circumstances less favourable
than the rest, both in respect to age and to the intensity of the symptoms.

* The commencement of the pneumonia in these cases, dates from the chill, fever,
and pain in the side.

The period of convalescence is supposed to commence when the febrile excitement
has ceased, and the patient begins to digest soup and other light food.—Author.
Again, while cases appear perfectly alike, still we must admit an idiosyncrasy, by which the same disease attacking two individuals under apparently precisely the same circumstances of age, sex, constitution, and treated in the same manner in both, will yet terminate fatally in one case and favourably in the other. This is the grand difficulty in attempting to resolve problems in therapeutics by the numerical method. If I am told that a sufficient quantity of blood was not drawn, I can say that as much was drawn as the state of pulse and the strength of the patient appeared to indicate—besides, all these patients took the tartar emetic in large doses about the third day of the treatment, after the inefficacy of bloodletting was demonstrated by the progress of the disease and the prostration of the patient.

II. Four of the patients were men of strong constitution affected with pneumonia in the second stage, occupying nearly the entire posterior portion of one lung—in these the first bloodletting was resorted to on the third day of the disease. In two of these, the bloodletting was repeated five times in the course of three days, and the patients lost seven or eight pounds of blood; in the remaining two, less blood was drawn, only two pounds and a quarter or half, in two or three bleedings, during two days. In two of the patients, both the general and local symptoms were aggravated after five successive bloodlettings, and in two more patients after the first and second bloodletting; in all of these the period of convalescence commenced about the thirteenth day of the disease. The age of these patients was also favourable, for with one exception, (50 years) the rest were but 19 or 20 years old. We have now before us, three patients affected with pneumonia of equal extent and intensity, all alike in age, sex, and constitution, and yet in one case it was necessary to bleed to the extent of eight pounds, and only two pounds and a half in the others, so true is that under circumstances apparently similar, there are real differences which the acutest observation cannot discover. It is worthy of remark also, that in no case was the pneumonia strangled, and that the period of convalescence commenced in all the cases, (both those in which bloodletting was resorted to largely and moderately) about the same time.

III. In this section I have classed 10 patients, (8 males and 2 females,) arranged according to their age and constitution: three from 20 to 40 years old, of whom two were of a vigorous, and one of a delicate constitution: seven were from 40 to 60 years old, all of vigorous constitutions. In one case the pneumonia was double; in another it affected the whole posterior portion of one lung; in the remaining eight cases, the inflammation affected either the inferior half, (three times) or the superior half, (five times) of the organ. A majority of these patients were bled from
the fifth to the seventh day of the disease, and lost in two days, in most instances, two pounds and a quarter of blood. In all these cases the pneumonia remained stationary during the whole progress of the treatment, the general and local symptoms were neither improved nor aggravated during the time that bloodletting was employed. In seven cases the tartar emetic was administered in large doses, and a blister applied to the chest for the purpose of aiding the resolution of the disease: in these the period of convalescence commenced from the fifteenth to the seventeenth day. In the three remaining cases, the disease appearing to occupy the same extent, but being attended by less marked general symptoms it was thought advisable to try the expectant* course of treatment: in three cases the period of convalescence commenced about the twelfth day of the disease. This difference in the progress of the disease is a point worthy of particular attention.

Those cases which were the most obstinate, resisting the use of the lancet, and requiring the aid of the tartar emetic and of blisters, occurred among the oldest patients; and although the extent of the disease appeared to be the same in those cases that recovered the most rapidly, yet the severity of the accompanying general symptoms is a sufficient proof that auscultation and percussion alone cannot indicate the degree of severity of the disease in different patients. Thus the period of convalescence was retarded in some cases on account of the age of the patients. In other cases, because the pneumonia had probably extended more deeply in the substance of the organ, a point that neither auscultation nor percussion can indicate exactly.

IV. Finally, I class together eleven patients, (eight males, three females,) all of good constitutions, four of whom were from seventeen to thirty years old, and seven from thirty to forty-seven years old. A majority of these patients were bled to the extent of two and a half pounds; one was bled to the extent of three pounds — in all, bloodletting was followed by a well marked improvement. One of these patients was affected with double pneumonia, and the case appeared so severe that it was thought advisable to increase his chances of recovery by combining the bloodletting with the tartar emetic in large doses. This patient, who lost three pounds of blood in three days, became convalescent on the the tenth day of the disease. The remaining patients were affected with pneumonia of the upper lobe (three times,) the middle portion (three times,) and the inferior lobe (four times,) They were

* The expectant mode of treating acute diseases among the French is this. The patients are ordered low diet, simple drinks, and the bowels are regulated by mild cathartics when necessary. — Editor.
bled from the first to the ninth day of the disease, and the period of convalescence commenced from the seventh to the eleventh day. *The improvement which followed the bloodletting was the more rapid in proportion as this treatment was commenced at a period distant from the commencement of the disease.* Thus two patients who were bled to the extent of a pound on the sixth and ninth day of the disease are so much improved by it, both in the general and local symptoms, that we might almost suppose the disease to have been *strangled* had this fortunate event occurred at the commencement of the disease—but, in the present instances, the disease had passed the period of development, and the rapid improvement was probably more owing to the efforts of nature than to the treatment employed.

*Third group.* Six patients (three males, three females) who died, presented the rational signs of the *third or suppurative* stage of pneumonia. In two of these cases, the expectoration resembled the *juice of preserved prunes*, and in four, arachnitis existed as a complication. All of these cases terminated fatally from one to three days after their admission into the hospital, and from the sixth to the twelfth day of the disease. They were considered as desperate cases, and we therefore adopted a mixed treatment, as one or more bloodlettings, the tartar emetic in large doses, blisters to the chest and to the inferior extremities. The use of bloodletting in these cases appeared to me to hasten their fatal termination, and its injurious effects were particularly noticed in the two patients whose expectoration resembled the juice of preserved prunes, although the fulness of the pulse appear to indicate the use of the lancet. "Of all the different kinds of expectoration," says Huxham, "the most unfavourable is, that livid corrupted sanious expectoration which resembles the lees of red wine, sometimes of a darker colour, sometimes fetid. I am very much inclined to think that this putrid peri-pneumony will not bear a second nor even a single bloodletting, except in cases where the pulse is strong and tense. In cases where I am afraid to use the lancet, I employ cupping and sometimes with success: but it has happened to me once or twice to witness the death of my patients before the scarifications had ceased to bleed." Probably in such cases it would be better to abstain entirely from bloodletting in any of its forms. The use of the tartar emetic in large doses, and external revulsives, appear to me to be the only remedies applicable in these far advanced cases. I have in fact seen a case when the use of these means was followed by a decided improvement in the general symptoms for the space of fifteen hours—the skin, which was cold, became moist, the thread-like pulse became more full and strong,
which seemed to authorize the abstraction of blood: twelve ounces were taken from a vein, and in a few hours afterwards the patient died.

The conclusions then to be drawn from these fifty cases, in relation to bloodletting, are the following: in eighteen cases it was beneficial, causing a more or less rapid improvement in the symptoms — in the remaining cases, in eighteen, the disease continued to make rapid progress notwithstanding its employment; in fourteen it did not appear to exert any influence either way, so that the influence of bloodletting upon the progress of pneumonia in these thirty-two cases was doubtful or even null. I may add also that in no case, where large quantities of blood were abstracted, (seven or eight pounds,) was the disease in its severe form, strangled, even when this treatment was commenced very early in the disease.*

Bloodletting is of all remedies the least susceptible of being prescribed according to a certain formula. It must be resorted to according to the circumstances of each particular case. If it is too large or too frequently repeated, it will commonly prolong the period of convalescence. Every observing practitioner will admit this, although some persons will deny it. In the eight patients who were bled most copiously, the medium age was thirty-five years, and the constitution was robust. They lost in two or three days, from four to eight pounds of blood — of this small number two died, on the eighth and ninth day of the disease, and in the remainder, the period of convalescence commenced on the thirteenth day. In an equal number of patients placed in precisely the same circumstances of age, sex, constitution, stage, and period of the disease, the bloodlettings were less frequent and less copious, and in these, the period of convalescence commenced on the ninth and tenth day Bloodletting was the more beneficial according as it was employed near the period when the disease commenced. The valuable observations of M. Louis have proved that this treatment employed as early as the second, or even fourth day of the disease, will have a decided influence in shortening its duration. The facts that I have observed confirm this opinion. I selected sixteen patients whose average age was thirty, thirty-two years, who were affected with pneumonia in the first and second stages. Those who were bled as early as the second day of the disease, became convalescent about the eleventh

* I have sometimes used the term strangled (jugulé) in this essay, although the expression is a barbarous one, because the partizans of the method of treating pneumonia by often repeated bloodlettings, employ it to convey an idea of the efficacy of this mode of practice. Prof. Bouillaud considers all cases of pneumonia as strangled which were cured before the seventh day. It is worth remarking, that the cases reported as strangled, were those in which the least quantity of blood was drawn. See Bouillaud Clin. Médicale, p. 365. Author.
day — those who were bled at a later period, for the most part became convalescent on the thirteenth day, and some as late as the sixteenth and twenty-first days. But in no stage of the disease whatever, did the first bloodlettings remove entirely the strich in the side, (in some cases even it was aggravated,) but in almost every case the pain abated after venesection, and still more after the local abstraction of blood. As a general fact, the pain ceased from the first to the sixth day, the average period was the third day after the first bloodletting. The characteristic sputæ continued from two to seven days after the first bloodletting, average period four days. I would repeat the same remarks in relation to the physical signs, that I have already made. I must, however, make here an important statement. I have been frequently surprised at the sudden change which has occurred in both the general and local symptoms after one or more bloodlettings. I have seen a certain number of cases of pneumonia accompanied by effusion into the cavity of the pleura, in which the effusion was rapidly absorbed. In these cases the flatness on percussion is less marked and extended, but the increase in the dyspnoea and in the frequency of the pulse, prove that the principal disease has not improved. We see from this, that in order to form a correct prognosis, and to establish the just influence of the treatment upon the progress of the disease, we must not trust to auscultation and percussion alone, but we must study also the general symptoms. On the other hand, when the general symptoms improve while the physical signs remain unchanged, it is probable, at least, that some improvement in the disease itself has actually taken place, for this may happen to the central portions of the organ which are beyond the reach of auscultation and percussion, the resolution in this case progressing from the centre to the surface.

Some practitioners have attempted to establish the rule that patients with pneumonia, should not be bled after the fifth day of the disease. This is bad practice. In the cases that I have analyzed in this Essay, the patients were bled as late as the ninth day. My opinion is that we ought not to be so much influenced by the length of time the disease has existed as by the stage in which it presents itself.

I have established the fact, that the effects of bloodletting upon the symptoms are not instantaneous, but that, on the contrary, they are only observed after a longer or shorter period of time. It is not then commonly prudent to repeat this operation after a short interval — we should wait and trust somewhat to the vis medicatrix naturæ; for there is a period in the progress of acute diseases when we had better do nothing. It is the skillful practitioner who understands when to adopt the expect-
ant mode of treatment, which is so often the successful mode, notwithstanding the satirical remark of Asclepiades, who calls it a meditation upon death—a jest, as Bordeu remarks, that may influence a thoughtless mind, but which should never turn the prudent practitioner from the adoption of right rules of conduct.

Finally, in cases of relapse, although it may be necessary to resort to bloodletting when the state of the pulse indicates its use, still this should also be done with great caution, for these relapses are the more dangerous, because the patient is every day growing weaker and less able to bear depletion. This wise advice of Huxham, of which my own experience has taught me the truth, should always be remembered by the practitioner.

Tartar Emetic. I have already remarked that the tartar emetic administered in large doses (6 to 16 grs. per diem) was a powerful auxiliary to bloodletting. It would not, however, be proper to compare in these cases the effects of bloodletting with those of the tartar emetic, for the latter remedy was only employed in the most severe cases, and when, after bloodletting had been carried as far as possible, the cases were still progressing towards a fatal termination. It was used in 24 cases, and 13 of these terminated fatally. This want of success should be attributed to the inefficacy of bloodletting, which was resorted to early in the disease, and consequently under more favourable circumstances, rather than to a want of power in the tartar emetic which was exhibited at a much later period.

It is a point of practical importance to understand the immediate effects of the tartar emetic on the digestive organs. As a general rule, if this remedy be given in large doses without being combined with opium as is the common practice of M. Chomel, and no direct effects result from its administration, it is an indication that the power of reaction is lost, and consequently the prognosis is more unfavourable. In fact, in 13 fatal cases this tolerance of the tartar emetic was noticed seven times, and some slight direct effects were noticed five times. On the other hand, among the 11 patients that recovered, all, with two exceptions, experienced some direct effect from the use of this medicine, sometimes nausea and vomiting, but commonly purging—these evacuations produced a good deal of prostration, but they were followed more or less rapidly by an improvement of the symptoms of pneumonia. It is easy to conceive in these cases how the direct effects of the tartar emetic may be beneficial to the inflamed lung: for at one period of the disease it is congested as well as inflamed, and in this case the shock produced by the act of vomiting may operate mechanically to expel the
mucus with which the organ is loaded. Some may think that this compression is of no use, but its beneficial effects in certain stages of external inflammation is a fact we see illustrated every day. In attempting to explain the beneficial effects of the tartar emetic in the treatment of pneumonia, I think we must attribute something to its revulsive action upon the digestive organs without referring it to any special action, either resolutive or absorptive; for, by the avowal of its most zealous partisans, it is of no use whatever in removing pleuritic effusions.

Blister. Blisters were employed as auxiliaries in 23 cases, nine of which terminated fatally. This mode of treatment has been too much praised by some practitioners, and too much decried by others. The result of the analysis of my cases in relation to this point is the following: in 14 cases, the application of a blister to the chest did not improve or aggravate the symptoms during the first 24 hours — the pulse preserved the same frequency, the skin the same degree of heat. In two cases only, its application followed during this period by a temporary acceleration of the pulse (eight pulsations a minute.) In the cases that terminated favourably, a blister was only applied late in the disease, after the febrile excitement had diminished. This powerful revulsive was then employed to assist in the resolution of the inflammation, but I am obliged to confess that I have never, even in these cases, found it of much use. After examining my cases with the utmost care, I come to this conclusion, that the application of blisters to the treatment of pleuro-pneumonia has never been injurious nor decidedly beneficial; but I must add that, perhaps, the cases that I have observed are not sufficiently numerous to establish more than a presumption, and that more facts are necessary to establish a perfect demonstration. I would not, however, be thought to say that a blister should never be prescribed, for there are cases where after the fever has abated, and the bronchial respiration ceased, there still remains a pain below the nipple or at the base of the thorax, which is felt during a full inspiration, or during the act of coughing. In four of my cases, a blister immediately removed this pain, which was the only symptom which had resisted the ordinary treatment.

Stimulants. — A large number of my patients had made use of warm wine mixed sometimes with aromatic herbs during the early period of the disease, for the purpose of exciting perspiration. While I admit that this practice is irrational, I am still bound to say that the disease did not appear to me to be made more severe, or its mortality increased by this treatment. Wine, too, can be given with propriety in this disease, to those who are addicted to intemperance. Hippocrates has said, "Do not subject your patients to too great and sudden a change;"
thus a patient who has been accustomed to drink daily a large quantity of wine or ardent spirits, ought not to be subjected to the same absolute diet as another, who has always been temperate. Professor Chomel in accordance with this principle, always allows habitual drunkards two or three glasses of wine a day. One of my patients who was attacked very severely with pleuro-pneumonia of the right lung, was permitted to take this quantity of wine during the whole period that he was subjected to the antiphlogistic treatment also, without the period of cure being in the least delayed. I must refer the reader to the memoir of M. Chomel on this interesting subject for more full details; I will only add that when practitioners learn to adopt the principle here inculcated, the great mortality among drunkards attacked with acute diseases, will probably be much diminished.

**Baths.** — Some practitioners seem to think the use of warm baths in pneumonia a very bad practice; still, the father of medicine has recommended their use in his admirable treatise on the regimen of acute diseases. Prof. Chomel has many times, in his extensive practice, tested their efficacy; he recommends their use in those cases of severe pneumonia which are accompanied by dryness of the skin. Administered in such cases, it has induced perspiration and assisted in the resolution of the disease. Two patients with severe pleuro-pneumonia and one with acute pleurisy, were placed in a warm bath— their skin which before was dry and of a pungent heat became, in from 12 to 20 minutes, more soft and cool, and a moderate perspiration soon followed.

**Tonics.** — In cases where the disease is adynamic, where the pulse and strength sink and the skin becomes cool, it becomes necessary to support the strength, to restore the heat of the skin by external revulsives and powerful tonics. In this way, the patient whose case I have briefly stated in the paragraph of the complications, was successfully treated.

To conclude, bloodletting is the principal remedy in the treatment of pneumonia. The tartar emetic, purgatives, baths, and perhaps blisters, are secondary means which should not be neglected. But let us not attribute too much to the influence of bloodletting; it is not a specific, in whatsoever manner we use it. It may, in certain cases, check the progress of the disease, but in the most acute cases, even if very near their commencement it never produces so rapid an improvement in the local symptoms as to justify the expression that the disease is *strangled*. 
REVIEWS

AND

BIBLIOGRAPHIC NOTICES.


The first volume of the Library of Practical Medicine, of which the above is the title, has just issued from the press of Messrs. Lea & Blanchard, in a very handsome form. The getting up is excellent, and it is extremely free from typographical errors. That this work must prove of immense utility, cannot be doubted, nor that it will indeed, when completed, be a library of general reference on theoretical and practical medicine, and a series of excellent text-books for the medical student. Herein, we think, will consist its chief value, and we shall delight to see volumes of this character placed for the perusal of the student upon the table of the office into which he is inducted on commencing the study of his profession, instead of the Cullen's, Gregory's, and Thomas's practice, with which it was formerly encumbered. Much depends upon a right commencement, and as an elementary work, we have seen none which can surpass the one in question. Comprehensive, clear — written in the very first style of scholarship, by men of acknowledged eminence, and consisting of the received medical doctrines of the day, it contains nothing that can be read without profit, while little is omitted which is essential to be known. We earnestly recommend to the student, or practitioner, who is about to commence the collection of a library, to procure it without delay, as a standard volume and all that it professes to be. To review it is difficult; to attempt an analysis of an elementary work, which is an analysis itself, would be a task of infinitely more length than our space would admit, while to criticise it would be unprofitable. We purpose, therefore, to glance rapidly along
its pages, noting what it contains, and stopping here and there to glean some useful hint or novel view of doctrine, and now and then perhaps to interchange a courteous dissent from, or signify our humble approbation of some opinion of our author's.

The first article is the introduction, by Dr. Symonds, consisting of general observations on the nature of disease in the abstract, as well as the leading principles which determine the association and succession of morbid actions, and its proximated elements or principles. The term disease, he remarks, includes not only every change in the physical qualities of organs, every alteration of the properties of the fluids, or unusual distribution of them, every disordered movement and sensation; but is used in a more limited sense to denote a collection of disordered actions called symptoms. It may result from mere deficiency or excess of action; is not an absolute state or action, but bearing a strict relation to the nature of the part in which it exists, and the disposition of the whole system, is influenced by temperament, and may be structural or functional, though some have maintained that derangement of action implies fault of structure. Special diseases are groups of morbid phenomena, each individual action being a symptom, and each symptom merely an effect of a proximate cause. Morbid actions owe their association and succession, 1st, to the direct mutual dependence of certain actions upon each other; 2d, to the derangement of functions allied for a common purpose; 3d, to continuity of structure; 4th, to contiguity of structure; 5th, to what in the present state of our knowledge we must be content to call sympathy, excluding, however, the sympathies of relation, and speaking only of the organic. Revulsion is the extinction of one diseased action previously existing, by the supervision of another. Metastasis; the accession of one disease on the disappearance of the first. All these axioms are illustrated by appropriate examples; sometimes revulsive action, when employed as a remedial measure, becomes mischievous from sympathy; witness the aggravation of inflammatory diseases, by the premature application of a blister. Excess of nutrient fluid (plethora) may enable two organs to maintain an increased action at the same time; hence the necessity of depletion before using them. Irritability of system is opposed to revulsive action; in children, particularly, counter-irritation is very apt to run into co-irritation. Revulsive irritation must not be applied to associated organs, as for example, a sinapism to the mamma; in menorrhagia symptoms may, or may not be signs of disease, according as they are viewed in relation to some other derangement; and there are many signs of disease which cannot be termed symptoms, as those elicited by percussion, &c.
The causes of disease in general, exciting, predisposing, proximate, and remote, are all considered in a logical manner. Pathology treats of the proximate; etiology of the remote causes of disease. Pathology implies the science of diseased actions; and is not strictly convertible with morbid anatomy, which describes only structural changes when resulting from said actions. It is general and special, and upon it, upon chemistry and clinical observation, rests the science of disease.

The first pathological state treated of is congestion. The nature of capillary circulation; the causes of congestion; its two species, active and passive; its signs, &c., each receive a terse but full examination and explanation, so far as this is possible in the present state of our knowledge. Congestion, it is remarked, is the forerunner or companion of so many diseases, that one can hardly wonder that some pathologists have fallen into the error of considering it an all but essential ingredient of every disease. Cadaveric congestion is to be separated in idea from vital. There are, according to Andral, two varieties: one produced at the time of death, and one occurring after it. This is a subject of the greatest importance. Anaemia receives but a very brief notice. Upon the subject of hemorrhage, the remark is made that Bichat, in attributing it to effusion from the open mouths of exhalant vessels, described the visions of his fancy, rather than matters of absolute observation. Their existence has never been proved, and even the capillaries have no terminations by open mouths; consequently whatever passes from them, must either transude through their walls, or escape by their rupture. The size of the blood globules precludes the former idea, and the latter is exceedingly probable from other considerations. The very vessels themselves being invisible, the inability to discover their rupture follows as a necessary consequence. Most of the pathological facts connected with this subject, are concisely stated. Diseased secretion is treated of under the heads of fibrinous, serous, purulent, and that constituting the heterologous formations.

The difficult subject of the organization of lymph, receives a brief but satisfactory notice; and the mode of formation of its vessels is explained by a change in the disposition of the particles which takes place in coagulation, and which may be easily conceived to be, in interspaces, permeable by the liquor sanguinis, or blood of the adjoining capillaries. As the substance concretes, these channels are converted into vessels. The escape of serum constitutes either dropsy or flux. Purulent deposits are mentioned as differing from the results of suppurative inflammation, in the absence of all evidences of this lesion in the surrounding tissues; but it is observed that it is still a question whether their
formation may not be traced to an inflammatory process in some other part of the system. In a vast proportion of cases, the neighbouring veins are implicated. Tessier, in a series of memoirs on the Purulent Diathesis, in the Experience, 1838, denies their being owing to the introduction of pus into the blood; and great obscurity confessedly hangs over this department of pathology. The heterologous secretions, tubercle, carcinoma, melanosis, &c., are attributed to the blood; not that the morbid deposit actually preexisted in the blood, but that this fluid is so affected in its constitution, as to be ready for the secretion of the matter wherever local conditions are presented. Tubercle is probably not organized; its secretion implies an alteration in the quality of the blood. There can, it is submitted, be but little doubt, that inflammation presents one of the most favourable local conditions for the disease, but that it must have been preceded by a constitutional affection before it is capable of producing tubercle. (p. 47.) Carcinoma includes many affections which might, a priori, be considered to have nothing in common, viz.: scirrhus, mammary sarcoma, pancreatic sarcoma, lardaceous matter, mattere colloide, or gelatiniform, or areolar cancer, vascular sarcoma, encephaloid matter, fungus hæmatodes and fungoid disease. The brief but satisfactory notice of these formations which follows, is derived from the writings of Carswell and Hodgkin, whose theory of cystiform arrangement, is well known. Melanosis is succinctly described; gaseous secretion much too briefly; it may be introduced from without, evolved from fluid or solid matters, and formed directly from the blood by a true morbid process; the arguments in favour of this position are clearly stated. Atrophy, hypertrophy, and softening, receive very brief notice; but they are here considered only as the products of diseased nutrition, and not of inflammation, which is noticed elsewhere. Similarly brief notices follow of transformation and ulceration, plethora, and anæmia, and a very good one of cachæmia, which depends on one of three conditions: 1st. A change in the physical qualities of the blood. 2d, in its chemical composition; and 3d, on its vitiation, a thing rather inferred than demonstrated. Alison's view of the cause of buffing is supported: viz. that there is an actual repulsion between the fibrine and the red particles in inflamed blood. The article concludes with the diseases of the nerves and contractile fibres. The author strongly advocates the purely neuralgic character of certain affections, and deprecates their being considered as inflammatory.

Such is a sketch of the contents of the first article, and it may be looked upon as a very good, though a hasty resumé of the best established facts connected with general pathology. The second section
treats on Inflammation, and is from the pen of the talented Dr. Alison of Edinburgh. Of its phenomena it gives a general view; presents an exposition of the present state of our knowledge of its essential nature, causes, and anatomical character; offers a general view of its symptoms, varieties and complications, and modes of fatal termination, with an outline of its treatment, especially in internal parts. It is important to give to the term now very irregularly used, a philosophic precision, and the author observes that "a peculiar perversion of nutrition, or secretion, he holds to be essential to the very existence of inflammation, and all attempts at explanation of the changes to which the term is applied, if they do not regard this their most essential peculiarity, we must look upon as necessarily and fundamentally defective. Mere mechanical obstruction in the capillaries, and mere chemical changes in the blood, whether preceding or following that obstruction, cannot, he says, suffice for the explanation of the phenomena of inflammation, as understood in our time, and the reasons why are ably set forth at length. Can they be explained by alteration of the vital powers of the vessels? or must they be chiefly referred to alteration of other powers, influencing the condition and motion of the blood in the living body, but independent of any contractions of living solids? This question is carefully considered, and the conclusion drawn that the latter opinion is inevitable. But we find it utterly impossible to do any thing like justice to the elaborate argumentation of the learned author, respecting the essential nature of inflammation, in the limits to which we are restricted. The causes of inflammation follow, and next its anatomical characters, when healthy, in the various tissues. When speaking of softening, the author observes, and the remark is not without its practical value, that in the brain and bowels there may be softening, especially of that kind unattended with change of colour, which we have no reason, either from its accompaniments or effects, to ascribe to any process resembling inflammation, and regard as a mere perversion of nutrition. Cullen's definition of the symptoms of inflammation is quoted with approbation; the concurrence of fever with fixed pain in some internal part, and deranged function of some internal organ. The alterations of sensible qualities, or perceptible actions of internal parts, also add much to the precision of our judgment as to the existence of inflammation. These are the physical signs of disease. The sympathetic phenomena, (sensations and actions,) must not be overlooked in making up an opinion. The "brief summary," as the author calls it, next proceeds to a somewhat extensive consideration of the varieties and complications of inflammation. A very important one is latent inflammation; scrofulous inflammation is
another, and is well described. Dr. Alison is well known to have devoted particular attention to the subject of scrofula. It can hardly be doubted, he observes, all things being considered, that the process by which tubercles are formed in the different textures, ought to be regarded, in many instances, as a form, or modification of inflammation. This is a disputed point. We regret that his theory of the formation of tubercle, (a partial exudation of the albuminous portion of the blood, too unhealthy to become organized, and hence cohering into minute spherical masses, which are tubercles, and generally attracting the same materials out of the blood vessels,) is too long to be inserted entire in this place. Erysipelatous inflammation is next considered; then that produced by the animal poisons, and lastly the specific. The sympathetic inflammations occurring during fever, &c., and that which is intercurrent, secure their due share of attention, and the whole is a very valuable summary, abounding in important facts, intelligibly detailed.

The modes in which inflammatory disease proves fatal, are next considered, and the author remarks that they ought to be clearly and steadily in the view of the practitioner who treats them. In many cases this can only be attributable to sympathetic affection of the heart. It is remarkably seen in cases of peritonitis, the majority of which cases are unattended with gangrene. A second class is owing to effusion of serum, as in cerebral diseases, attended with diminished sensibility in all the parts of the body which are dependent on this organ for innervation. In a third, asphyxia explains the fatal event, as in diseases of the larynx, heart and lungs: the asphyxia in the one class strangulatory, in the other, suffocative; a very instructive, though brief account of the various stages, according to their pathological phenomena, of each of these diseases is given. In a fourth class, inflammation produces death in a totally different manner, viz: by a part of the effusions which it produces being taken into the circulation, acting as a poison and producing typhoid phenomena, and purulent or other effusions in different parts. Of this class are dissection wounds and phlebitis. In some cases of this latter disease, the usual bad consequences may not occur, because of the effusion on the inner surface of the vein being, not pus, but of the nature of organizable lymph, and therefore not poisonous, though mixed with the blood. We know, from microscopical observations, that much purulent matter may be found in the vessels of a suppurating part, without being effused there. These are the cases in which, as after amputation, the external wound even being cicatrized, purulent dépôts oftenest take place, probably, because the suppurating surface acted as an outlet by which the pus, formed at the diseased part, and taken back into
the circulation, had found egress from the body. When this is closed, the usual consequences of absorption, speedily ensue. Long protracted suppuration, ulceration, or sloughing, constitute the cause of death in a fifth class, and the sixth and last arises from the blending of itself with, or the passing of inflammatory action into, other kinds of diseased action. Of this, the "Morbus Brightii" furnished a conspicuous example. Twenty pages of this large volume are devoted to the treatment of inflammation, and cannot contain much that is novel, though they abound in much that is judicious. What, for example, can be more so than the following rule respecting the greatest of all our remedies, bloodletting. "In all those cases when not only the heart's action is increased, the pulse morbidly frequent, or strong, or both, but when we are satisfied that this increased action is connected with, or maintains, or aggravates a local inflammation, which, in some of the modes already considered, threatens the life of the patient, such bloodletting as may impair the power of the heart is the effectual and appropriate remedy; and in all cases occurring beyond the age of 3 or 4, (below which age leeches are to be regarded as a general evacuation,) the simple and effectual remedy is by venesection." We commend this passage to our readers as a model of clearness and precision of language, with practical acumen. Not only is the heart's action weakened by the abstraction of its proper stimulus, but the effect on the brain and medulla oblongata influence it powerfully, and hence the advantages of bleeding in the erect posture. The sudden diminution of the pressure on the brain and spinal marrow of the circulating blood, acts or reacts on the heart in like manner as occurs, when the fluid of hydrocephalus is drawn off, or depressed bone elevated. The effect, be it however remembered, of this mode of bloodletting is not the most permanent, and in some cases of healthy inflammation, it may be advisable to retard or prevent, rather than encourage the approach of fainting. The idea is stated, and is certainly highly plausible, that general, and particularly local bloodletting, act also by causing derivation from the inflamed part to the opened vessel or vessels; to this may be owing the rising and falling of the pulse, in cases of peritoneal and cerebral inflammation, when blood has been taken away. To display all of its undoubted efficacy, bleeding must be used at the onset of inflammatory disease, not in its advanced periods, and in healthy constitutions; and we are even to bear in mind, in estimating its value as a remedy, the frequent deflection of inflammatory disease from the healthy and simple, and its frequent connection with other diseased states immediately preceding or accompanying it, and altering or augmenting the danger to be expected from it. In very few cases does bleeding cut
short a disease; the more usual effect to be hoped for is, that it will dispose it to a favourable termination. The only sure rule as to bleeding, in a case of well-marked inflammation, is to continue the loss of blood until either the pulse is affected, giddiness or faintness felt, or the local symptoms are decidedly relieved. A single bleeding, even although carried to syncope, is seldom sufficient to control a well-marked internal inflammation. Three leeches bleeding well, are a full bleeding for a child of one year, of average strength, and if one is added for each year of the child’s life up to five, a fair number for a single evacuation may be obtained. The idea, says Dr. Alison, of subsequent injury to the constitution, from the use of blood-letting, and particularly the idea of dropsy being thus produced, may in general be regarded as quite visionary. One of the chief practical evils, to be apprehended from large and repeated bloodletting, is that it always increases the facility with which the surface may be chilled, and hence induces a liability to relapse on any fresh exposure. Bleeding, as a general rule, is improper, after there occurs a manifest change in the constitutional, attended with continuance or increase of the local symptoms; in peritonitis, for example, when a cadaverous hue and cold sweat invade the body, with increased frequency of pulse, while the abdominal tenderness, vomiting, thoracic respiration, &c., have undergone no alleviation. The time for active depletion is then, indeed, “nearly over;” and the vanquished physician must sorrowfully deliver up his lancet to the stern and victorious Atropos, who with her scissors, omnipotent weapon, will speedily decide the unequal contest. Scrofulous inflammation is not much under the control of, and rheumatic inflammation, owing to its tendency to metastasis, not very favourable for, bleeding, and the typhoid nature of erysipelas, and the specific contagions may also be urged against its use in this class of maladies. The nature of the prevailing epidemic, the presence of chronic or organic disease, the age of the patient, the sex, the clime, the temperament, above all, the habit of body and its strength, must all receive consideration from the practitioner who would scientifically employ it, when about to attack the human fabric, with the puny instrument of so great a remedy; and such are some of the rocks and quicksands which Dr. Alison, in what might be called a most practical essay on bloodletting, points out like a wary pilot to the notice and avoidance of the inexperienced mariner, in the commencement of his career. Happy he who, wishing “Vitare Charybdem, non insidit in Scillam.” Many most excellent buoys and landmarks also, has he set up, by which he may steer safely and successfully, and we commend his directions to the careful attention of the practitioner. They must be read to be fully ap-
preciated. The consideration of the other means of abating inflammation are very, and perhaps too briefly disposed of. The author is no advocate for the English plan of "touching the guns" by calomel and opium; on the contrary, he considers it as generally hurtful, and the cases in which it has appeared to him most useful, have been those in which, the symptoms having subsided, it was withdrawn without the mouth being touched. Opium, in intestinal inflammations, is a very valuable remedy. Stimuli, in some advanced states of disease, bronchitis for example, pneumonia, &c., and used also with the hope of sustaining the strength long enough for the sanative efforts of nature to be exerted, are, paradoxical as it may seem, useful in the treatment of inflammation.

Fever, by Dr. Christison, comes next in order. This term is well known to embrace many varieties. It is with continued fever, synocha, synochus and typhus, that the author has to do. He commences the consideration of his subject with a short historical sketch of the principal opinions which have, at different times, been held of the nature of fever. Stevens is particularly considered, and he is thought to have fallen into the same error as his predecessors, and to have mistaken effects for causes. Clutterbuck's theory had never many adherents. Not so the doctrines of the late famous Broussais, who in 1816 asserted, while he denied its primary nature, that irritation or inflammation of the gastro-intestinal mucous membrane, was its cause.

This theory, though confined within a much narrower range than formerly, is still believed in by many. Based on it is the hypothesis of Bouillaud, according to whom fever is nothing else than an affection symptomatic of irritation, or general inflammation of the circulating system; inflammatory fever being one of its degrees, and the other supposed forms mere complications, arising sometimes from inflammation of the elementary mucous membrane and its follicles, sometimes from inflammation of the cerebro-spinal system, and sometimes from the introduction of putrid substances into the blood. "But" says Dr. C. "it seems difficult for any one to survey dispassionately the whole facts, without coming to the conclusion that fever is a primary disease, and that most, nay, possibly all of the local diseases which have been pointed out as its real source, are nothing else but secondary affections." Thus, after all that pathological anatomy has done in the last twenty-four years, we return to our original views of the nature of fever, having only learned the frequency of the co-existence of local affections, which we scarce know whether it be wiser to treat or to neglect; a rather humiliating view of the results of medical investigation; each new fabric erected by our ingenuity, falls in its turn, and
its ruins seem but to serve to encumber and embarrass the path of future inquiry. How truly was it said by the illustrious Laplace, in the close of his brilliant career, that “what we know is little, and what we are ignorant of is immense!” One of the author’s strong arguments in favour of this conclusion, is the fourth in his category, viz: that the local inflammation is secondary in point of time, and does not occur until the fever is fully formed. The nonessentialists themselves cannot agree as to the precise local seat of fever. The Dothenenteritis of Bretonnean, according to M. Louis the only cause of typhoid fever, though comparatively rare in Edinburgh, has been observed frequently in their repeated epidemics of typhus; but the great features of those epidemics have been altered in no material respect. Fever, then, says Dr. C., is an essential or primary disease. The changes which have hitherto been observed to take place in the blood and other animal fluids, are like the local disorders, secondary, not primary; they may be the source of the phenomena remarked in the advanced stage of the disease, but they are not the source of the disease, in the first instance. Disturbance of the nervous system, and disturbance of the circulation, co-exist in fever, and act and re-act on one another; and this co-existence and reaction, while they explain many subordinate phenomena, otherwise unintelligible, must be kept constantly in view, as modifying singularly the effect of remedies, and, therefore, regulating, in many essential respects, the method of cure.

In speaking of continued fever, the author asserts that in 1817—20 a fever purely inflammatory, altogether divested of typhoid character, formed between a fifth and a sixth of the patients in the infirmary and fever hospital of Edinburgh. The existence of a pure synocha, described and classed by Cullen, and by him accurately described, must then be admitted, —but it is rare. Dr. Christison’s sketch of its symptoms is excellent. It may either disappear by gradual resolution, or crisis, or pass into the typhoid state. Sweating is apt to be critical; convalescence is slow, and relapse is common. Local inflammations generally attend it, but are easy of removal in general.

Synocha is the commonest of all the types and forms of continued fever. It is the transition state of synocha, scarcely any cases not having an inflammatory incipiency,—a page only is given to it. It seems to be considered by Dr. C. as the typhoid stage which passes insensibly into typhus in its characteristic form, and seems hardly to deserve a separate classification. In fact, unless Louis’s Anatomical characteristics, hereafter to be alluded to, be considered as constituting a typhoid fever, as distinct from typhus, we conceive that Dr. Christison would have better
classified fever in the following manner, than in that which he has selected.

\[
\begin{align*}
\text{Synocha pura.} & \quad \text{" typhoides.} \\
\text{Typhus mitior.} & \quad \text{" gravior.}
\end{align*}
\]

The whole ground seems to us, deferentially be it spoken, to be covered by this arrangement. If Dothenenteritis be a disease, per se, of course it would take its place as third on the list, while intermittent, remittent, and irritative fever would follow, and the exanthemata bring up the rear. The only peculiarity we can discern between his "synochus," and his "typhus," is that in the latter, the inflammatory stage is shorter, and more intermingled with adynamia; or that the inflammatory symptoms are less marked, and the adynamia occurs earlier. We doubt if this will justify a separate appellation for what is only a difference in degree. Among his definitions, we notice that it is said that typhus is characterized by "little increase of the animal temperature." In cases of much malignity, and of the congestive character, there may indeed be coolness of the surface, but we think such is not generally an attendant on the disease. That talented lecturer, the late Doctor Hosack, whose doctrines, if not unimpeachable in soundness, were delivered in a manner at once eloquent and forcible, which we have never seen equalled, or surpassed,—used to tell us of the "pungent" heat of typhus almost burning the hand; and we can even now recall with painful vividness, its intensity, in a case of its purest form, when every symptom was closely scanned with the mingled anxiety of love, of hope, and of fear. In fact, immediately afterwards, the author says, the skin is "rather hot;" a statement which vitiates the definition. The remaining description is unexceptionably fine. Critical evacuations do occur, but their frequency is greatly overrated. The tendency to recover on the "critical days" is decided; they are the 3d, 5th, 7th, 9th, 11th, 14th, 17th, 20th.

Primary fever has a real existence, but still, cases of complication with secondary local disorder, chiefly inflammation, are proportionally most common; the causes we know not. Congestion of the brain is very common; meningitis, which Clutterbuck would have to be considered its essential character, is as a secondary lesion, very rare. Intercurrent convulsions occur at times, and are almost always fatal. Next in frequency is catarrh, pneumonia and pleurisy. When really secondary, they are not seriously dangerous; but we must be careful that we do not overlook them, as the torpor of the patient often renders him insensible to their existence. Chief in interest are the affections of the abdomen. The first is an irritation allied to gastritis; by Bronssais considered as such;
by the author, as an irritation rather, connected with congestion of the stomach and functional disturbance of the brain. Such, at least, are the opinions, the remarks of British experience on this much agitated topic, and the practitioners of Britain, who were admirers of Broussaisism, were never, he says, distinguished either by their number or their eminence. The second is inflammation, suppuration, and eventually ulceration of the solitary and conglomerate glands of the intestines, in some instances concurring with enlargement and suppuration of the mesenteric glands. Both are undoubtedly met with in the fever of the country, says Dr. C., but much more frequently, both are absent. Diarrhöea, in particular, he considers as comparatively a rare incident, and less common than an opposite condition; there our experience is at variance with his. A "mild yellowish diarrhöea" he considers serviceable rather than otherwise. Dr. Bright considered "ochrey" stools as indicative of incipient ulceration. The occurrence of dothenenteritis is a very different incident. Our chief authority on this subject is the elaborate and precise inquiry of M. Louis, *facile princeps* among the pathologists of Europe, into its relations to fever. He concludes that it is never wanting in typhoid fever. But, says Dr. Christison, there can be no question either that dothenenteritis is merely an occasional, incidental, or secondary affection during fever; or, that it is a wholly different disease from that to which the name of typhus has been long appropriated in this and other countries. This last is now M. Louis' opinion. "The term typhus or typhoid affection," ought not to be appropriated to this local affection. But retaining its new appellation of dothenenteritis, "it may occur, both as a primary affection and also as secondary of typhoid fever." Instances of it in Britain are extremely rare; but it is not distinguishable by any essential characters from the true primary typhus of British pathologists. Disorder of the hepatic system with jaundice, is a dangerous symptom. Petechiae are very common in some epidemics, but not seen in every case; the cases in which they occur, are generally severe. Louis considers them as invariably attendant on his "typhoid affection;" but in Britain, at least, it is very often observed where there is no such disorder. The reader will find in the American Journal of the Medical Sciences for February and August 1837, two excellent memoirs on the typhus fever which occurred at Philadelphia in the spring and summer of 1836, by Dr. W. W. Gerhard, whose name will always command high respect for anything which comes from his pen on the subject of pathology. They go to prove that dothenenteritis is not unfrequent in our own country. Dr. G. has published several cases of it in the American Journal for 1835. In Boston it was epidemic in 1833; of extreme gravity and
unusually fatal. But the disease which Dr. G. describes in the papers alluded to, was not dothenenteritis, which he, with ourselves, regards as identical with typhus miliar, but was a true typhus, analogous to that which prevails in Britain; and he thinks them, contrary to Dr. Christison's opinion, readily distinguishable. In only one case, in fifty autopsies, was there any, even the slightest deviation from the natural appearance of the glands of Peyer. We think that Dr. G.'s article goes far to prove that dothenenteritis is a disease per se differing in its specific character from typhus; and to it hereafter, the term of typhoid fever must, in strict precision, solely be applied. The expression "typhoid symptoms" will still continue to be used to characterize those which occur in the latter stages of erysipelas, intermittent, remittent, and continued fevers, smallpox, &c., without prejudging the question as to the existence of any lesion of the muciparous glands and follicles of the intestines. The sequelæ of fever, its prevalence, duration, and mortality, and particularly its anatomical characters, are carefully considered by the author. His conclusions will be anticipated from what has preceded, that except internal congestion, no norbid appearance is invariable. Those which are incidental or secondary, are carefully detailed. He concludes that the softening of the viscera, indicated by M. Louis as of frequent occurrence, and by himself rarely noticed, are secondary, not to fever in general, but to one of its secondary disorders, dothenenteritis. The causes follow; infectiousness comes next. Of this, in Britain, few doubt; the author argues the question at length and with ability, and fully lays down its laws; he himself has contracted it six times and Dr. Tweedie thrice. He doubts much the once universally admitted influence of fomites in propagating contagion. He admits that a disease undistinguishable from true infectious fever, may sometimes arise without infection, and that some of these are cases of gastric or gastro-intestinal disease. The prognosis receives long and careful consideration.

The whole article winds up with the treatment. The particular type must regulate the treatment in particular cases. Of late years, in the Edinburgh epidemics, bleeding has been ill borne and but little used. Local bloodletting is of more importance in all kinds and stages of fever. Cold drinks in moderate quantities may be allowed, with the restriction that when critical diaphoresis occurs they must be exchanged for warm ones. Great praise is given to soda water, as being longest and most relished. Cold or tepid spunging, according to the degree of reaction, is of great advantage. The great weapon of the older physicians, the diaphoretic plan, including the use of antimony, has proved fruitless in all recent British epidemics. Dr. Graves, it is well known, has spoken highly in favor of a combination of tartar-ematic and laudanum, in typhoid
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states of fever, but little benefit seems to arise from its use in general, while the serious purging to which it so commonly gives rise has seemed to us extremely objectionable. Brisk purging in the early stages, and mild laxatives subsequently, are advised. Low diet, and the abatement and removal of local disorders and especially symptoms, in which we notice no novelty, conclude the summary of the management of the first stage. When the state of exhaustion is well marked, it is seldom possible to do without wine, or some other alcoholic spirit, and the directions for their use are excellent. It is important to remember that this general measure is by no means incompatible with the use of local evacuants and counter-irritants. The following is the slight and only notice we have seen, of which is called, "a very inconvenient and common symptom in the middle stage of fever," tympanitic distension of the abdomen, (intestines.) "In severe cases it is scarcely possible to remove it until a crisis takes place, and then it promptly disappears without any remedies." Now, by a very skilful physician, Dr. Stokes, (Clin. Lect.) it is considered as almost distinctive of ileitis, and in several fatal cases of this and other diseases which we have examined, it has coincided with grave lesions of the mucous membrane and glands. We think it deserves a more attentive consideration. The treatment of the third stage is little else than steadily to supply stimulus and nutriment. The treatment of convalescence and the prophylaxis are good; although in this article on the treatment of fever, almost every sentence is judicious, and it is very instructive and valuable; but we do not think it can supersede a very particular study of the preexisting works on the subject. It deals too much in general advice, while the complications are too carelessly dwelt upon. They scarcely receive the attention they deserve, or at any rate which they have received at the hands of others. In fact, the typhoid form of fever, characterized by the symptoms of intestinal lesions, is not the subject of more than a passing notice, as among the occasional complications. But considering the somewhat narrow limits to which Dr. C. was restricted, it is, on the whole deserving of much praise. We hope that in the hasty sketch we have made of the topics on which it treats, we have done something to place the present doctrines relative to the essentaility of fever, and its subdivisions in an intelligible light. In our own city, the disease, as it has appeared of late years, has seemed, we believe we may say with correctness, to do best under a treatment essentially stimulant. For some details as to the subject, and its great success in the hands of Dr. F. U. Johnson, in the New York Hospital, we refer to this Journal for July 1839, and the plan pursued by Dr. Vachê, at the Bellevue Alms-House and Hospital, closely resembles it both in detail, and in its happy results.
The article on plague we pass over as possessing little interest with the profession in this country. That on intermittent fever is full and able, but we do not observe any novelty in it which deserves selection. A short article follows on remittent fever, the history of which seems chiefly extracted from the writings of Pringle, Jackson, Lander, Stevens, Irvine, Burnett, &c, on the disease, as it exists in the Mediterranean, Sicily, West Indies, &c. Eberle is quoted, but we do not observe that the remittent fevers of our southern and western states are alluded to. The bileo-inflammatory, or inflammatory form, closely resembles yellow fever; it is, however, an essentially distinct disease; black vomit never occurs in its progress. The article on yellow fever is also brief, but sufficiently minute. The "black vomit" is said to be probably nothing but broken down blood which oozes from the secreting surface of the mucous membrane, in place of its natural and proper secretion. The author remarks that there is very rarely softening, thinning, ulceration, or gangrene, a statement opposed to Dr. Physick's observations. O'Halloran, and Girkrest, (Cyclop of Med.) mention a dry, and extremely pliable condition of the liver, seemingly destitute of blood and bile, as an anatomical character. As to the nature of the disease, which is now generally considered to be a specific one, too many opinions are entertained for us to cite them here. The gastro-intestinal mucous membrane, the brain and spinal column, the ganglionic system, (Girkrest,) the capillaries, (Craigie,) the fluids, (Stevens,) have all been considered as its seat. Dr. S. arrives at the following conclusions respecting its origin. 1st; that it is not contagious primarily, or contingently. 2d; that it is essentially and solely of endemic origin. 3d; that its causes are probably atmospheric. The four articles just noticed are from the pen of Dr. Shapter. Dr. Locock furnishes the next on infantile gastric remittent, a subject of more immediate interest to the practitioner. "Worm fever," is one of its common synonyms. There are two forms, the acute, and the chronic; the description of the first is perfect. The frequent hacking cough, the disposition to pick the mouth, and thrust the fingers up the nostrils until they are soiled to the joints, and the linen disfigured by mucus and blood, are alluded to, as also the total loss of appetite; no notice is taken of the urgent thirst for cold drinks. How remarkable is the voracity which succeeds during convalescence to the inappetency of disease; and how necessary does it render caution in diet, to guard against relapses. Its tendency to run into the chronic form and be very protracted, must not be forgotten. The simple form is seldom fatal, but the tendency to complication with dysentery, or mucosenteritis, constitutes its danger. The appearances on dissection, says Dr. L. confirm this view; patches of this mucous membrane, generally of
the small intestine, being softened, sometimes abraded, and inflammatory blishes and circles surrounding the mucous follicles; ulcerations in the ileum, colon, &c, have been discovered. The following observation has our co dial assent:—"We agree with Dr. Butter that the mischief from worms has been considerably overrated, and that much harm has sometimes arisen from the use of, and perseverance in the more violent anthelmintics." There is no fever, especially with remissions, accompanying the presence of worms. The "picking" is not pathognomonic, as some have supposed, of intestinal disease alone. Chronic remittent is either primary or secondary; it is very apt to follow whooping cough, measles, or scarlatina; the tongue is more furred, the teeth corroded with sordes, the skin harsh, dry, and shrivelled, and the emaciation rapid and marked; in short, the whole general aspect of the case differs; the picking is intense; restlessness is incessant, or else the child dozes constantly unless roused, and is excessively cross and peevish. Diarrhoea, or dysentery occurs in the worst cases, when the mucous lining of some portion of the intestines is found either softened, abraded, or the intestinal follicles enlarged or ulcerated. In the close of these cases, after what is called "bo'd" treatment, it is not uncommon to meet with the "hydrocephaloid" condition of Gooch and Hall. In a case of the kind succeeding to scarlatina in our own practice, presenting in a very marked degree the last named symptom, a morbid phenomenon, not yet much attended to, presented itself as the sole lesion within the abdomen, viz. attenuation of the whole intestinal canal, the smallest printing legible through the coats of the bowels; the mucus coat presented a broken, creamy appearance, easily removable by the scalpel or finger, leaving the thinnest and most transparent film of peritoneal coat behind; the Peyerian glands could be seen in great numbers by holding the intestine against the light; of this state the author makes no mention. Too much starving and purging in these cases must be avoided, and gentle alternatives should be employed. Dr. L. advises the early use of the mineral acids; change of air as soon as practicable, is most essential. This truly practical article does credit to its talented author, now accoucheur to the Queen. A brief account of hectic fever succeeds. It is never primary. To say that the article on variola which follows is from the pen of Dr. Gregory, is to warrant its excellence. It is an admirable monograph, but insusceptible of analysis. Dr. G. lays great stress on the danger attending the morbid conditions of the larynx and trachea, and carefully describes the anatomical appearances which they present. He considers these to be the chief causes of death during the second week. Dr. G. does not think the variolous pustules ever occur in the intestines,
and remarks on the singular immunity of the abdominal viscera from disease, "No person has ever been admitted twice with variola into the smallpox hospital, and very few instances of alleged secondary smallpox have been met with; they are very, very rare." An interesting history of inoculation follows. With proper management not more than one in 500 cases will terminate unfavourably; smallpox is not taken after it, oftener than after the casual disease itself. "The arguments against inoculation," says Dr. G. after some ratiocination, "drawn from its supposed tendency to augment and multiply the force of contagion, are not so forcible as its opponents invariably allege." We are very sorry that he says so, as it is in opposition to our theory; but if true, valeat quantum! In an anonymous pamphlet published in 1834, on the "value and present condition of vaccination," by the author of this review, is recorded the fact that an apothecary was indicted in 1815 for having been the means of propagating the smallpox, by ordering children whom he had inoculated to be brought to his house through the public streets with the disease on them; it was proved in evidence, that from one of these children, several others caught it, and six actually died; and in the same brochure it is mentioned, that Macintosh had occasion to attend 50 cases of smallpox, all traceable to one source. Statistical calculations fail in the face of evidence such as this. A neat historical detail of vaccination follows, which cannot, it is said, be read without the conviction that all idea of banishing the smallpox from the earth is vain and illusory. The phenomena are well described; the lymph is said to be very powerful up to the eighth day. Dr. G. advises three or four incisions at suitable distances, with a very sharp lancet into the chorion to a considerable depth, the instrument being held slantingly, and the cut made from above downwards. He remarks that smallpox after vaccination is seldom met with before the eighth or tenth year. He inclines to the idea of the protective influence of vaccination wearing out by time, and of the virus by successive propagation. The newly discovered lymph is superior to the old. The practice of re-vaccination may be commended for its safety, but need never be recommended prior to the tenth year of life. We have seen varioloid at a very much earlier age than this, and think that it should be done in the second or third. If we may judge from the coolness and indifference with which this interesting subject is treated of by the highest authority on smallpox at the present day, he would appear not to possess much confidence in its efficacy, and rather to incline towards inoculation; whether it, (i.e. the latter) he remarks, be destined again to occupy the thoughts of man, is a question which it would at the present time be premature, and perhaps unnecessary to consider. Concise but
useful papers on* measles and scarlatina succeed, but we do not observe that they contain any thing of sufficient novelty or value, to induce us to extract it. We pass therefore, to the paper by Dr. Locock on puerperal fevers.

The reader will not expect to find this most interesting and extensive subject treated of in every detail, as 24 pages only are devoted to its consideration. Among puerperal fevers, Dr. L. places acute puerperal peritonitis, malignant puerperal fever, puerperal intestinal irritation, and false peritonitis; correctly enough, lastly, is included milk fever, a disease strictly puerperal; yet we think that its introduction into the catalogue of puerperal fevers tends but to complexity.

The epidemic constitutions of puerperal fevers vary in different outbreaks, a fact which materially influences the treatment. Armstrong incorrectly contended for the "immutability" of the disease. "In our opinion," says Locock, "the puerperal fevers vary as other fevers do, according to the season, local symptoms, effects of remedies, and in the organs affected." He professes to give a plain and practical account of those forms of the disease which are met with in hospitals and private practice. While he admits the frequency of anatomical lesions, as described by Lee and others, he by no means overlooks the influence of the nervous system in these cases, and states with Gooch, that cases have occurred in his own practice, wherein on a most careful search for morbid alterations, nothing could be found to explain the cause of death. He next cites Ferguson, and criticises his theory of the cause of puerperal fever, as set forth in the following propositions. 1st; the phenomena of puerperal fever originate in a vitiation of the fluids. 2d; the causes which are capable of vitiating the fluids, (viz. the bruised condition of the pelvic cavity, the abraded state of the mucous membrane of the uterus where the placenta was attacked, the gaping orifices of the veins and sinuses, whence pus and other putrid matter might be absorbed, the offensive lochial discharges, &c. &c.) are particularly rife after childbirth. 3d; the various forms of puerperal fever depend on this cause, and may readily be deduced from it. Dr. Locock replies that numbers of cases occur in which coagula, or portions of the placenta are retained, and instruments are used on putrid children born, and yet the patients recover without injury; offensive lochia and alterations in the mucous coat of the uterus, occur in every case of ordinary parturition. The most serious and fatal forms of puerperal fever are those in which the symptoms begin the earliest after delivery, before pus could have formed,

* Since the above sentence was transcribed, the vaccination bill as proposed by Mr. Wakeley making variolous inoculation penal, has become the law of Great Britain.
or decomposition have taken place. He might have added that in epidem-
ics the easiest labour is not less liable to be followed by it, than the most
laborious or difficult. Dr. Ferguson founds his theory upon the result
of injections of putrid substances made into the veins by Cruveilhier and
Gaspard, which produced many of the phenomena of this disease. But
allowance must be made for the sudden and violent manner in which
these substances were introduced into the circulation, and it must be ob-
served that innocent substances similarly injected, caused death in like
manner, and as rapidly. Dr. Ferguson believes that the condition of
the atmosphere only modifies the type of the fever. But to us it seems
more probable that this occult "condition of the atmosphere" is the
cause of puerperal fever. This it is, which, when generated within the
wards of a lying-in hospital, makes every case of parturition, be it easy
or be it difficult, coming within its influence, assume symptoms, which,
had it not existed, would have gone on for successive years in the usual
favourable manner; each fresh case becoming a fresh focus for atmos-
pheric infection, and personal contagion. This it is, which lurking for
weeks about the apartment, or on the circumambient atmosphere despite
of ventilation, cleanliness, and evacuation, waits but for a new subject on
whom again to exert its virulence. In like manner does erysipelas
act when it enters a hospital; every wound or diseased surface, howev-
er healthy, or however foul, feels its influence immediately; nor can it
with propriety be said that the erysipelas was owing to the state of those
wounds, sores, or diseases. A wounded surface, or a parturient
female, is at any moment, and at all seasons in a condition to be attacked
by the disease, when the exciting cause is applied. Thus far, the con-
dition of the uterus &c. is necessary to the attack, that if the patient had not
been delivered she would not have been affected. Accidental peritonitis
will, as every one knows, occur post partum; we have seen it after an
early abortion, according to Mme. Boivin, a very common cause of pe-
ritoneal inflammation; and the patient may die with symptoms closely
resembling those of an epidemic form of the disease. So also will occa-
sional sporadic cases of scarlatina, and smallpox occur, and yet no one
will deny that they depended on the limited generation or existence of
their peculiar poison. Sporadic cases of true puerperal fever occur occa-
sionally. It may also have for its cause a peculiar virus capable of
being developed within circumscribed limits, or over larger districts of
country, forming general epidemics. The general features of the dis-
ease in every epidemic are sufficiently similar to permit the idea of its
specific character; it may be argued against this, that it is of too rare
occurrence. The cholera has not visited us for eight years, and yet no-
body doubted that it was a disease per se and communicated by the condition of the atmosphere. If with Dr. Ferguson we are to consider the coagula touching manual operations, &c. and not an atmospheric influence, as the cause of puerperal fever, we must look upon the knife of the surgeon however skilfully used, the blister of the physician, however judiciously applied, the sponging of the nurse, however gentle, as the causes of erysipelas. But every one knows that skulls may be trephined, the body blistered, and wounds handled with impunity, except in the face of the pestilential miasma, which walks in darkness. In saying that the vitiation of the fluids is the essential cause of puerperal fever, and that the condition of the atmosphere only modifies its type, Dr. Ferguson seems to us to have overlooked the real cause, and substituted for it an effect dependant probably on the cause itself. What is it that makes these uterine fluids &c. usually so harmless, all at once act as poisons vitiating the blood, and producing their dreadful train of the phenomena of putrescency, if in reality they do so alter the circulating fluid? Is it a direct agency of the virus or miasma upon them primarily, or upon the nervous system originally, and through it upon the uterine fluids, retained portions of placenta &c; or else is it through the agency of this effect on the nervous system, that the circulating fluids of the mother become vitiated, and if so, what need is there of considering the "offensive lochial discharges, retained coagula, or portions of placenta," to be the causes of such vitiation? The first of these three opinions is inclined to by Dr. Locock, who considers, as we think very properly, that the vitiated state of the blood is the secondary, and not the primary link in the chain of phenomena. We have said that there is a form of puerperal fever unattended by any morbid lesions; the patient dying of the shock. The simplest form, says Dr. L. is that of peritonitis; the symptoms are briefly described; it may co-exist with an absence of pain. There is no phlebitis in these cases, according to Dr. L. but purulent deposits are found in the muscular structure of the uterus, and the ovaries are converted into purulent sacs. This remark shows how vain it is to make a strictly accurate variety of peritonitis only. We do not see anything peculiar in the treatment advised. Dr. L. mentions the case of a woman at the Lying-in Hospital who was not expected to survive the night, but was saved by the assiduity of the house surgeon, who never left her, but supplied her with egg and brandy at short intervals; she recovered. Next follows an account of adynamic, or malignant puerperal fever. The symptoms differ in some respects from the preceding form, and the morbid appearances, he says, are essentially different. But in speaking of a fatal case of this variety, he says "general peritoneal inflamma-
tion existed with disorganization of both ovaries;" circumstances just stated to have occurred under the first variety. In the detail of the anatomical characters p. 451, the condition of the veins, the very choicest of the bones of contention on this most disputed subject is not mentioned. We believe it does not once occur in the essay. The form of disease is more particularly expended on the ovaria and uterus, which is often gangrenous or "fairly rotten." The early advent of typhoid symptoms, makes, after all, the chief peculiarity in this form of the disease: much depends on the habit of body, and moral habits of the patient. The treatment may be inferred; very cautious depletion, combined with nutriment and stimulus, which argues no inconsistency. Purulent deposits in the joints and eye are alluded to.

So much for the worst forms of puerperal fevers; a far more common variety is that arising from intestinal irritation, and one very important properly to diagnose. It is apt to terminate fatally from bad treatment, though not necessarily fatal in itself when pure; but alas! for the accuracy of nosological arrangement, it is exceedingly apt to accompany, and seriously complicate the other varieties of this disease, of which it is a frequent cause; the discrimination then becomes difficult indeed. That elegant author, Gooch, not less amiable as a man than sagacious as a physician, in his admirable paper on the peritoneal fevers of lying-in women, relates the case of a patient who had diffused and permanent pain over the abdomen, with tenderness, which neither he nor the family apothecary could distinguish from the pain and tenderness of peritonitis, which nevertheless, did not depend on inflammation. (Case 5.) And truly had we one, who presented, according to Dr. Locock's description, "diarrhoea, increased abdominal tenderness, and a pulse increasing in rapidity, with profuse and incessant vomiting," we should feel ourselves in a like predicament. However the disease has its distinctive symptoms, which may well be learned in Dr. Locock's pages. The disordered tongue, the irregularity of the febrile paroxysms, the duration of the disease, the diarrhoea, the absence of all typhoid appearances in the beginning at least, will assist us in forming our judgment. Bleeding aggravates the symptoms. Post-mortem examinations reveal an entire absence of organic changes; ulceration of the mucous membrane of the intestine is occasionally met with.

The last variety is that spoken of above by Gooch, and by him first described. By Dr. L. it is called False Peritonitis, a silly name, if it be not an inflammation at all. He says, "it is short and will be less likely to mislead." No traces of disease are visible after death. It would seem, according to Dr. L., that it is an affection of the nerves of the peritoneum,
producing the constitutional disturbance, but without sufficient excitement of the vascular system to create actual inflammation. In all, there is pain and tenderness, and a rapid pulse; but it is full, soft, and compressible. Bleeding is inadmissible. As an evidence that cases of puerperal fever vary in character, and require modified treatment accordingly, let us listen to Gooch, who is still the authority on this subject. "The experience of the last few years has brought me to this conclusion: that the sanguine hopes which were entertained a few years ago, that the peritoneal fevers of lying-in women are always of an inflammatory type, and always to be cured by early bleeding and purging, as they were not borne out by the reasoning employed, so they have not been confirmed by subsequent experience." Very briefly is described the Ataxic form of fever, so called by Tonnélé and Ferguson. It is, as Dr. L. says, a fallacy to call this affection a fever at all; it is an hysterical affection, the pain is fugitive, the patient desponding, the pulse and respiration quiet during the intervals of freedom from excitement. The diagnosis requires caution, and the physician must be careful not to allow his judgment to be improperly influenced by his own fears. This state is apt to end in puerperal mania. Milk fever is considered in two pages, and the matter is not remarkably practical. The author speaks of a class of cases, we apprehend, of rare occurrence, in which, owing to an imperfect secretion of milk, violent delirium sets in, and fatal meningitis ensues. It is popularly said that the "milk flies to the head." The common form of milk fever which we meet with in practice, where the bosoms, one or both, become hard, swelled, lumpy, and in spots remarkably tender, a violent chill, or ague as it is called, ensues, followed in half an hour by intense reaction, with a full and rapid pulse, which in a few hours more is accompanied by profuse sweating, not always to the relief of the fever, is not mentioned; nor is the condition of the breasts themselves once attended to, nor is any allusion made to the possibility of abscess as a consequence.

The treatment advised in the alarming form of threatened meningeal inflammation is judicious; the occasional application of the child as a means of re-exciting the suspended secretion in the breasts is suggested. In the "weed" to which we have directed our attention, the patient will generally be found wrapped in innumerable blankets and shawls, with a face of scarlet, and sweating from every pore. These must be removed, coolness and ventilation enjoined, with tepid sponging, calomel as a purge, salines with antimony as nauseant and refrigerating; bleeding, when the blood flows with immense force and velocity, and is highly buffed, is often of signal advantage, though not always necessary; frictions with camphorated oil to the tender breasts, followed by warm poultices, or light
fomentations, are important adjuncts; the frequent application of the infant to the breast is to be made, if, as seldom happens in this gorged and distended state, it is able to obtain any milk from them. But it is under these circumstances that the happiest results are seen to follow the skillful operations of one of those useful females, who obtain their livelihood by "drawing the breasts" of their afflicted sisterhood. Some possess a peculiar tact, which very few others attain to, and two or three drawings from such mouths suffice to render the patient perfectly comfortable, and appease the storm.

A treatise on the disease of the skin follows, from the pen of Mons. Schedel of Paris, which probably differs little if at all, from that which he edited some years ago, in conjunction with Cazenave, from the practice of the late Mons. Biett. It is a very valuable portion of the work. To conclude this hasty survey of this massive volume, we may safely pronounce it one of the most valuable that a student can buy; one that every student should at once possess and peruse; a work which when completed will be the best elementary work on medicine we shall possess; modern, erudite, copious and classical. It cannot supersede, it is true, but it will prove an admirable pioneer to the perusal of the best monographs in our language, on the subjects of which it only cursorily treats, and we rejoice sincerely that it is rendered accessible to the profession in this country by the reprint before us. Each volume is sold separately, and a second embracing the diseases of the brain, and nervous system, will soon be forth-coming, which we shall notice on its appearance.

Since the preceding review was prepared, the 2d volume of the Library of Practical Medicine, has made its appearance. It contains a series of dissertations on the diseases of the nervous system, from able pens. Among these we are somewhat surprised to find included, inflammation of the eye, and otitis. Some valuable notes have been appended, by our talented countryman, Dr. W. W. Gerhard of Philadelphia. As the articles contained in these volumes very fairly represent the present state of opinions respecting the diseases of which they treat, and as nothing which may be gleaned from them can be useless, or unimportant, we purpose to subject the present work to analysis, in a future number of the Journal. In the ability which it displays, and in the beauty of its external appearance, it fully merits the eulogies bestowed on its predecessor.

W. C. R.

The researches of Dr. Bright have unquestionably been the means of calling the attention of pathologists to the diseases of the kidney—but for the most part, this attention has been confined to that form of the disease (granular degeneration) which this distinguished observer first placed distinctly before the profession. A complete treatise on this highly important and hitherto much neglected class of diseases was still wanting, until M. Rayer undertook the task, and the satisfactory manner in which he has thus far accomplished it, has gained him a new title to the rank of one of the best medical writers of the age. M. Rayer's work is not yet completed; it has passed thorough two octavo volumes of 600 pages each, and another volume, at least, will be required to its full completion. It is a work in the best style of the modern French school, full of cases complete in their anatomical, pathological, and therapeutic indications, with such conclusions as flow naturally from their study and comparison.

We propose to place before our readers as accurate an analysis as possible of a work of so much merit; omitting any notice of the introductory portion of the work, in which will however be found a very full account of the anatomical structure of the kidneys, of the healthy constitution of the urine, and of the morbid changes it may undergo, &c.; questions on which previous observers have already thrown great light, and which are already sufficiently before the profession.

Wounds of the Kidney.

Wounds of the kidneys are fortunately of very rare occurrence, owing to the situation, size, &c. of these organs. When this accident does happen the patient complains of pain more or less severe in the part affected. This pain often extends to the groin and to the testicle of the same side, which again, may also be retracted.

Commonly immediately after the accident hematuria occurs, or the passage from the bladder may be obstructed by clots of blood. If the
pelvis of the kidney, or a calix is wounded, the urine, or a fluid having the odour of urine, will escape from the external wound.

The constitutional and sympathetic afflictions in these cases are commonly well marked. These are restlessness, vomiting, pain in the epigastrium, in the direction of the ureter, in the corresponding testicle or thigh. If the hemorrhage is considerable there is a tendency of fainting, the pulse becomes small, irregular and quick.

As the inflammation consecutive to the wound progresses, the abdomen becomes painful and distended, the tongue red at its edges, the skin dry and hot.

When the inflammation extends to the pelvis of the kidney, the urine becomes more or less charged with mucus, or finally with pus.

Diagnosis. Hematuria, and pain in the lumbar region, following a wound in that region, are not absolute proofs that the kidney has been affected. Inflammation of the muscles and of the cellular tissue may extend to the kidney and produce these symptoms. If, however, the urine escapes by the external wound the case is no longer doubtful. The depth and direction of the wound, the attitude of the patient at the time of its occurrence, will also throw light on the diagnosis.

Prognosis. The most common source of danger in these cases is the occurrence of peritonitis, or inflammation of the sub-peritoneal cellular tissue, or a large effusion of blood into these same parts. Thus a communication of the pelvis of the kidney with the cavity of the peritoneum, a division of the renal artery or vein, communicating with the same cavity so as to permit an effusion of urine or blood into it, will prove rapidly fatal. On this account a wound penetrating from behind is likely to be less dangerous than one entering from the anterior surface of the body. The prognosis will also be materially affected by the nature of the instrument causing the wound. Thus other things being equal, a wound caused by a ball buried deep in the parts affected, is more dangerous than that caused by a knife or cutting instrument. In many severe cases, however, death does not occur in less than two or three weeks. Consecutive abscesses may form in the cellular tissue about the kidneys, which not finding a free opening, gradually exhaust the patient, or secondary internal hemorrhage may occur after an interval of several weeks and prove suddenly fatal.

Treatment. If no symptoms of collapse indicating the existence of internal hemorrhage exist, and especially if much febrile reaction ensue, the patient should immediately be bled largely and repeatedly. If any foreign substance should be found to exist at the bottom of the wound it should at once be carefully dilated, and the foreign body extracted.
Compresses wet with cold water, emollient drinks in small quantity, mild laxatives, and an opiate, especially if spasm or vomiting occur, are the first indications of treatment.

If the local inflammation runs too high, leeches may be necessary, followed by poultices, and by the warm bath, if the strength will permit.

If clots of blood obstruct the urethra or the neck of the bladder so as to cause retention, we must introduce the catheter, and then inject warm water into the bladder.

If the urine after having escaped freely through the wound ceases to flow, and at the same time, the pain in the part affected increases, if chills, &c., ensue, we have reason to fear suppuration of the surrounding cellular tissue, and must dilate the external opening by a probe-pointed bistoury. The same treatment is indicated if the urine has become infiltrated into the surrounding cellular tissue.

The external wound must be kept open as long as the matter discharged retains the smell of urine. Left to itself with simple dressings, it commonly heals after several months, unless there be a foreign substance in the wound, or unless the ureter is obliterated by adhesive inflammation.

We pass by the symptoms of concussion and laceration of the kidney, as presenting little of separate interest. If copious hematuria occur, if much pain exist in the loins, it is probable that the kidney has been affected, although the cortical substance may be injured without the appearance of bloody urine. The principal importance attached to such injuries, is the danger of secondary inflammation, and the direct object of treatment should be to guard against this.

**Nephritis.**

M. Rayer describes four distinct varieties of nephritis, or inflammation of the tubular or cortical structure of the kidney — 1st, simple nephritis; 2d, nephritis caused by morbid poisons: 3d, rheumatical and gouty nephritis; 4th, albuminous nephritis, called also Bright's disease, granular degeneration of the kidney, &c. These different forms of disease, although united by their common inflammatory origin, are yet, according to M. Rayer, essentially distinct from each other in their anatomical characteristics, their causes, &c. Our author also insists upon the importance of distinguishing nephritis proper, from inflammation of the pelvis, &c., of the organ, (*pyelitis*) as well as from inflammation of the fibrous membrane of the kidney, and the surrounding cellular tissue, (*perinephritis*)
I. Simple Nephritis. The acute form of this disease may result from a wound or contusion of the kidney, from exposure to cold and moisture, from the absorption of acrid substances, from retention of urine. It is commonly ushered in by a chill followed by the ordinary phenomena of febrile excitement.

Pain exists in one or both loins, although in some cases it may only be rendered sensible by pressure. It is commonly deep-seated, and often dull, but is sometimes, however, acute and apparently so superficial that the slightest examination aggravates it. The pain is aggravated by all the motions of the trunk, and by lying on the affected side. Sometimes it is limited to a small portion of the organ; in other cases, it extends upwards to the diaphragm and to the transverse colon, or downwards to the ureters, the bladder, the groins and testicles, sometimes with retraction. In some instances the pain in the bladder, especially in urinating, is more acute than that of the kidney itself, while the urine itself is passed frequently and in small quantity.

Although the size of the kidney is actually increased in this form of disease, still it is seldom possible to discover this by any mode of examination.*

The urine undergoes certain changes in acute nephritis. 1st. It is always diminished in quantity, or may even not be secreted at all when both kidneys are affected. It is passed but seldom, (2 or 3 times in 24 hours,) or there is a constant desire to urinate while only a few drops pass at a time, and if a catheter is introduced the bladder is found nearly empty. 2d. It contains a certain proportion of blood or albumen. 3d. It is less acid than natural, or neutral, or alkaline. 4th. In certain rare cases, where an abscess formed in the substance of the kidney communicates with its pelvis, or, what is much more common, where the mucous membrane of the urinary passages is inflamed, the urine may contain pus.

None of these symptoms however, taken separately, can indicate the true nature of the disease; they all occur in other affections; but when two or more of them are united, as a scanty and alkaline urine, with pain in the loins, then the diagnosis becomes much more certain, especially if the general phenomena of acute nephritis are present.

It should be remembered that acute inflammation of the kidneys, is not unfrequently attended by vomiting and by strongly marked cerebral symptoms, as coma and convulsions. In another class of cases, symp-

*It appears to us extremely probable that the new mode of percussion introduced by Drs. Cammann and Claiik, can be applied to the accurate measurement of the kidneys, under all the different forms of enlargement.
toms of putridity are present. The patients do not complain of pain in the loins unless firm pressure is made there. They lie upon the back, motionless and stupid; the passage of the urine is unfrequent, often involuntary; chills frequently occur during the day; the teeth and the tongue are incrusted with a thick, dark and dry coat; the pulse is accelerated; there is but little thirst.

*Simple chronic nephritis.* This form of disease has not yet been accurately described by pathologists. The symptoms usually described as indicating its existence, as tumour in the lumbar region, and the habitual discharge of purulent urine, belong in fact, to another disease, viz. pyelitis, or inflammation of the pelvis of the kidney. A great many cases of chronic nephritis can only be recognised during life by an attentive examination of the urine.

The most common causes of chronic nephritis are pregnancy, strictures of the urethra, diseases of the prostate gland, the bladder, the ureters, &c.

The chief symptoms of chronic nephritis are habitual pain in one or both lumbar regions, a less acid, or neutral, or alkaline condition of the urine (whether retention exists or not;) a sensation of weakness in the lower extremities.

The pain in the lumbar region is commonly dull, so that patients do not commonly complain of it, unless directly questioned in relation to it, or until it is rendered evident by firm pressure with the hand. It most frequently happens that the disease has existed for several years before the advice of a physician is asked. It is only when the passage of the urine has become very frequent and troublesome, its appearance turbid, and the strength of the patient has become a good deal exhausted, that he becomes anxious about himself. Often the existence of an accompanying stricture, or of some disease of the bladder, is all that engages his solicitude.

It seldom, however, happens that this pain in the loins, however obscure, is not revealed by pressure and propagated in the direction of the ureter. It is seldom attended by pain in the testicles.

The urine is commonly passed frequently and in small quantity. In cases where it is alkaline it is commonly turbid also, owing to the deposition of the phosphates. It rarely happens that the smallest proportion of blood or of albumen, can be detected, unless there exists also disease of the bladder, prostate gland, or urethra.

When none of these complications are present, the patients present no febrile symptoms, but they gradually lose both flesh and strength. The marked weakness and numbness of the lower extremities is particularly worthy of notice.
The above symptoms characterize chronic nephritis; still an alkaline and turbid state of the urine, &c., may exist, and the firmest pressure discover no tenderness in the region of the kidneys; and this in patients who have never suffered from pain in this region, and who have no disease of the bladder, prostate gland, or urethra. M. Rayer is in doubt whether such cases are to be regarded as chronic nephritis: he has never yet had an opportunity of examining the kidneys of a patient whose urine was thus affected without the existence of pain in the loins. It may be well to remark, however, that Sir Benj. Brodie maintains, that simple debility, or cachexia, without organic change in the kidneys, will render the urine alkaline.

*Morbid anatomy of simple nephritis.* The morbid appearances in this disease vary according to its degree and duration. In the *acute form*, the size of the kidney is increased, either throughout its whole extent, or partially, according to the extent of the inflammation: it seldom, however, attains to three or four times its natural dimensions. At the commencement, before pus has been infiltrated, the appearance of the part affected is morbidly red, or of a brown tint: the vessels of the cortical substance are unusually distinct, as well as the little venous polygons on the surface of the organ. Besides this are noticed a multitude of small, and intensely red, and not projecting points, upon the same surface. These red points, which are also distinct in the albuminous form of the disease, often coexist with black points and small vesicles. They often also, if examined by a lens, appear to be surrounded by a delicate vascular net-work. When the inflamed kidney is divided by the scalpel, these red points are also noticed in the cortical substance, commonly arranged in lines, rarely grouped, and distinguishable from the orifices of divided vessels; they are the glands of Malpighi much injected. Sometimes these glands, both externally and internally, assume the appearance of the little black points already noticed. In certain cases, the morbid redness of the inflamed surface is unequal in intensity, from the existence of small spots formed by the imbition of blood from the over distended venous polygons. In other cases these spots may be the result of ecchymosis.

An inflamed kidney in its acute stage, besides its increased size and morbid redness, becomes indurated. Both the redness and the induration are commonly general, affecting the cortical as well as the tubular structure. Commonly, on pressing the divided kidney between the fingers, an unusual quantity of blood will escape; but to this there are many exceptions. We never notice the same accumulation of blood in the organ as in cases of passive hyperemia dependent, for instance, on disease of the heart.
In certain cases, rare however, the kidneys present a marbled appearance, caused by the co-existence of the red and indurated inflamed portions with other portions in a state of anemia, but equally indurated. The red portions are commonly prominent; the pale portions more rarely so. In other cases where this marbled appearance exists, the red portions present ecchymoses, or numerous purulent points. These red portions almost always, and the pale portions more rarely, are prominent, presenting small flattened projecting points, or even a bosselated appearance. Finally, in cases of chronic nephritis, in which the acute form of the disease has supervened a short time previous to death, the kidneys have presented a mixture of hyperemia and of anemia, or a complete discolouration of the cortical substance, the external surface of which is mammillated.

Suppuration of the kidney presents different appearances, and in many cases requires a very careful examination to be distinctly recognised. In some instances, the deposits are so small as to resemble grains of white sand about the size of a large pin's head, situated in the centre of the venous polygons, and surrounded by a slight reddish-brown line, and intermingled with the red points already described, and in which pus has not yet been deposited. Commonly, however, these deposits are more distinct, being about the size of a large pustule of impetigo. They may be either scattered or grouped, or even run together, so as to form spots of considerable size upon the surface of the cortical substance. Abscesses of the size of a small nut, or even larger, may be formed, but this is rare; most of the cases that have been described as abscesses, being only collections of pus in the pelvis of the kidney. Finally, certain portions of the cortical substance may be infiltrated with pus: it is very rare for this infiltration to extend in an equal degree to the tubular portion.

Gangrene of the substance of the kidney is an extremely rare termination of inflammation. It may, however, be recognised by the black-brown tint of the fibres, the gangrenous odour, &c.

Chronic nephritis presents very different appearances from the acute form. When the whole kidney is affected its size is diminished; it is indurated and more heavy than in the natural condition. In some cases however, the reverse of this as to size is observed. The cortical substance is hypertrophied, and sprinkled with white prominent spots formed by a cellulo-fibrous structure under the lining membrane. In some cases these are larger, and of a yellowish white colour, and apparently formed by deposits of coagulable lymph of long standing.

The external surface of the kidney, which is naturally smooth and
polished, becomes slightly granular, or even rough, or presents marbled spots varying in colour, form, and size.

A general or partial anemic discolouration of the kidney, commonly united with condensation of its substance, is one of the consequences of chronic nephritis. When this discolouration is universal, it can easily be distinguished from the anemic caused by hemorrhage, &c., by the roughness, or mammellated appearance of the inflamed surface. This discolouration does not commonly extend to the tubular portion of the kidney.

A general or partial atrophy of the affected kidney is another of the consequences of chronic nephritis. This can be distinguished from the atrophy which results from an arrested development, or from long continued pressure. The surface of the kidney is rough in certain parts, and the vessels which are distributed to the portions that are atrophied appear large in relation to the parts they are destined to supply. In certain cases true cicatrices exist, presenting depressions of a gray, brownish, or slate colour, to which the fibrous envelope is very closely united, accompanied by a thickening of the intermediate cellular tissue. These depressions are sometimes deep enough to reach to the base of the pyramids.

The tubular portions of the kidney, as a consequence of their induration, may become deformed in various ways; sometimes presenting the appearance of very acute cones, of a whitish yellow colour. The mamillæ may be infiltrated with pus, eroded, or even ulcerated.

The external coats of the organ often exhibit the consequences of inflammation. They become very firmly adherent to the parts affected: in the atrophy which is the result of inflammation, they become thickened, and undergo various transformations, as the fibrous, cartilaginous, or osseous, or become morbidly coloured, of a blackish or slate tint.

The vessels of the kidney sometimes acquire a remarkable size, but their inflammation appears to have no connection with that of the organ itself.

Diagnosis. The diagnosis of simple nephritis from that caused by morbid poisons, from the rheumatic or gouty form, from the granular degeneration or Bright's disease, can be better understood after a description of the different forms of nephritis. In rheumatic nephritis the urine commonly deposits crystals of uric acid, which is not the case in the simple form: that caused by morbid poisons occurs during the course of typhoid or yellow fever, of smallpox, or of pestilential diseases. The granular degeneration is attended or followed by dropsical effusion, and albuminous urine is a constant and well marked symptom, while in simple nephritis it is of accidental occurrence and trifling in degree.
The diagnosis of simple acute nephritis from that complicated with pyelitis, or with slight peri-nephritis, is impossible; still, in the former case, if the proportion of mucus in the urine is great, and if the urethra and bladder are healthy, we may infer that pyelitis is present; but the difficulty is in determining that the bladder is perfectly free from disease. In cases where the pyelitis is sufficiently intense to cause the secretion of much mucus, the substance of the kidney commonly becomes affected with inflammation — but in such cases we can only be positive that this inflammation exists, when with acute pain in the loins, there is vomiting, cerebral symptoms, or those of the typhoid state.

It is more easy to distinguish chronic pyelitis from chronic nephritis. In the former there is a constant deposit of pus, or of purulent mucus in the urine — while in nephritis, if the urine is turbid, it is owing to the presence of the phosphates. Commonly, too, in chronic pyelitis, especially when caused by the presence of calculi, the pus accumulates and distends the pelvis and calices, so as to form a multilocular tumour which can be distinctly felt by examination.

In peri-nephritis the diminution in the secretion of the urine is less than in nephritis — when the surrounding cellular tissue suppurates the pain is pulsating, the lumbar region becomes prominent and oedematous, and finally fluctuation can be felt.

The symptoms of simple nephritis cannot easily be mistaken for those caused by the passage of calculi through the ureters. In the latter case, the pain is sudden and intense; there is great agitation, complete and sudden suppression of the urine, the pulse becomes small, feeble, and irregular, the vomiting is incessant — all these symptoms cease immediately on the passage of one or more calculi by the urine.

Commonly nephritis cannot be confounded with cystitis, still in the the former, the pain is sometimes confined to the region of the bladder. Nephritis is distinguished from lumbago by the state of the urine, by the existence of rheumatism in other parts, &c.

Nephritis may be mistaken for nephralgia, a very rare affection attended by severe pain, but which is intermittent and unaccompanied by febrile excitement: or for partial peritonitis; or for psolitis. Finally, a certain number of cases of nephritis assume a latent form — typhoid symptoms ensue without local signs. In some cases these may be connected with abscess of the prostate gland, inflammation of the bladder, &c., then an attentive examination by the rectum and of the urine, may lead to the discovery of the real nature of the case.

Prognosis. Simple acute nephritis when existing without complication is generally a curable disease, even when both kidneys are affected. But if it succeeds to some other affection of the urinary organs, as
a stricture, enlargement of the prostate gland, &c., then the prognosis is far more unfavourable. In the chronic form it is difficult to form a correct prognosis: the pain in the kidney may diminish, the fever cease, but the changes in the urine continue.

**Treatment.** The treatment of simple nephritis will depend upon the cause, the form, complications, age, &c. of the patient. If it be caused by external violence we should have immediate recourse to repeated venesection. The patient should use mucilaginous drinks in small quantity, with low diet, poultices sprinkled with opium, warm bath, leeches, &c. Indeed in all cases we have an acute inflammation of an important organ to treat, and the more or less active use of antiphlogistic remedies is always indicated, modified of course by circumstances, except in those cases accompanied by typhoid symptoms where every mode of treatment commonly fails. If the attack is a complication of some previous disease of the urinary organs, as a stricture, our chief attention should be directed to the removal or relief of that. If cerebral symptoms and vomiting ensue, saline purgatives, the application of cold to the head and epigastrium, and warmth to the lower extremities, are indicated.

In chronic nephritis the indications are two-fold; to remove the exacerbations, which are only slight attacks of the acute form engrafted on a disease of long standing, by the use of cups, warm bath, &c., and to guard against the occurrence of these attacks, by appropriate regimen, &c. The patient now complains of nothing but a more or less marked loss of vital energy, and the urine is constantly alkaline. He should protect the body by flannel, avoid all stimulants to the urinary organs, and support the vital powers. In cases where there is no coexisting disease of the urinary organs, an issue in the loins seems sometimes to be the means of guarding against exacerbations of the disease. Mineral and vegetable acids recommended so strongly by some practitioners do not appear to be of much use. A diet of animal food is to be preferred to a vegetable one. Symptoms may be palliated by the use of opiate and camphor injections, the warm bath, &c. The decoction of the pareira brava, of uva ursi, &c., are sometimes attended with benefit, but in certain cases no remedies seem to arrest the progress of the disease.

II. Nephritis caused by Morbid Poisons. This form of nephritis occurs in pestilential diseases, in the glands, in typhoid fever, smallpox, scarlet fever, measles, in cases of purulent absorption—it has also been noticed in the yellow fever. Being an element or final complication of a general affection it is always extremely dangerous,
and very little influenced by remedial agents. In the plague, the affection of the kidney appears to be induced directly by the cause producing that disease, while in the typhoid and yellow fever it is commonly preceded by retention of the urine, which is the occasional cause of its development. Finally, in all these cases, the pure antiphlogistic treatment is not applicable; in many cases it appeared to hasten the fatal issue of the disease.

III. Arthritic Nephritis. — Nephritis dependent upon Gout. It is a point well established that deposits of sand in the substance of the kidney, of gravel or calculi in the calices and pelvis, is a frequent cause of inflammation of this organ in those subject to gout.

The morbid anatomy of the kidneys in this affection is the following: Sometimes we notice small grains of uric acid sand upon the surface, or in the substance of the cortical portion, or in the mamillæ of the tubuli. When this deposit is considerable, the cortical substance surrounding it is more or less affected: the kidney presents those changes which have already been described as indicating the existence of chronic nephritis; gravel, and calculi of uric acid are often found in the calices and pelvis. The external membranes of the kidney are not particularly affected in these cases.

The symptoms vary very much in different cases. Sand, &c. may exist in the kidney without producing any well marked symptoms until a calculus attempts to pass by the ureter, and then the symptoms peculiar to this affection are suddenly developed. In other cases, patients do complain of more or less pain in the lumbar region, which may be accompanied by a sensation of numbness in the corresponding testicle or thigh.

But the examination of the urine is of the utmost importance in the diagnosis of these cases. It is acid, and sometimes even at the time of emission holds in suspension chrystals of uric acid, or at all events, deposits them after standing for a time. The urine in these cases may contain a little blood, or albumen, from the irritation of the gravel or calculi.

Diagnosis. The existence or pain more or less severe in the region of the kidney, the propagation of this pain to the ureter, and sometimes to the testicle and thigh of the side affected are common to simple and to gouty nephritis: but an attentive examination of the urine will remove all doubt as to the nature of the case. In simple nephritis the urine is less acid than natural, or even alkaline, and commonly deposits an amorphous sediment composed of the phosphates, or the chrystals of the ammoniacal—magnesian phosphate: if chrystals of uric acid are present they exist in very small quantity.
In the treatment of this form of nephritis, if pain exist in the lumbar region, cups to the part will be of service, or if fever be present venesection may be necessary. If after the pain has abated and the fever subsided, the region of the kidney remains a little tender, especially on pressure, and a certain quantity of pus, or mucus, or blood is found in the urine, it is probable that the inflammation is kept up by calculi in the pelvis. In such cases the use of the balsams, and especially of turpentine is indicated.

If there be no obstruction to the flow of urine the patient should make free use of drinks, as an abundant secretion of urine will be likely to favour the passage of calculi.

Alkalies, as magnesia, bi-carbonate of soda are indicated in this affection. Experience seems to prove that they exert a certain influence in the solution of gravel, &c., but these effects appear to have been exaggerated. A careless examination of the sediments of the urine, has led to the opinion that the urine had returned to its natural condition, especially when large calculi were no longer passed so as to be distinctly seen by the naked eye. The pareira brava also, which has been much recommended in these affections, is also in most cases unable to restore the urine to its healthy condition. Finally, we should endeavour, after the acute symptoms have subsided, to counteract the influence of the gouty diathesis by appropriate regimen and treatment.

Rheumatic nephritis. In examining the bodies of those who had died of disease of the heart or pericardium consecutive to rheumatism, M. Rayer has remarked that the kidneys are sometimes affected in a peculiar manner. In recent cases, the cortical substance was infiltrated in one or more portions with coagulable lymph: these solid deposits almost always projecting from the external surface of the kidney, where they presented the appearance of slightly yellowish spots of various size and thickness, often surrounded by a more or less distinct red line. Some of these spots are as large as a large nut and penetrate deeply into the cortical substance. The external membranes of the kidney corresponding to these deposits are commonly injected: sometimes the mucous membrane of the pelvis is injected also: the size and weight of the kidneys are increased, and they sometimes contain small deposits of pus.

In the chronic form, the elevations on the surface of the kidney, produced in the acute form by deposits of lymph, are replaced by depressions of considerable size and of a yellow colour, and by dividing the organ we find that the lymph has been converted into a substance like condensed cellular tissue. The membranes of the kidney are very adherent, especially over the depressions, and universally or partial
thickened and opaque. We sometimes also notice cysts in the cortical substance and portions of cartilage in the tubuli. The other portions of the urinary apparatus are commonly healthy.

The symptoms indicating this form of the disease, are none of them characteristic. In patients affected with rheumatism, the occurrence of pain in the loins may be dependant on lumbago, and so on pain in the thighs: if however the testicles are affected, and retracted, this indication is of more value. A marked diminution in the secretion of urine occurs both in acute rheumatism and nephritis, and no important indication can be derived from the application of chemical tests: in all cases of acute rheumatism, whether attended with pain in the loins or not, the urine is highly acid.

IV. Albuminous Nephritis. This form of nephritis, the granular degeneration of the English writers, may present itself either as an acute or chronic disease; it may be, or not, attended by fever.

Morbid Anatomy. The changes which the kidneys undergo in this disease may be classed under six distinct varieties, the two first belonging to the acute stage, the remaining four to the chronic stage. They may, however, be variously united in the same case, when the disease has attacked at different periods, different portions of these organs, which our author remarks he has never known to be affected singly, although one, especially in the chronic forms, may be more affected than the other.

In the first variety, the size of the kidney is increased; it weighs from 8 to 12 ounces, instead of 4 ounces, which is the medium weight of the healthy kidney; its consistence is still firm, and there is no induration. The surface is morbidly red, and sprinkled with numerous points of a more intense red than the rest. On making a section of the kidney, its increased size is evidently owing to the enlargement of the cortical substance. Internally, this substance presents numerous red points, like those observed on the surface, and which appear to be the glands of Malpighi, (terminating arterioles,) very highly injected. The tubuli appear compressed, of a more dead red colour, and with their striæ less evident than in their healthy condition. The mucous membrane of the pelvis, &c., is injected. This variety of the disease is rarely witnessed, because death seldom occurs so soon. It should be carefully distinguished from hyperemia of the organ, and from simple nephritis, in which the kidney is indurated, and presents almost always purulent deposits.

In the second variety, the size and weight of the kidney is increased as in the former case; its consistence is rather less firm: its lobules are often more distinct than in the healthy condition. But what particularly
distinguishes this variety is the remarkable combination of anemia and hyperemia caused by red spots on a whitish-yellow ground, giving the surface a marbled appearance. On making a section of the kidney, the enlarged cortical substance presents a pale yellowish tint, spotted with red, and is distinctly marked from the tubular portion which is of a bright reddish-brown colour.

In the third variety, the size and weight of the kidney is increased as in the former cases, but the red spots and the marbled appearance of the surface, are no longer observed. The cortical substance, both externally and internally, presents an uniform pale, rosy white tint, slightly tinged with yellow, or it is even more pale, resembling the flesh of eels.

Fourth variety. This is the form described by Dr. Bright as the granulated kidney. The organ is in this variety also, larger and more heavy than in its natural condition. The external surface, which is commonly of a pale yellow colour, is sprinkled and sometimes covered by small spots of a milky white colour, slightly tinged with yellow, about the size of a small pins head, frequently elongated in shape and resembling small grains of whey scattered irregularly and in greater or less numbers over the surface of the organ. These granulations are commonly most numerous near the extremities of the kidney. They are covered by an extremely thin lamina, resembling a coat of varnish. The surface of the kidney, of a milky white colour, is perfectly smooth, for the granulations are in the cortical substance. On making a section of the kidney from their convex edge towards the fissure, the cortical substance, as in the second and third varieties, presents the uniform pale yellowish tint that forms so striking a contrast with the red tubular portion. It is swollen, and its dimensions increased, especially in those portions which pass between the cones. The little milky white spots or granulations, instead of being more or less rounded in shape, and distinct from each other as is common on the surface of the organ, present the appearance of irregular lines or flocculi which seem to be continuous with the diverging striae of the cones. If the section is made properly, in the direction of the striae of the tubular portion of the kidney, this arrangement is very distinct, especially about the periphery of the organ and at the base of the cones, where the granular deposit is generally most marked.

In some cases, there are very few granulations in the interior of the cortical substance, while they are very numerous on the surface. In other cases, however, the deposit extends to every part of this substance, even to the little prolongations which enter the base of the cones, the striae of which are compressed and crowded from their natural arrangement.
The granulations become more distinct after the kidney has been macerated in water for a considerable time.

Fifth variety. This variety is more rare than those which precede it. The kidneys are in this, also, larger, heavier, and more lobulated than in their natural condition. It is difficult to give an exact description of the appearance they present; they, however, look as if a multitude of small grains of vermacelli, (semoule,) had been deposited beneath their investing cellular membrane. These little grains are quite distinct from the yellow particles of sand which we sometimes notice in the cortical substance, and from the small granulations of plastic lymph, which are sometimes met with in this as well as in other forms of nephritis.

Sixth variety. This variety seems to correspond to the third variety described by Dr. Bright. The kidneys are sometimes larger, often smaller, than in their natural condition; they are hard and irregular, or mamillated on their surface: they present but few of the milky granulations, but if making a section, more or less of them can almost always be discovered in the cortical substance. However, in some cases in which many months or even years previous to death, an attack of albuminous nephritis had occurred, M. Rayer has searched in vain for the true granulations of Bright in the kidneys which were indurated, rough, or mamillated; presenting in fact, the anatomical changes of simple chronic nephritis.

At an advanced period of the disease, the external membranes investing the kidney are commonly thickened, at least in certain portions, and very adherent to the surface of the organ. Other changes are also noticed, which are common to this and to the other forms of nephritis.

1st. Thus the glands of Malpighi become red, or blackish and enlarged in the first variety: but as the anemia of the cortical substance increases, they also become discoloured and transformed into little serous vesicles, and finally, in some instances, into true cysts. 2d. The red ecchymoses, or petechiae noticed in the first variety, become changed into greyish or slate coloured spots. 3d. The renal veins and their ramifications sometimes contain fibrinous concretions. 4th. The lymphatic glands in the renal fissure, are sometimes, rarely however, congested. 5th. The calices and pelvis of the kidney often present the appearances of inflammation, both acute and chronic, indicated in the former case by vascular aborizations or a punctated redness, and in the latter, by a dead white or bluish white appearance of the mucous membrane, which is sometimes sprinkled with ulcers.

Symptoms. — The acute form, which is common among children in some epidemics of scarlet fever, may also show itself in adults after an
exposure to sudden changes of temperature, and particularly to cold and moisture.

In those cases which terminate fatally, the kidneys present the appearances described under the first and second varieties, rarely those of the third and fourth, and then only in a slight degree, never those of the fifth and sixth varieties, which belong exclusively to the chronic form of the disease.

The attack is often ushered in by a chill followed by hot skin, thirst, and accelerated and hard pulse: the chill is, however, sometimes wanting. Besides these symptoms of a general inflammatory character, there are others of greater significance. The urine is diminished in quantity and of a reddish or deep brown colour, from the presence of blood. It is always acid, rarely, however, containing crystals of uric acid: its specific gravity is commonly increased; it deposits, after standing, reddish filamentous flocculi, which appear formed of the fibrin of the blood. The proportion of the different elements in the urine, in this stage of the disease varies. Thus the red colour often disappears after two or three days, and becomes a citron colour: but if an exacerbation takes place, it again assumes the reddish tint; the proportion of red globules, however, is not always in direct correspondence with the intensity of the rational and general symptoms. Neither has the proportion of albumen any relation to the quantity of red globules in the urine, the citron coloured urine often affording it in greater quantity than the red.

The natural elements of the urine undergo less change in the acute than in the chronic form of this disease. The urea, and the salts of the urine, the specific gravity are nearly natural.

Patients almost always complain of a sensation of constriction, of a dull pain or uneasy feeling in the loins, which is sometimes most marked in the precise region of the kidneys. This pain is sometimes more marked on one side than on the other, but it is never so acute as in the simple acute nephritis. It is never attended by darting pain in the direction of the ureters, nor by retraction of the testicles. The number of emissions of urine in the 24 hours, varies according to the quantity of drink, and the irritable state of the bladder; if this latter be somewhat increased, it may equal that of a state of health. The discharge is free from pain, except in certain cases where the bladder is affected, or where clots of fibrin obstruct the urethra.

Scarcely has the change in the secretion of urine commenced before anasarca ensues, and that sometimes with extraordinary rapidity. This form of dropsy commences by a puffiness of the eyelids, or swelling of the face, especially in those cases which supervene upon scarlatina. In
other cases, the œdema may commence in the extremities, and extend rapidly to other parts of the body, or disappear in one part to reappear in another. The skin is hot, shining, and does not pit easily on pressure; the marks of which speedily disappear. The pulse is more or less excited, and at the commencement the skin is commonly hot and dry. The tongue is coated, there is disgust of food, and frequently nausea and oppression. The blood is buffed and cupped.

The acute form of the disease may terminate in resolution or in death, or, as commonly happens when left to itself, it passes into the chronic form. In those cases which occur after scarlatina, or during the latter months of pregnancy, the cure may take place with great rapidity. This fortunate termination is announced by free perspiration, by abundant discharges of urine, a diminution in the quantity of albumen, an increase of the urea and salts of the urine, and finally by a cessation of the febrile excitement, and a diminution or complete disappearance of the dropsical effusion — of the anasarca, or of ascites or hydrothorax if they existed. Such cases may recover during the second, third or fourth week.

In some cases the disease may terminate fatally. Commonly this termination is announced by the rapid supravention of cerebral symptoms, or by dyspnœa, dependant of a pleurisy or sub-acute pleuro-pneumonia, or a pericarditis.

The appearances of a restoration to health in this disease are sometimes deceptive, the disease actually assuming a chronic form. After all the other symptoms have disappeared, the albuminous character of the urine continues. After an interval of many months perhaps, or even years of apparent health, the dropsy reappears with acute symptoms, or in a slow and progressive manner, or the patient dies suddenly without any suspicion on the part of the physician of the previous alteration of the urine, or of the former dropsical effusion.

*Chronic Albuminous Nephritis.* This is by far the most common form of the disease: it sometimes succeeds the acute form, but commonly it commences and progresses slowly. When it follows an acute attack, it is characterised by the anatomical lesions, described as the third, fourth, fifth and sixth forms of the disease; but even when it commences insidiously and without fever, especially in scrofulous patients, in phthisis, and in those affected with inveterate constitutional syphilis, &c., the morbid appearances noticed in the early periods of this form do not materially differ from those observed in the acute form, although they are less strongly marked.

The most simple form in which chronic albuminous nephritis presents itself, is where the secretion of urine alone is changed. Thus in scrofu-
lous persons, and in those whose constitution has been debilitated by previous disease, the urine may become albuminous, and assume all the other characters that belong to it in this form of nephritis. Frequently, these changes appear after an exposure to cold and humidity, but sometimes they cannot be referred to any appreciable cause. At the time when it is passed, the urine is almost always slightly acid; it may, however, be neutral, or alkaline, always pale, and often a little turbid, resembling whey in which small whitish flocculi are suspended. The smell of the urine is dead (fade;) its specific gravity below that of healthy urine, sometimes considerably so, 1004-5-6. Examined by the microscope, this pale and turbid urine presents almost always, and often in considerable quantity small whitish lamina, very thin and light. Frequently, also, these lamina are mixed with mucus. This want of transparency in the urine may be dependant on the presence of fatty matter, in which case sulphuric ether will render the urine clear.

A vessel, in which albuminous urine has been passed, almost always contains more or less bubbles of air.

Albuminous urine, treated by nitric acid, precipitates a coagulum of albumen. In the chronic form, this is often more considerable than that noticed in the acute form.

Exposed to heat, albuminous urine sometimes coagulates en masse, but this is rare. Commonly, when either of the above agents are employed to coagulate the albumen in the urine, large whitish milky flocculi form, which, after being precipitated, occupy from the quarter to the three quarters of the vessel. Sometimes these flocculi are so light that the urine only becomes clear above, after several hours.

Both heat and nitric acid should be employed in our experiments on albuminous urine. If, for instance, the urine is alkaline at the time of its emission, or has become so from standing, heat will not commonly coagulate the albumen. If it is transparent, it may not even become turbid; however, if it contains much albumen, it will commonly assume a milky colour. In these cases of alkaline urine, if we add a few drops of nitric acid, the albumen coagulates at once.

Again, in cases where the urine is alkaline, and does become turbid by heat, we must not refer this to the presence of albumen: it is commonly due to the precipitation of the phosphates — the addition of nitric acid renders this kind of urine transparent; and if it is added before the application of heat, the urine will continue to be transparent. Thus, if after filtering the urine if it is turbid, and rendering it acid if it is alkaline, we expose it to heat, and it becomes turbid, or deposits a coagu-
lum which is insoluble in nitric acid, we may conclude that it contains albumen.

But we must be equally careful how we regard every precipitate formed by nitric acid, as an evidence of the presence of albumen; for it may be owing to uric acid, or the urate of ammonia, existing in abundance in the urine. The urate may be re-dissolved by an excess of nitric acid; the uric acid is not so easily re-dissolved—but the application of heat restores to these kinds of urine their transparency.

In some cases, the urine contains both albumen, and the uric acid, or urate of ammonia: in these cases, we must resort to the microscope to distinguish the different deposits. The coagulated albumen presents lamina, which are distinct and with irregular edges: the uric acid presents chrvstals, and the urate of ammonia either an amorphous powder, or afterwards chrystals.

Thus to sum up: Heat and nitric acid, assisted by the microscope, are certain and easy means of ascertaining the smallest quantity of albumen in the urine, whether mixed with globules of blood, or of mucus, or not, care having been taken, as already indicated, to avoid all the chances of mistake.

In the chronic form of this disease, before the appearance of dropsy, the quantity of urine corresponds very nearly with the quantity of drinks. The region of the kidneys is seldom painful, unless firm pressure be employed. The frequency in the emission of urine is often greater than that of health.

The change in the urine may exist for months without the supervention of dropsy; but, unless the patient is carried off by some other disease, it will at length occur, and commonly in the form of anasarca, commencing in the face and extending to the extremities, and is frequently united with effusion into the serous cavities.

The blood also, when the disease is of very long standing is remarkably changed in its qualities: the coagulable portions of the blood are diminished in quantity, the blood is thin and serous, but the proportion of serum is greater than that of the cruor. The proportion of the solid ingredients of the blood, the salts and the albumen, are sensibly diminished. It generally contains a certain quantity of urea: commonly the serum of the blood has a milky colour, and the red globules are fewer in number than in healthy blood.

Besides the above enumerated symptoms, the albuminous urine, the dropsy, the changes in the blood, other symptoms indicating a change in important functions are commonly observed: perspiration is checked, there is habitual dyspnœa dependant on bronchitis, œdema pulmonum,
or serous effusion; vomiting and diarrhoea, especially towards the close of the disease, and which however abundant it may be, does not seem to diminish the dropsical effusion. Finally, sometimes cerebral symptoms ensue, which coming on suddenly almost always indicate a fatal issue.

This form of disease may continue from several months to many years. The great difficulty is to ascertain the duration of the attack before the occurrence of dropsy, as patients are not in the habit of examining their urine; but even after dropsy has occurred the progress of the case is equally uncertain. Sometimes this symptom will disappear after a months’ treatment; at other times, it resists every remedy. Commonly the dropsy continues until death, sometimes worse, sometimes better, until the disease assumes an acute character, or grave secondary lesions ensue which rapidly terminate in death.

Relapses in the acute form even, are common, but the probability of this occurrence depends somewhat on the cause of the disease. Thus a relapse after an attack following scarlatina is rare; while in cases where the disease is dependant on causes which are difficult to avoid, as cold and moisture, ardent spirits, &c., this result is almost inevitable; so that finally the kidneys become so much altered in structure as to render the case absolutely incurable. Imperfect cures, in which while the other functions appear to have regained their healthy condition, the kidneys still continue to secrete albuminous urine, are also intimately connected with these relapses.

In those rare cases in which the disease terminates favourably, the cure is announced by a disappearance of the dropsy followed by a diminution of the albumen in the urine, and by a marked improvement of the general health. In cases where this diminution of the dropsy and of the albumen keep pace with each other, the duration of the disease is generally less, and its favourable termination more certain.

When the disease terminates fatally, it may terminate suddenly by the occurrence of cerebral symptoms, or of pericarditis, pleurisy, pneumonia, or by phlegmonous or gangrenous erysipelas: in other cases, patients die a lingering death, exhausted by diarrhoea, vomiting, fever, and want of sleep.

The causes of this disease have already been partially alluded to. Long continued exposure to cold and moisture is in France the most common cause of this disease. In Great Britain, the abuse of ardent spirits is a very common cause. Among other causes less frequent in their operation, may be mentioned masturbation, pregnancy, constitutional diseases, as scrofula and syphilis: local diseases, as phthisis and
diseases of the heart. Diseases of the liver exert a more doubtful influence; cirrosis appears to trace its origin to the same cause with the granular kidney, viz. the abuse of ardent spirits.

Diagnosis. In the acute form of albuminous nephritis, the existence of albuminous and often bloody urine with anasarca often followed by effusion into the serous cavities, indicates the disease. No other disease presents these two symptoms united.

Sometimes, however, the dropsy does not at first appear, and then the diagnosis of the disease may be for a time doubtful. It will be most likely to be confounded with hematuria, but in this pure blood is commonly passed with fibrinous concretions, &c. In typhoid fever, small pox, measles, and in other acute diseases, the urine may happen to contain albumen; but in addition to the general characteristics of these diseases, the urine contains commonly a large quantity of the urates, which is not the case in albuminous nephritis. In acute simple nephritis, the urine may sometimes contain a little albumen for a short period; but dropsy is not a consequence of this disease, so that the progress of the case will confirm the diagnosis.

The diagnosis of the chronic form is more difficult than that of the acute. This difficulty is of a two-fold character: first, to distinguish the cases of the disease in which dropsy occurs, from other affections in which this is a prominent symptom; and secondly, to distinguish those cases in which dropsy does not occur, from other affections of the kidney and other organs attended by albuminous urine.

If the patient complains of little or no pain in the lumbar region, if the specific gravity of the urine is less than natural, if this fluid contains albumen, and but a small proportion of urea and of the urates, the existence of chronic albuminous nephritis may be regarded as certain, especially if disease of the heart is not present. Even in this case, the chances of mistake are small: for, if in some cases of disease of the heart, pericardium, or great vessels, or of the organs of respiration, the kidneys like other organs, undergo a passive congestion, and as a consequence of this, the urine contains a certain quantity of albumen; still in these cases, the specific gravity, the quantity of urea, &c., remain nearly or quite natural. Besides in these cases, the quantity of albumen will be found to vary very much, even in the course of the same day. Much aid to the diagnosis may also be derived from a careful comparison of the symptoms and general progress of the two diseases.

Some cases of diabetes present the albuminous urine, but at the same time sugar is present.

In cases of cystitis, of inflammation of the pelvis of the kidney, &c.,
the urine containing a certain quantity of pus or mucus, coagulates when treated by heat or nitric acid; but to mistake such cases is to overlook the existence of pus or mucus in the urine, and the characteristic signs of those affections that lead to their production.

In patients who have been unwell for several days, if grave cerebral symptoms, or repeated vomiting without dropsy ensue, and at the same time the urine is loaded with albumen, is of diminished specific gravity, and no disease of the heart, of the pelvis of the kidney, of the bladder, or urethra can be found, these symptoms are probably connected with chronic albuminous nephritis. If additional circumstances can be ascertained, as that the patient has been long exposed to cold and moisture, that he has abused the use of ardent spirits, that he has had general dropsy some months ago, then the diagnosis becomes more certain.

If in addition to the peculiar condition of the urine already noticed, *anasarca* or effusion into the serous cavities exist, and no affection of the heart or liver, nor the existence of pregnancy can account for it, *then the diagnosis is certain*.

Finally, in endeavouring to distinguish the disease in question, whether accompanied by dropsy or not, from other diseases, we must compare their most characteristic symptoms and pay particular attention to the urine, especially if dropsy be present. For there is *not a single symptom* of either the acute or chronic albuminous nephritis, which, if *taken by itself*, will not be found to exist in many other diseases. Thus the presence of albumen in the urine has been detected in numerous diseases, and so with the diminished specific gravity and the diminution of urea, &c.; but there is a series of symptoms which actually belong to albuminous nephritis, and when they exist the disease cannot be mistaken.

*Treatment.* It should be remembered that the two great exciting causes of this disease are cold and moisture, and the abuse of ardent spirits: facts that should be kept constantly in view in the general treatment. This is especially the case in those cases which follow scarlatina — where improper exposure both causes and aggravates the disease.

The treatment of the *acute form* is very simple. Venesection, local bleeding, the warm bath, saline purgatives — remedies addressed to most acute inflammations and regulated by well established principles, according to the severity of the symptoms, the strength of the constitution, &c., are to be employed. When gastric and intestinal irritation complicates the case, as indicated by vomiting, diarrhoea, &c., leeches to the anus, and small doses of opium will be found useful.
In the chronic form the treatment is far from being equally simple or equally successful. In a majority of cases, the only object we can have in view, or hope to attain, is to check the progress of the disease.

Bloodletting, which has been found so successful in the treatment of the acute form, is not equally so in the chronic: still there are circumstances in which it is beneficial. If there is fever and the strength of the patient is considerable, we may resort to cupping and leeching the loins, and to venesection, even if no pain exists in the region of the kidneys. And even if fever is not present, and we can establish the fact, that the disease is not of more than a months’ duration, and if the patient is not exhausted by some previous disease, or by privations, it will still be proper to resort to venesection, or the free application of cups to the loins. For although bloodletting is injurious when the kidneys have become pale, granulated, or indurated, still it is impossible to distinguish during life the precise period when these conditions occur.

The attacks of acute inflammation which supervene during the progress of the chronic form, require the same treatment as an original acute attack, only it should be less active.

The greatest care should be taken to guard against any aggravation of the disease, especially by avoiding exposure to cold and moisture, and the abuse of ardent spirits. In addition to these important points, other means may be employed with advantage in checking the progress of the disease. Issues, &c. applied to the loins have been found useful.

The tinct. of cantharides in small doses, has in several cases produced a very favourable influence on the state of the urine, and on the dropsical effusion, but it is an uncertain remedy. The balsams and spirits of turpentine have been used, but without advantage.

Frictions with mercurial, iodine, and other ointments upon the loins, have equally failed.

The attempt to remove the dropsical effusion by purgatives had long been made, even before the true nature of the disease on which it is dependant was known. Seidlitz water, super-tartrate of potass, and the more drastic purgatives, as elaterium, colocynth, gamboge, have all been used with some success in the removal of the dropsy. If the patient is feeble, they should be combined with the preparations of iron. But these successful cases are on the whole rare. On the other hand, we must take into account the cases in which the abuse of these means has led to injurious results, as nausea and vomiting, obstinate diarrhœa, disgust, weakness and discomfort, and all without the least advantage.

The above remarks in relation to purgatives apply also to diuretics.
The great number of such remedies which have been recommended, prove sufficiently their inefficacy in most cases. Dr. Bright has but little confidence in most of them. Dr. Christison has probably exaggerated their advantages. Of all the diuretics, the wild horse radish has succeeded best in the hands of M. Rayer.

The vapour bath has been used with advantage, in both the acute and chronic form of the disease. When administered, great care should be taken to avoid exposing the patient, by administering the bath in the bed where the patient lies.

The moderate success that has attended the employment of the vapour bath in these cases of dropsy, has led to the employment of diaphoretics in the same cases. The English writers extol highly the use of Dover's and James' powders. But M. Rayer has found them of no use whatever in promoting diaphoresis in the treatment of the dropsy dependant on chronic albuminous nephritis. They rarely induced a salutary perspiration, and the Dover's powder sometimes produced uneasiness and nausea: even where perspiration was induced, it did not seem to exert any very marked influence on the dropsical effusion.

M. Rayer acknowledges that he has derived some advantage, at times, from the use of the above means; but, very often, especially where the dropsical effusion has existed for several months, every thing has failed. The dropsy goes on increasing until the skin of the lower extremities bursts, becomes red, and sometimes phlegmonous erysipelas ensues. Puncturing the parts in different ways has been recommended to prevent the occurrence of such an accident, but this means often will induce it, when it has not previously existed.

Chronic albuminous nephritis seldom exists in a simple state. Secondary complications, in addition to the dropsy, and more or less important in their character, ensue, requiring the use of particular means. Some of these are acute, and must be treated very actively during the first 24 hours of their existence: others are chronic and incurable, requiring only palliative treatment.

In the cerebral affections, calomel in purgative doses, cups behind the ears, and blisters to the nucha, are indicated.

The inflammatory affections of the chest, &c., as bronchitis, pneumonia, pleurisy, peritonitis, require the ordinary treatment: but the impaired powers of the constitution and other causes, diminish very much the probabilities of success.

Vomiting, in these cases, may be checked by kreasote, by tonics and blisters, better than by ice, opium, cups, and effervescent draughts. The diarrhoea may be best checked by the administration of opiates.
In addition to all the remedies already recommended in the treatment of this disease, much may be gained by an attention to hygieinc means, which tend to support the powers of the constitution, and prevent the supervision of secondary symptoms. To this end, dry and well warmed apartments, easily digested food, the daily use of the preparations of iron, and of a little white wine, will be found useful.

M. Rayer next considers the relations of albuminous nephritis to other diseases of the urinary organs, and establishes the important fact, that while common nephritis is very frequently dependant on some antecedent disease of these organs, as stricture, disease of the bladder, &c., albuminous nephritis is seldom or never dependant on such cause. He concludes the 2d vol. by numerous cases, illustrating the connection of albuminous nephritis with other diseases, as diseases of the heart and pericardium, bronchitis, pneumonia, pleurisy, phthisis, plastic angina, diseases of the skin, secondary syphilis, scarlatina, and with pregnancy, &c., &c.

J. A. S.


In the first number of this Journal, we gave a short notice of the first volume of this work, and promised when the second should appear, to notice it still more in detail. As the second part has just reached us, we shall endeavour to redeem our pledge, though, owing to the late period at which it has arrived, we shall be unable to do anything like justice to its contents.

and." XVII. "Scandinavia." XVIII "Russia." XIX. "Italy." XX. "Spain." XXI. "Portugal." XXII. "America." This bibliographical list is very full, and so far as we can judge, accurate. To the student of Materia Medica it will prove an invaluable guide, as containing all the works of any note ever published on the subject.

The second part of Mr. Pereira's work treats of those medicines which are obtained from the organic kingdom, beginning with vegetables, the articles being arranged according to the natural system, now almost universally adopted by botanists. The advantages attending this arrangement, we formerly pointed out in our notice of the "Flora Medica," of Mr. Lindley, to which we beg to refer the reader. The articles from the vegetable kingdom are arranged under eighty-one natural orders, the technical descriptions of which are framed to accord with the existing state of botanical knowledge. The descriptions have, in general, been borrowed from Lindley, Hooker, Decandolle, and others, omitting unimportant particulars. After giving the technical as well as common name of the plant, we are next presented with its History, then its Botany, Description, Composition, Chemical Characteristics, Physiological Effects, (I. on vegetables; II. on animals; III. on man;) Uses, (in all the principal diseases,) Administration, Antidote, Adulteration, and Commerce. Mr. Pereira seems to have availed himself very fully of the writings of the French and German physicians, of the analyses of Batka, Cannobio, Pfaff, Thubeuf, Poggiale, Pelletier, Caventou, Meissner, Vogel, Tilloy, Buchner, Hinkler, Braconnnot, Trommsdorf, Buillon, Lagrange, Berzelius, and others. For facts connected with the Materia Medica of our own country, the author has chiefly depended on the Dispensatory of Wood and Bache, and the works of Drs. Chapman and Eberle. The work is rendered peculiarly attractive by a large number of well-executed wood cuts, representing the different species of vegetable and animal products, whose properties are described. The great superiority of these to American wood cuts cannot but attract the notice of the reader.

As the work is not susceptible of analysis, we can only speak of it in general terms, and commend it as in the highest degree worthy of attention and study. For its thoroughly practical character and scientific arrangement, completeness of detail, and minute accuracy, it seems to us far in advance of every other work of the kind with which we are acquainted, and we doubt not it will so be considered by the profession generally.

As much has been said of late on the subject of belladonna, as a prophylactic against scarlatina, the following remarks by Mr. Pereira may
not be uninteresting. " The introduction of belladonna into practice as a preventive of scarlet fever, is owing to the absurd homeopathic axiom of "similia similibus curantur," for as this plant gives rise to an affection of the throat, and sometimes to a scarlet rash on the skin, its power of guarding the system against the reception of scarlet fever has been assumed; and the assumption has been endeavoured to be established by an appeal to experience. Bayle (Bibl. Therap. t. ii. p. 504,) has collected from various publications 2,027 cases of persons who took this medicine, and were exposed to the contagion; of these 1,948 escaped! Oppenheim, (Lon. Med. Gaz. vol. xiii. p. 814,) gave it to 1,200 soldiers, and only 12 became affected. To the authorities here referred to may be added Hufeland, (Lancet, May 2, 1829,) and Koreff, (Lon. Med. Gaz. vol. iv. p. 297,) who admit from their own personal observations, the efficacy of the remedy, though they have not specified the number of cases in which they have tried it. But bearing in mind the well-known capriciousness evinced by scarlet fever, (as indeed by other contagious disorders,) in regard to the subjects of its attacks, and the large number of those, who, though exposed to its influence, escape, the best evidence hitherto adduced in favour of the notion must be admitted to be inconclusive. While, therefore, the facts brought forward in favour of the existence of this prophylactic power are only negative, those which can be adduced against it are positive. For I conceive 20 cases of failure are more conclusive against the opinion here referred to, than 1000 of non-concurrence are in favour of it. Now Lehman, Barth, Wendt, Murhbech, Hoffman, Bach, and many others that I could refer to, declare it has failed in their hands to evince its prophylactic powers. In this country we have no extended series of observations to quote; but the cases which I am acquainted with are decidedly against the efficacy of the remedy. A remarkable failure is mentioned by Dr. Sigmond, (Lancet, 1836-7, p. 78,) of a family of 11 persons who took the supposed specific, yet every individual contracted the disease." A few years since we experimented pretty extensively with belladonna, as a preventive of scarlet fever, but without any satisfactory results. As near as we could judge, about the same number took the disease as if the belladonna had not been given. We may remark in passing, that Mr. Pereira shows the estimate in which he holds the writers of the homeopathic school, by never quoting them as authority on any subject; for the results which they pretend to have witnessed, are neither sustained by reason, observation, or experiment. Indeed we consider it is a remarkable fact, that though the homeopathic school boasts of having 800 volumes, detailing the results of experiments in health and disease, and though they boast of their devotion to truth, and
their patient investigation of facts, no experiments have been made in this country, so far as we can learn, to test the accuracy of statements as to the effects of remedies in health. If sulphur will really produce itch, let it be shown: if quinine will produce a genuine intermittent, let it be demonstrated; and so of the rest: but let us see no more implicit, blind belief in the assertions of German transcendentalists, Swedenbergians, and animal magnetizers, without putting the matter to the test of experiment, especially since it can so easily be done.

In speaking of the physiological effects of wine, we are happy to find our author taking different ground from that maintained by Mr. Sigmond. He remarks, "in a state of perfect health, its use can be in no way beneficial; but on the contrary, its habitual employment is calculated to prove injurious, by exhausting the vital powers and inducing disease. The actual amount of injury which it may inflict will of course vary with the quantity and quality of the wine taken, and according to the greater or less predisposition to disease which may exist in the system. Maladies of the digestive organs, and of the cerebro-spinal system, gout and dropsy, are most likely to be induced or aggravated by it." Again, "To persons in health, the dietical employment of wine is either useless or pernicious."

With respect to the adulteration of wines, we cannot agree with Mr. P. that lead "is usually to be traced to shot in the bottles, and rarely to fraud," for we have ascertained by numerous trials, that champagne and other French wines, often contain a much larger amount of lead than can be accountable for in this manner. It is now well known that the adulteration of wine by means of lead, is practised to a great extent among the dealers in France. We have tested a bottle of champagne received direct from the importers, by adding a little nitric acid, and then a portion of sulphuric acid to a tumbler full, when there was immediately a precipitation of sulphate of lead in the form of white flakes, filling one third of the glass, and still, to the taste, this was very passable champagne. Lead has been employed from a very early period to improve the taste of acescent or harsh wines. The German emperors issued decrees against its use between the years 1498 and 1577. In 1696 several persons in the duchy of Wirtemberg were poisoned in consequence of drinking wine adulterated with ceruse. The attention of physicians and legislators was, in consequence, directed to the subject, and heavy penalties imposed upon the practice; indeed in some of the German states it was made a capital offence, and several persons suffered. The well-known endemic Colic of Poitou, which first made its appearance in 1572, and raged with great violence for sixty or seventy years, is now acknowledged
BIBLIOGRAPHIC NOTICES. [January,
to have arisen from the adulteration of wine with lead. Hence the name, *colica pictorum*. In 1750 a curious discovery was made by the farmers general of France. For some years previous to this date, 30,000 hogs-heads of sour wine were annually brought to Paris, probably for the purpose of making vinegar; but on inquiry it was found that the vinegar merchants corrected the sourness of the wines with litharge. (*Paris and Fonblanque vol. II*, p. 347.)

Prof. Christison remarks, that there are good reasons for believing that the same adulterations are practised in France at the present day, for "the small tart wines, and in such abundance, by people of all ranks in that country, hold out strong encouragement and facilities to its perpetration." (*Christison on Poisons*, p. 479.) In Graham's "Treatise on the Preparation of Wines," and in a work called "The Vintner's Guide," there are directions for preventing wine from becoming acid, and for clearing cloudy or muddy wines, which consist in the addition of sugar of lead. Accum also states, that lead is extensively employed for this purpose; indeed he remarks "there appears to be no other method known of rapidly recovering ropy wines." We therefore differ with Mr. Pereira on this point, and as it is one of some importance, we have dwelt upon it the longer.

After learning Mr. P.'s opinion as to the injurious effects of wine-drinking to persons in health, we were a good deal surprised to find him falling in with the recently expressed doubts as to the evil consequences of opium-eating and opium-smoking, under similar circumstances. "That the immoderate practice of opium-smoking," he remarks, "must be highly detrimental to health, cannot for one moment be doubted. But there is at present no evidence before us to prove that a moderate enjoyment of it is injurious. The ill-effects ascribed to this practice by Medhurst apply probably merely to cases where opium-smoking has been carried to excess. In conclusion I would observe, that a good account of the effects of opium-smoking, by an unbiased and professional witness, is still a desideratum; and until we obtain this we should be cautious in adopting the statements of our zealous anti-opium partisans. "And we should be further careful not to assume hastily, because opium in large doses, when taken by the mouth, is a powerful poison, and when smoked to excess is injurious to health, that, therefore, the moderate employment of it is necessarily detrimental. Tobacco is an instance in point. Either swallowed or smoked to excess it is a violent poison; yet, as I have before remarked, (p. 871,) I am not acquainted with any well-ascertained ill effects arising from the moderate enjoyment of tobacco-smoking." Now the first inquiry we feel disposed to make is, what is
the moderate use of opium or tobacco? Can we assert that what would be a moderate dose for one person, would be so for all? Are these narcotics necessary or beneficial in health? Can their moderate use be long continued without danger of its becoming immoderate? Can articles confessedly poisonous be taken in health, in any quantity, without some injury? To all these questions we answer no,—and we see not how Mr. Pereira can reconcile his concessions with what he has laid down on the subject of wine-drinking, especially after having quoted the following description of the habitual opium-eater from Oppenheim:

“He is instantly recognised by his appearance; a total attenuation of body, a withered, yellow countenance, a lame gait, a bending of the spine, frequently to such a degree as to assume a circular form, and glossy, deep-sunken eyes, betray him at the first glance. The digestive organs are in the highest degree disturbed; the sufferer scarcely eats any thing, and has hardly one evacuation in a week; his mental and bodily powers are disturbed,—he is impotent. By degrees, as the habit becomes more confirmed, his strength continues decreasing, the craving for the stimulus becomes even greater, and to produce the desired effect the dose must constantly be augmented.” Again, “these people seldom attain the age of forty, if they have begun to use opium at an early age.” And this is the article, “the moderate employment” of which, Mr. P. thinks “is not necessarily detrimental.” We should like to know on what principle of physiology such an opinion can be maintained. It may be said that the recuperative energies are adequate to resist the influence of noxious agents, when acting within moderate limits; but it by no means follows that this is done without an injurious expenditure of vital power, and consequent impairment of the healthy functions. If a poisonous article be efficacious in the removal of disease, we have strong doubts whether it can be taken with impunity in health, even in moderate doses. Perhaps, however, Mr. P. may defend his position as some do the moderate use of alcoholic drinks, by maintaining that in the present artificial state of society, there is no such thing as a state of perfect health, and therefore narcotic stimulants may, and should be taken “as a medicine.” This is the only rational ground on which their defence can be placed, and to this we can only reply by denying both premises and conclusion. Under the article Cocculus Indicus, Mr. P. remarks that the greater part imported is consumed for illegal purposes, principally for adulterating beer and ale,—though this practice is prohibited by the legislature under a penalty of 200l. upon the brewer, and 500l. upon the seller of the drug. And again, “notwithstanding the severe prohibitory statutes against the employment of Cocculus Indi-
in brewing, I have reason to believe that it is extensively used; but being employed in the form of a solution of the extract, the fraud is not easy of detection." Morrice, (Treat. on Brewing,) gives full directions for its employment. In the manufacture of porter, this author directs three lbs. of Cocculus Indicus to be added to every ten quarters of malt.

"It gives," says he, "an inebriating quality, which passes for strength of liquor, and prevents second fermentation in bottled beer, and consequently the bursting of the bottles in warm climates."

It is now pretty generally known that this drug is extensively employed in the manufacture of American malt liquors, and that the sale of it to brewers constitutes a no small item in the business of the druggist. Though the fact is acknowledged, yet our legislatures in their wisdom have not thought it necessary to place any restrictions upon the practice, choosing rather that the good people should be poisoned by wholesale, rather than one jot or tittle of their liberty should be infringed. Whether our law-makers will ever take cognizance of these vile adulterations is doubtful, as too many of them are engaged in the practice themselves.

But we have already extended our remarks much farther than we had intended; we can therefore only conclude by again expressing our high opinion of the work, and commend it to all teachers, practitioners, and students of medicine, as on the whole the most complete and valuable of any hitherto published in our language.

C. A. L.


In this work on a subject of leading importance, and which has given rise to considerable difference of opinion, as well as to many and fatal errors of treatment, we are presented with a practical essay founded on experience gained in an extensive field, and under favourable auspices. The author was for several years on duty as a surgeon in the West Indies, and it is to that excellent regulation of comparatively recent introduction into the medical department of the British army, requiring reports of
practice from all medical officers, which has already yielded valuable returns of knowledge, and which promises still richer results, that we are indebted for the first edition of the work published ten years since. The present edition embodies also the subsequent experience of its author and the results of more extended investigations of the subject.

The different names under which this disease has been known and described by different authors are first passed in brief review, and are all found open to some objection. Our author prefers that of erethismus ebriositatis, but as it is generally known to the profession under the name of delirium tremens, he makes use of that term. He gives the following definition of the disease, viz: Indirect general debility, succeeded by a morbid increase of action in the brain and nervous system, which is attended with delirium, and terminates, generally, either in a sleep and subsequent health, or in death from collapse, or effusion within the cranium. In some cases, however, the delirium is followed by more or less permanent aberration of intellect, particularly in those predisposed to insanity; or the second stage may be suspended or extinguished by the supervision of some inflammatory affection.

He divides the disease into three distinct stages, an arrangement which he regards as of great practical moment in the judicious modification of treatment, and which he claims the credit of having first introduced. The regularity of these stages is such as to lead him to consider this affection as a disease "sui generis," somewhat similar in its course to a paroxysm of ague, being to the brain and nerves what intermittent fever is to the arterial system. He compares the first stage, or that of exhaustion, to the cold stage; the second, or that of nervous excitement, to the hot fit; and the sleeping, or third stage, to the sweating stage.

Mr. B. objects to the division of this disease into idiopathic and symptomatic, and also into acute and chronic, and asthenic and asthenic, as made by Barkhausen of Bremen. He considers it in all cases as purely idiopathic, arising invariably from the sudden cessation, or material diminution of intertemperate habits. He regards it as altogether an asthenic affection, as well from the nature of its cause, as from the nervous symptoms which constitute it. The symptoms may manifest more or less of an acute or chronic, asthenic or asthenic tendency, according to the previous state of the constitution, age, and habits of the patient, but never to such a degree as to warrant a corresponding division of the disease.

He objects also to the term traumatic delirium used by Dupuytren, as liable to mislead in practice, because it would imply that it is the peculiar consequence of wounds or accidents; whereas it is not confined to
any one state or injury of the system, but will always occur when the system is deprived of its accustomed stimulus in the necessary diathesis induced by habitual intemperance, whether this deprivation depends on an attack of fever, or a whitlow, or be owing to solitary confinement and restriction to bread and water. The cases described by subsequent authors under this title, he attributes to the sudden cessation of habitual intemperance alone, and not to the peculiar shock or consequence attending on a wound or fracture, farther than that the wound or fracture may have been the cause of this sudden cessation.

To induce the state of constitution favourable to the development of delirium tremens, or the ebriositatic diathesis, as our author terms it, it is not necessary that the habits should be such as to entitle the individuals to the appellation of drunkards; all that is required is that the habit of taking a certain quantity of diffusible stimulus daily, perhaps little more than sufficient to remove those feelings of debility which are induced by the effects of climate, (referring particularly in this part of the description to the West Indies, where the author saw numerous cases of this affection,) and which, as they are indirectly increased by the means used for their relief, require a gradual increase in the quantity of stimulus taken, to keep up the feeling of benefit afforded by them.

Mr. B. enumerates the following as the first distinct indications of the disease, which usually appear in the following order: a peculiar slowness of the pulse,* frequently as low as forty-four in a minute, attended with coldness of the hands and feet, which generally present a clammy, icy feel: these are preceded and accompanied with symptoms of general debility, and a diminution of temperature, owing of course to the defect of sensorial or nervous influence. Cramps in the muscles of the extremities, with giddiness, nausea, and occasional vomiting, are also troublesome; the bowels are generally open, but sometimes the contrary; nervous tremor of the hands and tongue, the latter being moist, and but slightly furred, form also, in most instances, prominent features in this stage. All these are accompanied with dejection of spirits, frequent sighing and oppression of the praecordia, anxiety and depression of the countenance, with short and interrupted slumbers.

The interval of time which elapses between the privation from accustomed stimuli, and the commencement of these symptoms of the first stage is uncertain, depending on predisposition, previous habits, and the general state of the constitution.

* This, he says, that he has invariably observed as indicative of the first stage of the complaint, and is not aware of the previous notice of this symptom by any author.
"As the second stage approaches, the countenance gradually assumes a wild expression: the patient begins to entertain hallucinations: he fancies he sees loathsome objects, as lizards or cockroaches, for instance, on the bed, or somewhere near him, which he suddenly attempts to catch; and he becomes more restless, with an apparent anxiety to perform immediately whatever you desire, or even to anticipate you in what he thinks you are about to require of him." By a careful discrimination of this last symptom, Mr. B. thinks that he has generally been able to prognosticate approaching delirium.

The duration of the first stage will always be in proportion to the nature and extent of the cause, and the state of the constitution and previous habits of the patient; but it seldom lasts many days, under any circumstances, without the accession of a certain degree of mental derangement.

When the second stage is established, mental alienation in various degrees and forms is developed: the heart and arteries at length sympathise, and the pulse becomes more frequent, though it continues small, and the heat of the surface increases: the hands and feet retain in some degree an icy and clammy feel, while the rest of the surface may become even hot and dry. If this state continues long without amelioration, a clammy sweat pours from the skin, accompanied with excessive irritability, the disorder of the mind increases, and objects of the most frightful forms present themselves to the imagination of the patient, and in positions in which it is physically impossible they can be situated. "From the moment delirium is fairly established, the patient is harrassed by obstinate pervigilium, which may be looked upon as a pathognomonic symptom of the second stage of the disease. During all this, the appearance of the countenance becomes particularly anxious, the tremor of the hands and tongue generally continues, and the fur on the latter increases; the urine at the same time becomes scanty and pale, and the bowels rather confined; or, if relaxed, the stools are dark coloured; the pupils are contracted, but without intolerance of light."

After a continuance of these symptoms for one, two, or three days, and in a few instances, even beyond that period — where a fatal termination is not about to take place, their gradual mitigation almost always succeeds, which is attended with a strong tendency to sleep, exhibited by yawning and drowsiness. The sleep soon becomes profound, and lasts from six to eighteen hours, and occasionally much longer, constituting the third stage of this nervous paroxysm, to which convalescence almost invariably succeeds.

Mr. B. never saw delirium continue a month in this disease, as some
authors have asserted. He saw one fatal case which lasted six days. In this case, the patient refused medicine or food, and perished in this determination with the greatest obstinacy until death.

When the third or sleeping stage does not supervene in due course, the mind appears to labour under excessive irritation, and the patient makes violent and frequent struggles, which are attended with copious perspiration. As the disease advances, this perspiration becomes deadly cold; the pulse increases in rapidity, becomes thready and feeble; the tremor of the hands also augments, and extends to the whole frame, approaching almost to subsultus tendinum, though resembling more the nervous rigors which, in violent cases, sometimes precede the approach of the sleeping stage. As the disease still farther progresses, the pupils become exceedingly contracted, the countenance is pale and anxious, the tongue brown and dry in the centre, the patient talks incessantly, and with astonishing rapidity, and may perhaps be affected with pseudoblepsis and carpologia. The delirium then becomes excessive, and continues till a short time before death. There is generally, however, a calm previous to death, which, in most instances, takes place without a struggle, though it may sometimes be immediately owing to an epileptic fit.

We have been thus particular in giving a detailed description of this disease, and generally very nearly, or quite in the authors own words; because it is this division into these stages which he claims as having been first made by him, and because, without having their limits definitely marked out, we should not be prepared to appreciate the modifications of treatment adapted to these several stages, and which constitute a very important practical point.

The most common predisposing cause of delirium tremens, as is well known, is the habitual and excessive use of strong liquors; but this predisposition may also be induced by the immoderate and long continued use of any of the diffusible stimuli, especially of opium — the long abuse of strong coffee has also produced it, and also intense mental application.

The immediate or occasional cause appear to our author, to be, in general, the sudden cessation of the application of accustomed stimuli, through the medium of the digestive organs, to the nervous system, in consequence of which cessation the nervous power gradually sinks to the lowest ebb; and in endeavoring to rally and re-establish the lost equilibrium between it and the vascular system, its efforts exceed the exhausted resources of the sensorium, the consequence of which is delirium, &c.

Our author ascribes the fatal termination of this disease to serous effusion within the cranium, and not to venous congestion or inflammation of the brain, to which it has been attributed by some.
The diagnosis of this disease is important, and in general, is not difficult. It must be distinguished from the delirium of phrenitis, typhus, &c., and also from the different forms of mania — also from that delirium consequent to the immediate effects of spirits, or other diffusible stimuli, a form called delirium ebrioum by Darwin, from which it differs very much in its symptoms, and in the mode of treatment required. Our author prefers regarding these as distinct and opposite diseases, rather than as forming two kinds of delirium tremens.

Under the head of prognosis, Mr. B. remarks, that when the pulse does not exceed one hundred strokes in a minute, he considers his patient, generally speaking, as safe; but when, from its rapidity and the tremor of the hands, it can scarcely be counted, he considers him in imminent danger.

In the treatment of this disease, particular attention must be paid to the stage of the complaint — the age, temperament, habits, and integrity of the constitution of the patient, and also the nature or type of any accompanying disease or accident, must also be considered — all mental irritation must also be soothed by physical as well as moral means.

During the first stage, the disease may be cut short by proper management. If there is slight gastric derangement, attended with nausea and occasional vomiting, effervescing draughts containing ten drops of laudanum, given every second hour, with emollient, and, if necessary, anodyne enemata, are very efficacious. In the intermediate hour, Dr. B. has been in the habit of giving an ounce of rum, with a little warm water and sugar, and of prescribing the warm bath, or tepid affusion, or even the cold affusion, according to the strength of the patient, and the probability of reaction. He recommends at the same time, anodyne frictions on the epigastrium, and that the head should be shaved and well rubbed with strong volatile liniment, &c., as gently to stimulate the surface of the scalp — a blister to the nape of the neck is also of advantage.

As to emetics, which have been so highly recommended in this affection, our author would not, even in the second stage, risk giving one more permanent in its action than the sulphate of zinc, from fear of its debilitating effect, more particularly those arising from tartar emetic. He remarks that Stoll recommended the administration of emetics in delirium in 1778, although late writers, both in Great Britain and America, have claimed the credit of their first introduction into practice.

When there is no nausea at all, Mr. B. gave an ounce and a half of the camphor mixture, with 20 or 30 drops of ether, and ten of tincture of opium, and when the appetite allowed it, he permitted moderate quantities of soup, arrowroot, sago, or any other mild nourishment — but the stom-
ach was generally so weak as not to call for anything but the medicine. His reason for presenting rum in preference to any other stimulus, was that his patients were accustomed to that spirit — under different circumstances, he would allow wine, ale, porter, &c.

When constipation existed, Mr. B. found a drop or two of croton oil very useful, from its acting though the medium of the nervous system, in addition to its efficacy as a purgative.

He would not have recourse to large doses of opium in the stage of exhaustion, as has been recommended by some authors, and particularly by Dr. Coates of Philadelphia — he says that they may be useful in certain cases of the stage described by Dr. C., which he says corresponds pretty nearly with his second stage; and in this stage, he himself recommends their use — nor will Mr. B. recommend, either from experience or theory, the exclusive use of stimulating or spirituous liquors, as has been proposed by Dr. M. Ryan. The object of our author in the first stage of delirium tremens is to raise the lowered scale of nervous power, not by overwhelming it with large doses, but by the gradual effect of the administration of diffusible stimuli, aided by opium, or preparations of morphia, in quantities calculated to allay irritation, without, at the same time, increasing debility.

In the second stage, full doses of opium must be gradually administered, taking care to support the system at the same time by means of diffusible stimuli and antispasmodics, such as brandy, rum, wine, porter, and camphor or musk mixture, with ether, varying their exhibition according to circumstances. To these means, our author has been in the habit of adding calomel and Dover’s powders, say 2 grs. of the former to 6 of the latter, every two hours, until the system become affected, or the disease yielded.

The warm bath is also a valuable adjuvant for the purpose of soothing nervous irritation, and of exciting a general perspiration — before such a state of the skin takes place, cold applications should be constantly made to the head. He has often found the flowing of a small stream of cold water slowly on the surface of the head, while the patient was in a warm bath, particularly soothing in this stage of the disease — but care must be taken to prevent the cold water falling on the body.

The state of the bowels must be watched, and, if necessary, two or three evacuations should be procured daily by means of croton oil, (a drop or two shaken in a small quantity of spirit of wine, and then mixed with a little sugar and water.) Should the oil thus administered produce much irritability of the stomach, it may be applied by friction to the abdomen in appropriate doses. This course must be persisted in until a favourable change is observed, as manifested by a gradual diminution of
all the symptoms, and a tendency to sleep. At the particular approach of this crisis, we should be careful not to interfere too much with the intentions of nature by over-doses of medicine, especially of opium, — after a fair quantity of this has been given, we should be cautious about giving more without allowing sufficient time to intervene between the doses.

From the commencement of this stage, particular attention should be paid to the moral management of the patient, and an ascendancy must be gained over his mind, if possible, without having recourse to coercive measures.

If the patient awake soon, some warm stimulating drink, with a moderate dose of opium, must be given, and kind and assuring conduct adopted, and the patient will, almost in every instance, very soon fall into a more profound sleep, from which he generally awakes perfectly rational. After this, we have little more to do than support the strength, and gradually diminish the quantities of stimuli before administered, to bring the constitution back to a moderate healthy degree of action. Quinine, iron, hops, &c., aided by the cold or tepid shower bath, are of service in restoring the vigour of the shattered constitution.

Should this second stage continue without the supervention of sleep, and effusion commence, or be about to take place, Mr. B. recommends the application of a blister to the head, and the liberal administration of musk and ammonia. He would also blister the extremities, and order mercurial and iodic frictions to the spine, to excite the action of the absorbents, and continue at the same time, the use of turpentine enemata, the tepid bath, &c., though at this stage but little benefit is to be hoped for from medical assistance.

Bloodletting may sometimes be an important auxiliary during the height of the second stage in young and very vigorous subjects, or where there are symptoms of local determination, but is seldom required to the extent of more than a few ounces, nor is its repetition often necessary, nor should it ever be employed without keeping in view the general nature of the disease.

Our author, in conclusion, sums up his views under the three following heads:

1. That pure delirium tremens is altogether a nervous disorder, the consequence of the sudden cessation of habitual intemperance in the use of diffusible stimuli, &c., &c.

2. That it is a disease of paroxysmal type, which may be divided into three stages, essentially different in their symptoms and nature, and consequently requiring each a modification of treatment.
3. That the stimulo-narcotic mode of treatment, when properly directed and modified so as to suit each particular stage, is the one which promises the most success.

H. D. B.


We have long regarded the Dublin Dissector as the best manual with which we have been acquainted, for the use of students in the dissecting room. And we are glad to see it reprinted in this city, and thus brought within the reach of all those amongst us who are engaged in anatomical studies. The present edition is enriched by the addition of a large amount of new matter, compiled from standard authors, or obtained from private sources, by which its value is greatly enhanced. Among the new matter which has been introduced, we find an account of the average weights and measurements of the principal organs of the body in their healthy condition, and of the modifications which are produced in them by disease. We find also a statement of the chief varieties which occur in the muscles, arteries, and veins.

The work is highly creditable to the industry and research of the editor, and we have no doubt that he has performed an acceptable service to medical students and to the junior members of the profession. We recommend the work with great confidence to all who wish to devote themselves to the practical study of anatomy.

A. C. P.

The American Medical Almanac for 1841, designed the daily use of Practising Physicians, Surgeons, Students, and Apothecaries, &c. &c. Boston.

The American Medical Almanac, edited by Dr. Smith, editor of the Boston Medical and Surgical Journal, has already been so favourably received by the profession that no new commendation on our part is required. The present volume contains a large amount of valuable statistical information which has been collected by the editor and his assistants in different parts of the country. It is sold by C. S. Francis, 252 Broadway.
Dr. Washington reported the following interesting case of fecal vomiting, occurring in the course of typhoid fever, and hastening the fatal result.

A gentleman of this city, Mr. S. B. L. came under the care of Dr. Francis and himself in the advanced stage of fever, and died on the morning of the fourth day afterwards, April 21st, 1840, aged 24 years. His disease was evidently that form of typhoid fever which is accompanied by ulceration of the bowels as one of its most constant pathological changes. He had been sick about 30 days, of which 24 were on ship-board, and his whole aspect evinced great exhaustion of the powers of life. His bowels, the primary seat of disease, were greatly distended with gas; delirium had existed more or less for the last eight days, during which time his urine had oozed away unconsciously to himself, so as to render a frequent change of his bed-linen necessary. His bladder was found to be filled almost to bursting with urine, of which about two quarts were drawn off by a catheter before it was emptied. The unconscious discharge of urine and delirium were doubtless associated with this over-distension from the commencement. This afforded him so much relief, that some hopes were now entertained of his recovery: at the end of a few hours, however, after having been for a while quite restless, he suddenly vomited, at one gush as it were, about a pint of yellowish, fluid, fecal matter, which, from its odour and appearance, evidently came from the bowels. This vomiting of the contents of the bowels continued more or less until death, which supervened between two or three days after it commenced. It had not previously occurred during his illness, and it indicated most clearly that a strangulation of the bowels had taken place; and as there was no hernia found on examination of the exterior of the abdomen, it was inferred that the strangulation was internal. Conscious-
ness increased as death approached, but the powers of both mind and body were so exhausted that he only once complained of the offensive nature of the matter vomited. After this vomiting came on, his pulse increased in frequency from about 120 to 156, afterwards to 168, at last to 180. Vomiting generally occurred a few minutes after almost every article of drink, nourishment or medicine. His great thirst rendered ice very grateful, but it had but slight effect in allaying the vomiting; nor did injections, fermentations, or other applications to the abdomen, nor any other means, have any decided effect in arresting the approach of death. The introduction of a very long, flexible catheter into the bowels as recommended by O’Beirne, to remove the gas so as to allow the distended bowels to contract, and thus disengage themselves from the strangulation, proved entirely useless.

 Examination after death. Abdomen. The stomach and the superior two thirds of the small intestines were found greatly distended, particularly the latter, which was of the size of the wrist, and exhibited, externally, great vascularity. The inferior third of the small intestines was contracted to the breadth of the little or ring finger, and flattened like a ribband, being emptied of its contents. There was a strangulation of the small intestines at the union of these two portions, apparently by a twisting of the bowels, and by the imprisonment of about 12 inches of the distended portion of the small intestine adjacent to the strangulation, in the cavity of the pelvis, so as to require some force to disengage it. The portion of the small intestine adjacent to the strangulation was more distended than any other. The stomach and the distended two thirds of the small intestine contained besides gas, the same kind of yellowish, liquid, faecal matter, which had been vomited during life, while the portion of the small intestine beyond the strangulation, was literally emptied of all faecal matter, having passed its contents into the large intestine.

 The mucous membrane of the stomach was deeply reddened throughout its extent; that of the distended portion of the small intestine was also much reddened, particularly in some few spots; the inflammation in both was evidently of recent date, and occurred no doubt in connection with the strangulation. In the remaining or contracted third of the small intestines, and in the large intestine, about 20 ulcers in the whole, were found, occupying in the former the glands of Peyer, in the latter, two feet of the bowel, particularly at and near the ileo-cœcal valve. The whole mucous membrane and the sub-mucous cellular tissue were very much thickened for the distance of three inches from the valve. In the large intestine, the ulcers were scattered throughout its whole extent; the ulcers are all deeply imbedded in the thickened coats of the intestine,
some of them almost perforating the bowels, and others presenting a
mass of the thickened, disorganized, sub-mucous cellular tissue of a yel-
low colour, which had not yet sloughed out, adhered to the bottom of the
ulcers, but exposed to view, as the covering of mucous membrane had
ulcerated away. The ulcers varied in size from that of the nail of the
little finger, to that of a shilling piece. The mesenteric glands, which
corresponded to the ulcerated portions of the intestines, were much en-
larged, of a violet colour, somewhat softened by inflammation, but had not
suppurated.

The spleen was about three times its usual size, and more soft and pulpy
than natural.

The liver was perfectly healthy in every respect.

The gall-bladder contained not more than two ounces of bile.

The bladder contained half a pint, or less, of clear urine; its inner sur-
face presented a number of small spots of ecchymosis, in the intervals
between which its mucous lining was of its natural grayish-white shining
appearance, without the least thickening from inflammation. These
spots of ecchymosis were doubtless produced by the pressure of the urine
so long retained, which so diminished its vital powers as to allow this
exudation of blood into the sub-mucous cellular tissue.

Thorax. — The heart was of full size and healthy,— the pericardial sac
was also healthy, and contained no effused fluid.

The lungs were also perfectly healthy, with the exception of a few
miliary tubercles at the summit of each lung. The tissue of the por-
tions of lung in which they were deposited, which was not more than a
cubic inch in extent in the right lung, and much less in the left, was
pale, and apparently not inflamed. The pleural cavities were perfectly
healthy, and contained no effusion of serum. There were pleuritic ad-
hesions, but not of recent date, of the summit of each lung.

The brain was not examined, to avoid disfiguring the body more than
was necessary.

On a review of the preceding case, it is evident that death was hast-
ened and rendered inevitable by the occurrence of the strangulation, and
that the retention of urine, which was unrelieved until he came under the
care of Drs. W. and F., doubtless aggravated his disease. The pres-
sure of the over-distended bladder on the portion of the small intestine
in the pelvic cavity during eight days, had probably so diminished and
modified its vital power as to bring on, within a few hours after the
drawing off of the urine, inflammation of this compressed portion, with
great development of gas, and such distension as to cause its imprison-
ment in the manner already alluded to, and thus give fixedness to the twist of the bowel, which seemed to be the seat of the strangulation.

Catalepsy.—Dr. Phelps related a case of catalepsy in a young man 22 years of age. The disease was first noticed five years ago, while he was a clerk in a drug store,—the first indication of it was that he would stand and look customers in the face without stirring. It has increased very much the last six months. At present, if a limb is placed in any particular position, it remains so. He is as helpless as a child,—his bowels are torpid, his pulse has been 40, and is now 50. A peculiarity of the case is, that he will do just as ordered and nothing more,—if ordered to walk, or stand, or sit, or to take food, or to chew or swallow it, he will do so, but will do nothing more than he is told to do. If food is put into his mouth he will not masticate it unless ordered to do so, and when masticated, will not swallow it unless again ordered. When not ordered to perform all the acts necessary for nourishment, he suffered much from want of proper nutrition, but has improved since better attended to in this respect. The cause of the disease is not obvious. The coldness of the surface and the immobility are perfectly statue-like,—the surface is of a purplish colour. There is great emaciation. One of the children in this family is in a state approaching to fatuity, and two of them are subject to epilepsy,—some improvement has taken place under the use of cathartics and electricity.

Spontaneous gangrene of the penis.—Dr. A. C. Post mentioned a case of spontaneous gangrene of the penis in a farmer, 31 years of age. He had suffered much from malarious fever, but had never had syphilis, nor had he been in the habit of eating rye bread. A black spot appeared on the prepuce thirteen days before his admission into the New-York hospital, which spread so as to involve the whole thickness of the penis at its extremity, but continuing superficial near its root. It was painful during its progress. The line of demarcation began to form two days before his admission, when the pain ceased. The slough separated, leaving a granulating surface, about a week after his admission.

Pustular Ophthalmia.—Dr. Post also mentioned a case of pustular ophthalmia, not affecting the cornea, remarkable for the excessive intolerance of light which accompanied it. After general and local depletion and counter-irritation, without relief of this symptom, opium was resorted to, in doses of one grain every two hours, with immediate and very marked effect.

Regular Meeting, June 24, 1840.

Ship Fever.—Dr. Jos. M. Smith remarked that a greater number of fever patients had been admitted into the New-York hospital during the
present month than during any month of the year, although the month of June is usually healthy. This increase has been owing to cases of ship-fever, of which twenty-one have been received, exclusive of a few which were in the house before, and all of these from three or four ships. The ships had short passages, and the patients were attacked with the disease after having been landed,—in no instance did it occur on board the ship. The symptoms were those ordinarily met with in typhus. Petechiae occurred in every instance, and were generally seen on the fourth or fifth day, which was the period at which the greater part of them were received into the hospital. Three cases out of the twenty-one proved fatal, all of which were attended with cerebral complication. Of these, two were examined after death. The brain was found remarkably congested in both. The intestines were carefully examined in both cases,—in one case the mucous membrane of the stomach was engorged, and the glands of Peyer enlarged,—in the other case there was no lesion in the alimentary canal,—the only lesion was in the brain. The petechiae in these cases were of a large size and of a livid colour. None of the cases were bled after being received. They were generally mild in their character, and were mostly treated without stimulants. In six cases, however, stimulants were given, and in two instances the patients were entirely restored by them; the articles used were wine, carbonate of ammonia, and brandy, with arrow-root. After convalescence had commenced, in eight or ten of the cases a papular eruption appeared on the abdomen, chest, lower part of the back, and upper part of the thighs and arms, having the characteristics of lichen.


Dr. Buck stated that on Monday afternoon, June 22d, 1840, he was requested to see Mrs. S— of Jersey City, who was suffering from strangulated hernia in the right groin, where an elastic tumour existed of the size of the larger end of an egg, over Poupart's ligament, and inside of the femoral artery. It was not painful to the touch, but became tender after being handled; and at times she felt pains radiating from it to the umbilical region: stercoraceous vomiting had supervened within 24 hours. The abdomen was tender on pressure, tymid and tympanitic, especially the umbilical region. The temperature was natural, and the pulse accelerated. The tongue was coated with yellowish brown fur, and she had constant thirst with frequent vomiting: the bowels were constipated. The countenance retained a good expression. Mrs. S— was 62 years of age, rather slender constitution, and having been subject to attacks of bilious colic for several years past she had
regarded her present illness of this nature, and had quite lost sight of the swelling in her groin. This had existed for a long time, though it had attracted her attention only for about two years; it would never entirely disappear even when she laid down. On Wednesday afternoon preceding, after a long fatiguing walk, Mrs. S—— was seized at the tea-table with pain in the left side near the hip, that soon extended to the umbilicus, where it has been fixed, and from which it has radiated to both hips and the lower part of the back. Vomiting supervened a quarter of an hour after, and has continued with great violence, sometimes lasting three hours without intermission. Repeated enemata and cathartics had been ineffectual in overcoming constipation that has existed from the first. A blister had been applied to the abdomen, and venesection twice resorted to.

Soon after the attack, the tumour in the groin increased very much in size, and became tense and firm, but again subsided to its dimensions at the time of the operation.

From the violence of the symptoms and the long period of their existence, it was judged best to lose no time in attempting the taxis, but to resort to the operation without delay, — which he did the same evening at nine o'clock, with the assistance of Dr. Hoffman. The skin being pinched up over the tumour, an incision two and a half inches in length was made in a line with Poupart's ligament. A small artery was now secured, and the remaining adipose tissue divided by repeated strokes of the scalpel, until the external surface of the sac was brought to view. With the aid of forceps and a director, successive laminae were divided, and the sac opened, when a quantity of bloody serum was discharged. The opening was enlarged in the direction of the external wound, and the finger passed around the strangulated intestine without encountering adhesions. Its size was that of a walnut, and it was of a deep purple colour, and of a glossy lustre. A curved director was next passed under Gimbernat's ligament, and upon it the hernia bistoury, with which the structure was incised with a creaking sound. The intestine was easily replaced, and the edges of the skin brought together with a single suture, supported by adhesive straps on either side. Compresses and a spica bandage completed the dressings. Ice was given to allay the thirst instead of drinks, and the abdomen covered with a flaxseed-meal poultice, to be renewed every two hours: also an enema ordered to be administered in the morning. Vomiting did not recur after the operation. The bowels responded kindly to the action of enemata and laxatives, and the abdomen recovered its healthy condition. The outer half of the wound united by the first intention; the remainder, after suppurating pretty freely, healed by granulation.
Gelatinous fluid in hernial sac. Dr. J. K. Rodgers mentioned a case of femoral hernia in which he had recently operated, in which he found the sac to contain a gelatinous fluid so tenacious that it would not flow out, and of a light claret colour. The parts had been down 24 hours: there was tenderness of the tumour, and vomiting. The patient did well.

Malposition of the liver in a child. Dr. Washington stated the case of a child which died of inflammation of the colon and a small portion of the ileum, after an illness of three weeks. There was nothing unusual in the case, except a remarkable malposition of the liver. Its under surface presented anteriorly, and its upper surface posteriorly — the posterior surface corresponded to the spine, and extended along it; the left extremity was in apposition with the diaphragm. The gall-bladder lay transversely, with its outlet a little lower than its base. The liver was loosely attached to the right vena cava to within half an inch of the right emulent vein. The child died of an affection of the brain which appeared early in the disease.

Great distortion of the shoulder. Dr. W. also related a case of such a degree of distortion that the axilla was on a level with the nipple. The patient said that he could not pass his urine; but on the vessel being held for him, it was found that he could pass it, and that his only difficulty arose from his inability to hold the vessel. On examination, the difficulty was found to arise from a blow on the shoulder, which he received on the 4th of July last. There was heat and swelling of the part. He could straighten the spine when the arm was raised up. This case had been mistaken for one of paralysis dependant on disease of the brain.

Regular Meeting, Aug. 26, 1840.

Dr. Phelps remarked that the case of catalepsy before reported continues to improve, and that the patient is nearly well. The improvement is to be attributed to particular attention to diet, and the use of frictions and exercise, rather than to any particular remedy.

Periodical epilepsy cured with arsenic. Dr. Macdonald mentioned a case of epilepsy at the New-York Hospital which, after resisting the usual modes of treatment, had yielded to Fowler's solution. The patient, a seaman, 21 years of age, of rather delicate frame, had been subject to epileptic fits for about four months. The paroxysms had occurred twice every day until two days previous to his admission into the Hospital, when he had six. They were preceded a few seconds only by vertigo, which was the only warning he had of their approach, and
continued from ten to twenty minutes. At the end of that time, he recovered perfectly, and felt as if nothing had happened. His health in every other respect appeared to be good. He had been bled before he came to the Hospital, and with only slight improvement, which was a few days before Dr. M. saw him. The paroxysms recurred at 8 A. M. and at 1 P. M.; on account of which periodicity, the physician who had preceded him in attendance at the Hospital gave him quinine, but without benefit. Assafætida had also been given without effect, and an attempt had also been made to prevent the paroxysm by an anodyne administered about an hour before its expected return, but with equal want of success. Fulness of the head still existing, Dr. M. ordered him to be cupped on the temples, which was repeated after an interval of three days. There was increased intensity of the paroxysms instead of improvement. He then gave him Fowler's solution, in doses of four drops three times a day. In three days, the paroxysms were postponed, and were also rather lighter: at the end of three days more, he had a very violent paroxysm, after which he had none for a week. At the expiration of that period, the pain caused by the extraction of a tooth brought on a slight paroxysm, after which he passed nine days without any. The remedy was then discontinued, when the paroxysms recurred, but again ceased when it was resumed. He then left the Hospital. The dose was increased at one time to six drops daily.

Dr. M. also stated that he had lately been using hydrocyanic acid at the Hospital in diseases of the stomach, with very happy effects. One case of scirrhus, and another of supposed scirrhus were decidedly relieved by it. In one case of one and a half years standing, in which the patient was unable to retain his food, this remedy restrained the vomiting and kept him comfortable. In another case, under the use of one to two drops three times a day, the patient now retains all his food, and for the first time in a long while has had natural stools. Dr. M. gives it in pepper-mint water, or weak camphor mixture.

Dislocation of the os femoris in an adult female. Dr. Rodgers mentioned that he had seen another case of dislocation of the os femoris in an adult female. He has already reported three cases of this accident, which have come under his care, and which, so far as he can learn, is of extremely rare occurrence. This case, which makes the fifth case he has seen, and the fourth which he has reduced, the other case being irreducible, occurred two months since, in a woman eight months advanced in pregnancy, who was thrown from a wagon. It presented the ordinary symptoms of dislocation, with the head of the bone resting on the dorsum of the ileum, and was reduced without trouble.
**Regular Meeting, Sept. 30, 1840. Case of probable sloughing away of the Uterus.**

*Dr. A. C. Post* mentioned the probable occurrence of this in the case of a woman whom he had seen, 28 years of age, who was married three years since, and had two abortions within two years. The last one occurred in May last, during two months after which time, she stated that she was more or less unwell, though able to be about the house. She suffered from a sensation of dragging and pain in the lower part of the abdomen, accompanied, as she said, with an unusual protrusion, which must have been either inversion or prolapsus of the uterus, and which, she said, came away with a fetid smell. On a recent examination, *Dr. P.* found a complete closure of the vagina half an inch beyond the meatus urinarius, which was so firm that the resistance could not be overcome. There was an indurated cicatrix between the vagina and the rectum. *Dr. P.* thinks that the uterus must have sloughed away.

**Remarkable oedema of the arm in a female, alternating with the state of the menstrual discharge.**

*Dr. P.* also related a singular case in the N. Y. Hospital of oedema of the right arm in a female, which began three years ago, and was produced by putting it in hot water after it had been very much chilled. This was followed by swelling of the arm, and by cessation of the menses, which were regular before. The elbow became stiff, and she has not been able to bend it since. She has menstruated two or three times since it happened, but never perfectly; and at these periods there was a remarkable diminution of the swelling, so that it nearly disappeared; at other times it is so hard that it will not pit on pressure. There is always an increase of pain and swelling on the approach of the menstrual period. The forearm bears the mark of extensive incisions, the cicatrices being more distended than the sound skin, so as to form cylindrical prominences. Various modes of treatment have been employed. After menstruating last month, the swelling of the forearm nearly subsided. The arm can only be kept with the fingers hanging down when walking, as she is not able to support it in a sling; while sitting, she has it supported on a pillow. She has recently menstruated more freely than at any time previous to her becoming affected, and the swelling has nearly subsided; she has menstruated two months in succession, which had never been the case before since her attack; she has suffered from vomiting, but has now recovered from that. A seton was placed on the back of the wrist a month ago; she had before been partially relieved by an issue. The case is remarkable for the long continuance of the oedema, and for its connection with menstruation.
Stricture of the Urethra. Dr. J. Wood mentioned a case in which he feared lest he had made an artificial opening with the catheter, from the uncommon success with which he treated a stricture of the urethra. The patient, a sea-captain, had suffered from a stricture several years, and had been treated two or three months previously by Dr. W. by the use of the bougie, and the application of caustic. He then went to sea, and about a month since came under his care again labouring under the same difficulty. He was now put in a warm bath, and after considerable trouble, and some bloody discharge, Dr. W. succeeded in passing the smallest sized silver catheter; after this had been retained some time, he replaced it by one of the second size, and afterwards introduced one of the third size, and also passed an instrument two or three times afterwards; but the first time he passed the catheter, there was a sensation as though it produced laceration, and passed through cellular substance. This was followed by great irritation, which was subdued by leeches and poultices, so that he was finally able to introduce the instrument again. The little distance which was found to exist between the urethra and the rectum, and the inability of his patient to pass urine again after the instrument was withdrawn, as also the constant dribbling, particularly whilst in an erect posture, and the readiness with which larger catheters were shortly afterwards passed, and the circuitous route they appeared to take, led Dr. W. to apprehend that he might have made an artificial passage. His patient now passes a bougie of the largest size, retains his urine and passes it without difficulty. There were at least three strictures. Dr. W. thought that the instrument might have passed through the bladder, and requested the opinion of the members on the subject. An opinion was expressed that such might have been the case, though the fact that he can now both pass and retain his urine at pleasure, is one of difficult explanation in this view of the case.

Remarkable effects of Rheumatism. Dr. Washington mentioned an instance of the remarkable effects of rheumatism which he had witnessed in a young man 19 years of age, brother of one of the teachers of the Deaf and Dumb Asylum. He has been suffering from it ten years, and lost a brother who had it the same length of time. His knees are dislocated so that the condyles of the femur are anterior to the head of the tibia; the bones of the spine are ankylosed; the chin is fixed within two finger's breadth of the top of the sternum, so that he cannot move his head without moving the whole body; the union of the bony surfaces is apparently perfect. The sight of the right eye has been destroyed by iritis, and the pupil of the other eye is so contracted by the same dis-
ease, as to prevent his reading. There is great emaciation of the whole system, and particularly of the limbs, so that his thigh is not larger than the wrist of an ordinary sized man. There is now active disease in both wrists, which are tender, and have a doughy feel. His digestive organs are in good order, his tongue slightly furred. He is of a cheerful disposition, and continued to read as long as the state of his eyes permitted. Dr. W. never saw anything approaching such a degree of deformity.

Pathological anatomy and treatment of White Swelling. By Professor Gerdy.

The author commences by a careful study of the changes which the different tissues composing the joint undergo in this disease, commencing with the most external.

Skin. At first this tissue undergoes no change, but after the swelling has become considerable, it is tense, smooth, and shining, and at times, hotter and more red than natural, during the exacerbations of pain. When abscesses form, it becomes of a livid red colour, grows thin, and finally ulcerates. Often then, the whole circumference of the joint presents numerous fistulous openings, communicating with abscesses beneath. These openings are sometimes large, with thin and inverted edges, and sometimes covered with fungous granulations.

Cellular tissue. This tissue becomes dense, often lardaceous; in some portions firm, in others friable. These changes are most often noticed about ulcers and fistulae. In certain parts also, a sort of erectile tissue forms under the skin, so soft as to convey the sense of fluctuation; but on passing in a bistoury, nothing escapes but blood. Sometimes this sub-cutaneous tissue is infiltrated with a thick yellowish matter, resembling jelly. These appearances may exist separately or united: at a distance from the joint, the cellular tissue is simply infiltrated with serum.

Fibrous tissue. The aponeuroses are commonly unaffected, except in very old cases, where they become thickened, friable, and confounded with the cellular tissue: they sometimes undergo the jelly-like degeneration. The tendons are seldom softened, they are usually unaltered but their cellular envelopes are much altered. The ligaments are enveloped in the red inflamed cellular tissue which has undergone the jelly-like degeneration. They, at an advanced period of the disease, or earlier, if the changes commenced in the osseous tissue, are softened, infiltrated, slightly red, and can be easily torn.

Synovial membrane. The absence of redness on the cartilages, has
led some anatomists to believe that the synovial membrane does not cover them: therefore our author has been surprised to discover this membrane extend itself in irregular slips upon the cartilages of the articulation, especially in the lateral portions: it is red and puffy, and beneath it is cellular tissue, infiltrated with bloody serum. In old and severe cases, it is very common to find nothing but the remnants of this membrane loosely attached to the ligaments.

**Cartilages.** These are united to the surface of the bone by a very delicate cellular tissue, which it is difficult to detect in health: but it is different when the joints become inflamed. Sometimes, this uniting cellular tissue swells, raises up the cartilage, and causes it to peel off—it may thus be found loose in the cavity of the joint, or finally be absorbed. In other cases, the cartilage is not thus separated from the bone; but the inferior layers of it are absorbed by degrees, and it becomes reduced to a thin plate, which in some portions may be perforated. If perforation ensue, the subjacent cellular tissue throws out soft red granulations, which pass up through the opening; spread themselves out on the cartilage which remains, and cover it with a sort of membrane. If we examine with care what remains of the cartilages, we shall find, that however small these portions may be, they have the white, firm, and elastic texture of health. Two or three times, however, our author has found them softened, and twice very thin, semi-transparent, and flexible. In cases where the whole cartilage has been absorbed, the sub-cartilaginous cellular tissue becoming swollen and fungous, might be mistaken for softened cartilage; while, in fact, this appearance is simply owing to a false membrane similar to that which forms in the abscesses and fistulae.

**Cavity of the joint.** The liquid found in the joint is commonly a milky flocculent serum, at other times it is bloody: sometimes, in mild and chronic cases, it is only dull, and of a yellow tint. The quantity found in the joint varies, the fistula communicating with it causing the fluid to be discharged as it is secreted.

**Bones.** Inflammation of the osseous tissue connected with the joints, has been already described by M. Gerdy.* He, therefore, only alludes to the results of this inflammation in a summary manner. The articulating surface of the bone destitute of cartilage, is porous, irregular, and perforated by a multitude of small holes: its circumference is furrowed, and perforated also by holes for the passage of vessels. Sometimes the parts about the joint are incrusted with bony plates, which have been secreted by the inflamed periosteum: sometimes a portion of bone

* See Vol. III. of this Journal, page 132.
dies before its structure has been changed by inflammation, and is separated and discharged by an abscess; or inflammation having first changed its structure, it is porous and fragile when discharged. The medullary portion of the bone is commonly red, softened, or even diffusent.

Abscesses form in the neighbourhood of the diseased joint, which should be distinguished from those immediately communicating with the diseased bone. These first mentioned abscesses are frequently numerous when the inflammation is severe, and may heal and open again during the progress of the case.

M. Gerdy refers white swelling to four distinct causes. 1st, scrofula; 2d, rheumatism; 3d, wounds; 4th, eruptive fevers. That produced by scrofula attacks first the bones: that produced by rheumatism and by injuries, attacks first the surrounding soft parts; and this is occasionally true, of that form subsequent to the eruptive fevers, which is, however, of rare occurrence. This disease is common in youth, and rare after the age of 40 years.

The symptoms and progress of this disease are well known. It may be slow or rapid in its progress. The functions of the joint are impaired: motion is difficult and painful: pain is even sometimes present during repose. The patient sometimes is sensible of a creaking noise on motion, as if the joint was no longer lubricated with synovia. The limb wastes while the joint swells and abscesses form.

In the rheumatic variety, and in that following wounds, the disease is acute: in the scrofulous variety, the contrary is the case. In this latter form also, the degree of swelling is much less, and the nocturnal pain is much more severe. It is only after effusion has taken place into the joint, that the swelling becomes very great, and fluctuation is perceived. The destruction of the ligaments is known by the external mobility of the joint.

It is easy to distinguish these different varieties of white swelling. Thus in the rheumatismal variety, we have pain in different parts of the body dependent on rheumatism; no evidence of the scrofulous diathesis, no swelling of the bone, the disease beginning in the synovial membrane or the soft parts: a painful sensation of cracking on motion, and often effusion into the cavity of the joint. While in the scrofulous variety there are no wandering pains; scrofulous constitution; previous symptoms indicating the same predisposition; deep-seated pain seated in the bones; congestion and elastic resistance of the surrounding cellular tissue. Those cases which follow injuries and the eruptive fevers are analogous to those following rheumatism.
Treatment. Most surgeons have given the opinion that the chances of cure in this disease are very small, and that only by anchylosis. M. Gerdy, however, states that he has cured a considerable proportion of such cases.

In the cases connected with scrofula, constitutional treatment, good nourishment, country life, wine and beer, and exercise, especially in the open air and sun, when the pain and local inflammation will permit, should be resorted to. Many surgeons are in the habit of recommending absolute rest in this variety, but it is sometimes a great mistake; for moderate exercise not only supports the strength, but acts as a gentle local stimulant and assists in resolution. This is a point of the greatest importance. Our author has frequently seen children pale and emaciated by confinement, with the joint stiff, and as it were anchylosed, become fat, and the joint became supple, and the swelling disappear by proper exercise.

In the rheumatismal variety, vapour baths and douches, and aromatic fumigations* to the joint, are the proper treatment. General fumigations are also very useful. The patient should also wear around the joint flannel covered with oiled silk. In these cases compression is also useful.

In those cases dependent on injuries, local antiphlogistic remedies and emollients are indicated.

In relation to particular remedies used in the treatment of white swellings, M. Gerdy thinks that flying blisters are useful at the very commencement of the disease, if it is not severe in its character. They are particularly beneficial in the rheumatismal variety. The cautery he has not found useful; but moxas, if applied in considerable numbers around the joint, have been productive of great benefit. The anti phlogistic treatment is not only necessary when symptoms of acute inflammation exist, but is also useful when the disease is less rapid in its progress. M. Gerdy applies 12 to 15 leeches around the joint every 8 or 10 days, and recommends at the same time, baths, poultices, and repose in bed. Irrigation with cold water has been found of service by M. Gerdy. These different methods must be employed together, or in turn, according to the indications of the case. Stimulating ointments and compression are also useful in removing congestion, especially during the later periods of the disease, when it has already been improved by more active treatment.

* Take sage, rosemary, juniper berries, &c.; cut them up into pieces and throw them upon burning charcoal; a thick vapour arises which should be received by the joint placed over the furnace, and covered by a woollen cloth to retain the vapour.
As to the time when amputation is proper in this disease, M. Gerdy is decidedly of opinion, that it should be deferred until every thing else has failed. He does not think that hectic fever, diarrhœa, considerable loss of strength, or even the existence of crude tubercles in the lungs, or a white swelling in another joint, and but little advanced in its progress, contra-indicate this operation. He is of the opinion that much less vital energy is requisite to sustain the shock of the operation than is commonly supposed. — Archives Gen. De Méd.

Report of primary Syphilitic cases, by C. Aston Key. In a former number of these reports, it was my object to show the general character that prevailed among venereal sores, and the circumstances on which their variableness seemed to depend. I have come to the conclusion that the principles both of Mr. Hunter, as laid down in his work on the lues, and of Mr. Carmichael in his more recent writings, are those by which the profession is guided in its views of the nature of the disease, and the employment of remedies. Mr. Hunter was not an advocate for the use of mercury in all forms of primary sores where a syphilitic character, even in its mildest form, could be detected. The very free, and by many of his followers, the indiscriminate use of this medicine would lead one to suppose that such was the opinion even of those surgeons who imagined themselves to be the disciples of Mr. Hunter. I cannot, however, see in his writings any ground for supposing that he recommended mercury to the extent of which he is accused; and though time has added both to our pathology of syphilis and to our catalogue of remedies, his practice seems closely allied in principle to that of the present day. The writings of Mr. Hunter do not warrant the inference that induration is an essential characteristic of chancræ, nor do they exclude, as now syphilitic, sores that present to the finger no defined hardness of base or margin. "A chancræ has commonly a thickened base, and although the common inflammation spreads much farther, yet the specific inflammation is confined to this base." These are the words of Mr. Hunter, and though in some parts of his writings he may have expressed himself more strongly, as to induration being an effect of venereal action, the expression "commonly" tends to vitiate the universality of the characteristic. In describing the different appearances of a chancræ as modified by the structure which it attacks, "on the glans," he says, "it appears as a pimple full of matter, without much hardness." On the body of the penis he describes it as a pimple "that is allowed to scab, owing to its being exposed to evaporation; this scab is rubbed off and one larger than the first forms." The cartilaginous hardness is omitted in
both these descriptions, and it may be inferred as well from these, as from a former quotation, that he considered this character by no means constant. With regard to the immediate or local effects he says, "they are seldom wholly specific, but partake of the constitutional and specific inflammation, and therefore it is very necessary to pay some attention to the manner in which chancres first appear, and also to their progress, for they often explain the nature of the constitution at the time. If the inflammation spreads fast, it shows a constitution more than naturally disposed to inflammation; if the pain is great, it shows a great disposition to irritation; it also happens that they very early begin to form sloughs; when this is the case, they have a strong tendency to mortification." Thus he points out the distinction between the irritable, the inflamed, and the sloughing chancre, and affords a guide as safe and intelligible as the more elaborate descriptions of modern writers. The influence of constitutional peculiarity on the character of a syphilitic sore could not escape the acumen of his observation, nor fail to be included in his philosophical view of the disease. In estimating his predilection for mercury, we must keep in view the distinction he draws between the natural and unmixed effects of the virus, and the normal action produced by idiosyncracy. He considered mercury, given so as to affect the mouth slightly, the most efficient remedy for the immediate cure of the local action, and for the prevention of the secondary effects in such cases as admitted its employment. The question to be decided by the practitioner is, the capability of bearing the mercurial action, not the power of this remedy over the disease. It is the abuse of the remedy which is to be guarded against, and Mr. Hunter was fully aware of its direful agency in some forms of the disease, and has pointed out the circumstances under which the remedy acts as a poison. According to Mr. Hunter's views, the action of the virus was uniform, the condition being the same; when abnormal deviations occurred, in either the primary or secondary effects, they were attributable to peculiarity of constitution. I now proceed to speak of phymosis as an occasional accompaniment of chancre, depending more on the accidental presence of inflammation, than on the essential action of the virus; it is generally the cause of the worst forms of sloughing chancre. One of its most common forms is produced by a cluster of sores surrounding the extremity of the prepuce, resembling apthous chancres, and yielding to the same treatment; they usually leave the prepuce in a state sufficiently pliant to relieve the phymosis. There are two conditions of phymosis which demand special attention; that in which a well-developed chancre occupies a large portion of the prepuce; and a sloughing sore endangering the glans. The necessity of dividing
the prepuce will be determined by circumstances, it being better, in all cases of doubt, to divide the skin, a small evil in comparison with the mischief produced by a destructive sore. The absence of œdema, with the non-existence of fever, is a strong presumptive proof that no destructive action is in progress. When the discharge is purulent, of uniform appearance, and unmixed with shreds, nothing more than a cluster of aphthous sores is indicated. Even if the discharge be serous, it will probably be found to proceed from one or more sores whose ulcerative stage has stopped and been succeeded by a granular surface; in this case, there is a distinct induration to be felt on the outside of the prepuce, which will yield to mercury. A large chancre on the prepuce sometimes involves so large a fold of skin as to render it impossible to retract the prepuce while the sore remains, or even after the sore is healed. If the operation be now performed, the cut surface changes in a few days; and acquires the character of the original sore, which character is transferred, probably by a continuity of action, in the vessels to the incised part; hence it is material to choose a favourable time for the operation. The period best adapted for the operation is denoted by the cessation of all unhealthy action, and the return of the sore to its normal specific aspect; time is thus saved, and precaution taken against the chance of the sore becoming intractable. It is rare to meet with sloughing chancres without phimosis; if the inner layer of the prepuce be involved, the outer layer and intervening cellular tissue soon become inflamed; and the sore quickly passes into a dark slough, involving the neighbouring tissues until the escape of the glans through the slough, checks the inflammation, and stops the gangrene; the sore then puts on a healthy appearance, and quickly heals under astringent dressings. When the inflamed part is under the influence of the specific poison, the tissue is destroyed by a specific phagedenic action, as well as from excessive inflammation. Exposure of the sore is then indisensible for preserving the glans, and should be performed as early as its unhealthy character is ascertained. The nature of the discharge being a dirty reddish or brown, mixed with shreds of white slough, will determine this. The best dressings are the balsams or turpentine, with opium, if there be severe pain or great irritability; when there is a disposition to hemorrhage, warm olive oil with spirits of turpentine checks this tendency; when there is great local and general irritability, equal parts of balsam Peru and the sedative solution of opium form an effective application. Lint steeped in equal parts of port wine and tincture of opium will sometimes check the ulceration and induce a healthy surface. The operation itself presents but little choice; the simple division of the under part of the skin near the frænum
answers well in ordinary forms of phimosis, but is insufficient in the more severe forms of sloughing sores, a more extensive incision is then necessary: the dorsal part of the prepuce must be divided as far as the corona, and in some cases where the prepuce is long or diseased, must be preceded by circumcision. The main point is to extend far enough the division of the inner layer of skin, and when circumcision is performed the angles of the divided inner layer may be turned back and united by very fine sutures, to the edge of the outer layer of skin. This proceeding shortens the process of cicatization, and lessens the deformity.

*Guy’s Hosp. Rep.*

*Operation for the radical cure of a reducible inguinal hernia.* By Bransby Cooper.

**John Holman**, aged 22, a tall muscular man, admitted 26th May, 1840, with a large, reducible inguinal hernia on the right side, which it has been impossible to support by a truss when he made the slightest effort. The intestine first descended seven years ago — he has worn a truss ever since, but without preventing the protrusion. On the 28th of May, after a heavy lift, a large portion descended, which has been reduced by the truss with great difficulty. Mr. Cooper on examination stated that from the great size of the abdominal rings, the case afforded an opportunity for performing the operation recommended by Mr. Gerdy. On the 10th of June the operation was performed by pushing a portion of scrotal integument before the left fore-finger through the external ring as high as could be reached, and upon the finger introduced, a director; a long needle fixed in a handle, and armed with a double silk ligature, was carried along the director to the extremity of the invaginated skin, and pushed through the tendon of the external oblique and the skin, so as to come out an inch and a half above Poupart’s ligament; one end of the silk was then retained by an assistant, and the needle drawn back again into the inguinal canal along the other end, when it was again pushed through the abdominal parietes as before, about four lines distant from the other end of the thread, including the skin between the two silks; these were now tied over a piece of bougie, so as to retain the invaginated portion within the inguinal canal; a piece of lint dipped in liquor ammoniac was passed into the cul de sac, and the surface well rubbed. This caused intense pain. The patient was put to bed with the thighs raised, and the scrotum well supported. On the 14th the ligature was removed, as suppuration was well established; pressure over the part was continued. On the fourth of July, a feeble truss was applied, and in the end of July, he left the hospital to return to his occupation.
Early in August while at work a portion of intestine again descended; a stronger truss was then substituted for the weak one, and since its application he has had no return of the hernia. There is little doubt had a proper truss been applied before he returned to his labour, that no protrusion would have ever occurred. Ibid.

*Episternal bones found in the human subject.* The subject of this peculiarity was a man of well developed form, the only particular of his history which is important in connection with this rare formation. The small symmetrical bones resembling the pisiform, were attached to the summit of the sternum. M. Breschet states that he has met with many instances of this abnormal deviation, and considers them as the rudiments or vestiges of imperfectly developed ribs, forming an analogy with the episternal bones of some animals. Ibid.

*Operation for Strabismus.* Summary. — The new operation for strabismus has excited a vast amount of interest in the surgical world, and it has been performed an immense number of times during the short interval which has elapsed since it was first carried into execution. In this respect indeed, it is without a parallel in the annals of surgery. The operation was first recommended by Mr. Anthony White,* an English surgeon, who performed it on several animals. It was afterwards again suggested by Stromeyer of Hanover, to whom the world is so largely indebted for the scientific and successful method of treating club-foot and other deformities, which he introduced into practice. But these suggestions were not acted on until about the commencement of the year 1840, when the operation was performed with entire success by Dieffenbach of Berlin. The report was widely circulated, and everywhere it excited the most lively interest. Since that time the operation has already been performed in many hundreds of cases by numerous operators in the different countries of Europe, and in the United States of America. The result in the vast majority of cases has been highly satisfactory, and the operation may now be considered as having been sufficiently tested in order to claim a place among the established resources of surgery.

Among the numerous operators whose practice has been made known to the profession, considerable diversity of opinion prevails in the regard to some of the details of the operation. And there are some peculiarities of practice, to which certain individuals have ascribed an exaggerated degree of importance, regarding them as essential to the success of the treatment, while other individuals have regarded these same peculiarities

*See London Medical Gazette, Sept. 1840. Page 928.*
as entirely useless, or even highly objectionable. We propose to sift the mass of facts which have been presented to us, and to lay before our readers such general results as we may obtain from a careful revision of those facts.

The eyes are capable of being distorted in a variety of directions, by the irregular associated or separate contractions of the straight and oblique muscles. But by far the most common of these distortions is that in which the pupil is turned directly inwards, or inwards and upwards; and it is this alteration in the direction of the pupil which is commonly known as strabismus convergens, or squinting. The opposite distortion, which is known as strabismus divergens or leer, is the next in frequency. The other varieties of strabismus, viz. those in which the pupil is turned upward or downwards, are very rarely met with.

It has been chiefly in cases of strabismus convergens, that the operation in question has been performed; and in these cases it has been so frequently repeated, under such a variety of circumstances, and with such nearly uniform success, as to leave no doubt that all the beneficial results which have been hoped for may be realized from its performance. The operation has been resorted to in a few cases of strabismus divergens: but there is a diversity of opinion among different operators as to the degree of success which is to be expected in these cases; some asserting that but little improvement in the appearance of the eye results from the operation, while others affirm that they have entirely succeeded in removing the deformity.

The operation for the cure of strabismus convergens essentially consists in the division of the muscular or tendinous fibres of the internal straight muscle of the eye. The patient is placed in a sitting posture, facing a window, with his head leaning against the breast of an assistant, who with one hand closes the sound eye, while with the other hand he secures the upper lid of the affected side. A great variety of specula have been contrived for the purpose of separating the lids, and there has been much discussion as to the advantages or disadvantages attending the employment of these instruments; some representing them as almost essential to the proper performance of the operation, while others regard them as rendering it more painful and more formidable to the patient, while they present no advantages to compensate for these inconveniences. We have no doubt that the operation can be well performed without the aid of specula, when the surgeon has provided himself with assistants who are skilful in holding the lids with their fingers. But when no such assistants are at hand, it is far better to employ specula, even at the expense of some additional pain to the patient, than that the lids should be
badly secured, by which great embarrassments may be thrown in the way of the operation. The main object in covering the sound eye is to enable the patient to direct the affected eye outwards, which it has been ascertained by experience, that he can do most effectually when the light is excluded from the sound one. The patient is then directed to turn the eye outward as far as possible toward the temple, by which means the portion of the eyeball into which the rectus internus is inserted is fully exposed to view. There has been much controversy with regard to the best method of fixing the globe of the eye during the operation. Some rely for this purpose on the efforts of the patient assisted by gentle pressure with the finger of the assistant who holds the upper lid. Others employ single or double sharp pointed hooks, which are introduced into the sclerotica, or simply into the conjunctiva, and are then held by an assistant in such a direction as to draw the eye gently outward. In adults, and in persons possessing a good degree of firmness, we are convinced that the eye may be kept sufficiently steady without the aid of hooks or other mechanical contrivances, and in such cases it is desirable to dispense with them. But in children, and in nervous and irritable patients, we should apprehend great embarrassment in attempting to perform the operation without the assistance of these instruments. And we are of opinion that it is decidedly better to fix the points of a small double hook in the sclerotica, than to trust to a single hook passed through the conjunctiva, as some surgeons have recommended. When the points of the hook are inserted no deeper than the conjunctiva, it is difficult to fix the eye, and the instrument is liable to tear its way out, by which the cornea and other parts are in danger of being lacerated. The next step in the operation is to make an incision through the conjunctiva and the cellular tissue beneath that membrane, so as to expose to view the insertion of the rectus internus muscle. The conjunctiva is seized between the blades of a small forceps, about midway beneath the margin of the cornea and the membrana semilunaris; an incision is then made through the conjunctiva in a vertical direction, from a quarter to half an inch in length, by means of a small scalpel or scissors. The insertion of the muscle being now exposed to view, a curved probe or director, or a delicate probe-pointed bistoury is passed under the muscle from its inferior to its superior edge, and, by means of the bistoury or of a small pair of scissors, the muscle is divided near its insertion. The posterior portion of the muscle is then pushed back into the orbit to prevent its reunion to the anterior portion. The eye is now left at liberty; and when the muscle has been completely cut across, the pupil is commonly directed forward, and in some cases slightly outward. If the pupil be directed at all inward, either
by an effort of the patient or by involuntary muscular action, there is reason to suspect that the division of the muscle has not been complete, and it is well to examine carefully by means of a probe whether there are not some bands of connection between the body of the muscle and the sclerotica. If any such bands be found, they should be divided with the scissors. Some surgeons affirm positively, that any remaining power of turning the eye inward is a proof that the division of the muscle has been incomplete. Others assert that there are cases, in which, after the complete division of the muscle, the patient retains the power of turning the eye inward to a greater or less degree. The latter statement accords with our own experience in this matter. The treatment after the operation consists in the application of cooling lotions to the eye, and a mild antiphlogistic regimen. Little or no inflammation usually follows the operation; the eye is disfigured for a few days by ecchymosis of blood which is gradually absorbed.

A number of cases have been reported, in which after the operation the strabismus has not been entirely removed, but the eye has been still somewhat inclined inwards. In some of these cases, the distortion has subsided spontaneously after a few days. In others, it has yielded to the division of the rectus internus of the other eye, the persistence of the deformity being supposed to be due to the existence of a morbid sympathy between the two organs. Some surgeons, in cases of this kind, have recommended the division of the internal fibres of the rectus superior or inferior, or the division of the obliquus superior. This plan has been adopted in a few cases, but there has not been a sufficient amount of experience to warrant any general conclusions, as to the advantages to be derived from the practice.

It is a very rare occurrence for strabismus to commence simultaneously in both eyes; indeed it is a matter of some doubt whether such cases are ever observed. But it is very common for the second eye to become affected, although in a slighter degree, at a subsequent period. In such cases, the operation should always be first performed on the eye, which was primarily affected, as the second eye often yields spontaneously after the first has been cured: the second eye may be subsequently operated on if the deformity continue.

It occasionally happens after the operation that fungous growths proceed from the wound of the conjunctiva; if these do not subside spontaneously in the course of two or three weeks, they may be snipped off with scissors, and the surface from which they grow may be touched with nitrate of silver.

There are some cases, in which the eye which has been operated on,
protrudes somewhat from the orbit so as to appear larger than the other eye. This occurs chiefly in those cases where more than one of the straight muscles have been divided, and it is owing to the undue action of the oblique muscles. It constitutes a serious objection to the division of more than one of the straight muscles in the same eye.

With regard to a liability to a return of the strabismus after it has once been cured, there is some difference of opinion, but the majority of those surgeons who have expressed their views on the subject, are of opinion that there is no reason to apprehend a return of the distortion, after the operation has been properly performed.

In a large proportion of cases, strabismus is attended with more or less weakness of vision in the affected eye. The effect of the operation on the vision of the eye has generally been decidedly favourable. Double vision has in many cases been the immediate result of the operation, but after a few days the vision has usually become single.

There are some cases of strabismus in which it is very doubtful whether the operation ought to be performed. Such are the cases in which the cause of the distortion is still in operation, as where it is connected with chorea or epilepsy. The operation ought not to be performed in recent cases where it is doubtful whether the deformity will be persistent. It also seems to be contra-indicated in those cases in which the distortion was preceded by great weakness of vision in the affected eye, causing disturbance in the sight of the sound one: in some cases of this kind, in which the operation has been performed, although the deformity has been removed, the effect on vision has appeared to be injurious.

It has occasionally happened, in the performance of the operation for strabismus, that the sclerotic coat of the eye has been divided, and the humours have been evacuated. This is an accident which implies a great degree of awkwardness in the operator, and it should be a warning to bunglers to abstain from rash experiments, where so important an organ as the eye is concerned. The operation is safe and simple, when performed by a skilful operator; but it is beset with difficulties and dangers, when it is undertaken by persons who are destitute of accurate knowledge and of practical skill in surgery.

Cases of Traumatic Phlebitis. By Dr. Nicolaus Pirogoff of Dorpat.

Case I.—Fracture of condyles of os brachii, followed by extensive suppuration; amputation; death; inflammation of axillary vein.

This patient was a gardener who fell from a height of seven feet and broke his right arm through the condyles. Great pain and swelling of
the arm. Leeches were repeatedly applied, and ice poultries. Copious suppuration took place, and several incisions were made. The patient was then put upon the use of decoction of cinchona bark. In the night between the 18th and 19th day of the accident, without any known cause the patient had a severe chill, which was repeated on the following morning. V. S. and large doses of ant. tart. On the following day, the 15th November, there was no return of the chill. The upper fragment of the bone was distinctly felt through the wound; an incision was made, and two inches of the bone removed with a saw. On examining the extremity of the bone, purulent matter was found in the medullary canal. Dr. P. then introduced an actual cautery to the depth of two inches into the medullary canal. Half an hour after this operation a violent rigour occurred, on account of which two doses of quinine, each two grains, were administered; a blister was also applied to the chest, on account of a cough with which the patient was affected. There was no return of the chills, but the suppuration was more abundant.

Nov. 24th. Patient appears very much prostrated; tongue dry and foul; pulse 100, small and feeble; marked subsultus tendinum; very copious suppuration; extremity of the bone projecting. It was determined to amputate the arm somewhat above its middle, which was done by a circular conical incision. An hour after the operation a severe rigour, which continued three quarters of an hour.

Nov. 25th. Another rigour; quinine two grs. every hour, and on the 26th every two hours.

On the 26th another rigour, and occasionally hiccup.

27th. Another rigour; 12 doses of quinine, each two grs. and three doses of quinine with opium.

28th. A severe rigour in the night; four grains, quinine every two hours.

29th. Several rigours. Death.

Autopsy. Capsular ligament of the shoulder joint lacerated at the anterior part, and abundant suppuration within and without the articular cavity. Fracture of coracoid process; fissures in the body of the scapula. The whole of the axillary vein was filled with pus, with slight traces of coagulated lymph. The coats of the vein were thickened, and reddened in spots. The bronchial and subclavian veins were nearly in their normal condition. In the cavity of the right pleura were six ounces of a chocolate-coloured liquid. At the inferior edge of the lung was a superficial suppuration about half an inch in diameter, surrounded by a brownish red hepatized border. Another portion of the inferior edge of the lung was hepatized, and of a bright liver-colour.
Case II. — Paronychia; suppuration beneath the palmar fascia; phlebitis of the veins of the foot; death.

The patient was a labourer 28 years of age, of phlegmatic temperament, and of a cachectic appearance. He had at first a superficial lacerated wound over the first phalanx, and the metacarpal bone of the thumb, and subsequently injured the same part in lifting a burden. When he presented himself at the clinic, the following appearances were observed: — An irregular, elastic, doughy swelling, general redness of the skin covering it; pain piercing, throbbing increased by firm pressure; no remarkable increase of temperature. At the outer part of the hand fluctuation was perceptible; here a longitudinal incision was made through the skin and fascia, and the pus pressed out as much as possible. On the following day, the 26th December, three deep incisions were made in the forearm through the skin and fascia. The radial artery was divided by one of these incisions, and a profuse hemorrhage occurred, which induced syncope. Two vessels were tied with considerable difficulty on account of the swollen state of the limb; compresses were then applied, and secured by bandages. Two hours afterward there was another hemorrhage which was arrested by pressure upon the brachial artery.

27th. Pain somewhat diminished; dressings removed in the evening; swelling of the forearm greatly reduced; purulent discharge very free, especially from the first incision in the hand, increased by pressure upon the inner side of the carpus. A deep incision was made in this situation down to the fascia pulmaris; the little finger was introduced, and a cavity felt extending beneath the carpal ligament; another incision was then made in a transverse direction. This was followed by profuse arterial hemorrhage; compresses and a bandage were applied, but the hemorrhage recurred after half an hour, and was again arrested by pressure. On the same evening, there was a general rigour, which continued half an hour, when it subsided under the use of chamomile tea, and Dover's powder.

29th. Patient has sleepless nights; the rigours increase, but the wounds look well.

Jan. 2d. Appears prostrated; pulse very small and rapid. In the afternoon he complained of a severe sense of cold proceeding from the chest.

Jan. 3d. Rigour at 5 P. M. In the course of the afternoon and evening he took four doses, each containing four grains quinine, and one grain of opium.

Jan. 4th. Patient complained for the first time of pains in the left
foot, but stated that he had felt them more or less since the time of his admission. On examining the foot it was found to be cœdematous, especially in its plantar portion, and about the ankle joint. On the dorsum of the foot was a small red spot, which was very tender upon pressure. There was an obscure feeling of fluctuation throughout the sole of the foot. Two small deep incisions, from half an inch to an inch in length were made into the sole of the foot through the fascia, but no fluid escaped, with the exception of a little blood and serum. Almost immediately after the incisions were made, a severe rigour came on which lasted half an hour. Towards evening he had a slight rigour, which continued ten minutes.

Jan. 5th. Twenty leeches applied to the calf of the leg; patient placed in a warm bath and continued there an hour; in the evening V. S. 16 ounces.

6th. Patient feels prostrated, but the pulse has acquired more firmness since the venesection. The venesection was directed to be repeated, but the blood which flowed from the vein was very thin and watery, and a very small quantity was taken. The patient died 36 hours afterward.

Autopsy. Extensive purulent infiltration in the diseased hand. Most of the veins of the leg filled with pus. In the cavity of the right pleura five ounces of a bloody exudation. In the superior lobe of the right lung was a tubercular cavity of the size of a walnut. In the inferior lobe, and near the surface, were several small spots in a state of hepatization. The inferior lobe of the left lung was in two places adherent to the diaphragm, and in these places there was hepatization, with commencing suppuration. Above this part there was a considerable vein, which with its branches were filled with a consistent puriform matter. In the middle lobe of the same lung was a small inflamed spot with pus in the centre.

Case III. — Wound of the foot with injury of the tarsus; phlebitis; death.

A young man 22 years of age, of sanguine temperament, was received with a wound of the foot which had occurred a week before, and which had become neglected. He appeared sallow and dejected, and the wound was foul and dry. On the fifth day after his reception he had a rigour following an incision into the diseased foot. On the evening of the same day he was directed to take every hour three grains of calomel with two grains of sulphate of quinine, and half a grain of opium. On the following day, (April 5th,) he appeared somewhat better. He was directed to take large doses of calomel and sulph. quinine, &c.

April 6th. Patient appears drowsy; complexion yellow; wounds dry. Severe rigour. On the 8th he died.
Autopsy. Suppuration in all the veins around the wound, but none in
the veins above the popliteal. One large and five small abscesses in
the brain; about eight ounces of exudation in the thorax. The right
lung softened to a consistence like that of the spleen.

An abscess of the size of a bean in the liver.

Case IV. — Phlebitis following the extirpation of a tumour in the ax-
illa.

The patient was affected with a glandular swelling as large as a man's
fist: the tumour was not adherent to the surrounding parts, and the in-
tegument covering it was in its normal condition, except that its veins
were unusually large. The tumour was excised, two arteries and a
vein were tied.

On the 10th April, the fourth day after the operation, a rigour oc-
urred, attended with pain and a cord-like swelling of the right arm.

On the 11th, several rigours with diarrhoea. An emetic of tart. ant.
and ipecac. was given, followed by large doses of sulphate of quinine,
and other active remedies.

On the 12th, there were some indications of a rigor, when a scruple
of sulphate of quinine was given in two doses at an interval of half an
hour, and forty leeches were applied to the right arm in the course of
the great vessels. Death took place at 5 P. M.

Autopsy. The basilic vein exhibited marks of inflammation, but with-
out suppuration. The viscera were all examined, and found to be near-
ly in their normal condition.

Case V. — Phlebitis following amputation.

The patient had a large abscess at the lower part of the thigh, with
caries of the os femoris. The thigh was amputated, and a ligature ap-
plied to the femoral vein. The patient died, and marks of inflamma-
tion were found in the femoral vein, and in the external and primitive
iliac vein.

Case VI. — Phlebitis after amputation.

This was a case of amputation of the thigh performed on account of
suppuration in the knee-joint. Death followed, and the inferior cava
was found to be filled with coagulated lymph, in the centre of which was
a cavity containing pus.

Case VII. — Phlebitis following the extirpation of a large glandular
tumour in the neck.

The tumour was of enormous size, occupying nearly the whole of the
left side of the neck, and a part of the right side, being seven inches in
its vertical diameter, and thirteen inches in its transverse diameter. On
the 30th August, an attempt was made to excise the tumour, but the
patient became affected with syncope and other unpleasant symptoms, and the operator was obliged to bring the operation to a close by the removal of only a portion of the tumour: a ligature was applied to another portion. The patient died on the 11th September.

Autopsy. The vena innominata contained a reddish and soft coagulum: the internal jugular was filled with a coagulum in which the formation of pus had commenced. The inner coat of this vein was abnormally red and thickened, and had lost its polished surface: higher up it was quite friable,—and at an inch and a half from its junction with the subclavian vein, it was lost in the cavity formed by the operation. Purulent matter was pressed out from one of the venous branches opening into this cavity.

In an appendix, Professor Pirogoff gives some highly interesting observations on phlebitis, founded upon numerous vivisections. The following are the chief results of his investigations:

1st. The venous system does not exhibit a remarkable proneness to the propagation of inflammation.

2d. An artificial infection of the mass of blood in animals, by injecting pus into the veins towards the heart, produces a train of symptoms during life and of appearances after death, which have a striking resemblance to those which arise from phlebitis suppuratoria in men.

3d. The condition and quantity of the pus injected into the vein of the animal have a decided influence upon the rapidity with which the general symptoms of infection are developed.

4th. When the symptoms of infection have occurred after the injection of pus into the veins, morbid changes are always found in the lungs.

5th. The infected blood is altered in its qualities: its colour and consistence have some resemblance to those of strong broth. The blood in this condition has also a certain degree of translucency. After it has stood for a while, a white crust forms upon it, from which a quantity of serum may be forced by pressure with the finger. In cases where phlebitis is suspected to exist, Professor Pirogoff is in the habit of taking an ounce or two of blood from a vein to aid him in forming a diagnosis.

Prolapsus of the rectum in a scirrhous state, cured by the actual cautery.

By Dr. Sadler of St. Petersburgh.

In the summer of 1836, I had under my care an old prolapsus of the rectum, which had already undergone a scirrhous degeneration, and had given rise to violent burning and lancinating pains. Leeches had been applied, which had increased instead of diminishing the pain. The tumour resembled a cauliflower in appearance, and was of the
size of a goose’s egg. Dr. S. determined to apply the actual cautery. The patient stood on the ground, and leaned forwards over a bed. After she had pressed down the prolapsus as much as possible, the nates were drawn asunder by two assistants with wet towels, and the cautery heated to a white heat firmly applied. For a few days the pain was extremely violent, but it gradually subsided. Considerable portions of the rectum sloughed away, after which the parts healed, and have since remained free from disease. The sphincter has regained its power to such a degree, that emetics and cathartics have been administered without occasioning any return of the prolapsus. — Zeitschrift für die gesammte Medicin.

**Extirpation of the clavicle. — By Regnoli.**

A healthy patient, 34 years of age, after lifting a burden, experienced pain in the clavicle, which was followed by suppuration, necrosis of the bone, and hectic fever. Regnoli extirpated the bone; the soft parts were indurated, and creaked under the scalpel. The body of the clavicle was detached by the disease from the articular extremities, and was readily removed with the forceps. The sternal extremity was then disarticulated, and the acromial left in its place. But the acromial extremity became subsequently affected with necrosis, and was in its turn removed. Cicatization took place, and such a degree of induration of the soft parts, as in some measure to supply the place of the clavicle.

*Annali Medico-chirurgici.*

**Inguinal Aneurism. Ligature of external iliac artery. Secondary hemorrhage. Ligature of the common iliac artery; gangrene; death.**

In this case the ligature was applied to the external iliac artery by Dr. Pirogoff, on the 24th November.

On the 29th, the dressings were removed, and free suppuration was found around the ligature. The ligature was cut away, and brought with it a portion of sloughing cellular tissue. The wound was dressed, immediately after which, florid blood escaped through the dressings. The hemorrhage was arrested for the time, by pressure with the hand upon the artery above the wound. An incision was then made above the former one through the integuments and muscles down to the fascia transversalis, which was cautiously raised with forceps and divided on a director. The peritoneum was then exposed to view, and separated from the fascia transversalis by the two index fingers: but in the neighbourhood of the former wound, it was so adherent to the surrounding parts, that it was torn by the finger, which was then introduced into the
peritoneal cavity, where the pulsation of the artery was distinctly felt. Over the artery, the peritoneum was a second time torn with the finger, and the artery isolated. An aneurismal needle was introduced under it with considerable difficulty, and a ligature applied. On the 4th December the dressings were removed, and the edges of the wound were found to be separated to the extent of about a quarter of an inch. The wound was of a dirty gray colour, and an ichorous fluid escaped from it.

December 6th. The whole surface of the wound gangrenous and very offensive.

10th. Fæces were discharged from a fistulous opening. Rigours occurred on this and the following days. On the 13th, arterial hemorrhage occurred, by which the patient was much exhausted. On the following day he died.

Autopsy. The right common iliac artery was found to have been embraced and divided by the ligature at the junction of its middle and lower third. The two ends were half an inch apart: the superior, contained a coagulum partly of blood and partly of lymph, three quarters of an inch in length, loosely adhering to its inner coat. This clot was broken through at a small spot, from which undoubtedly the hemorrhage had occurred the day before the death of the patient. The middle and internal coats of the vessel were completely divided, but a portion of the external coat remained at the posterior part, by which the two ends were loosely connected together. The lower end of the artery was entirely covered by a layer of soft coagulated lymph, in which the ligature was firmly imbedded. Half an inch below the upper end of this portion of the artery, was the commencement of the internal iliac artery, entirely pervious, but somewhat contracted. The space included between the two ligatures was one and a half inches in length, including the termination of the common iliac and the commencement of the external iliac: it was entirely impervious, being filled with coagulated blood and lymph. At the place where the lower ligature was applied, the two ends of the artery were half an inch asunder, entirely separated from each other, and surrounded by ichor. The extremity of the lower portion of the artery was entirely closed by a coagulum of blood.

The inner surface of the aorta exhibited a number of yellowish elevated deposits between the middle and inner coat. At the arch of the aorta was a thimble-like sac formed by the protrusion of all the arterial coats. A similar protuberance was found over one of the semi-lunar valves of the aorta. — Zeitschrift für die gesammte Medicin.

Case I. — James N. aged 75 years, had (Feb. 1836,) been for two years suffering from diabetic flow of urine, which for nine months had considerably increased: he had been under the care of different persons, and a variety of remedies were tried, but no abatement of the symptoms was observed. When he applied to me the quantity of urine discharged was 9½ pounds by weight in 24 hours, fully charged with saccharine matter. His appearance was emaciated, countenance anxious, and tongue dry and furred. After trying various plans without any apparent benefit, (with the exception of temporary relief for a few days by the exhibition of nitrous acid,) at last, without any particular hope of benefit, I ordered the following mixture.

B. Tinc. opii 3 iss.
Sulp. Quin. grs. viii.
Aq. Dist. 3 vi. M.

An ounce of which was to be taken three times a day. After continuing this formula for three days, I was agreeably surprised by a sensible abatement of the quantity of urine, but still as fully charged with saccharine matter. In five days more, the abatement had continued; the countenance was less anxious, tongue clean, constitution evidently improving. On the eighteenth day, barely 4 pounds of urine were discharged in 24 hours, in which little saccharine matter could be detected. In four weeks, with a continuation of the medicine, he appeared in perfect health, and at the end of six weeks, ceased taking medicine entirely, and has since, (Sept. 1840,) had no return of his complaint.

Case II. — Henry G. aged 30, came under my care April 1838, after being treated by different persons without apparent benefit. From the decided success of the tinc. mur. ferri in the preceding case, I began immediately with the same dose as above stated. The quantity of urine was, at the commencement, 8 pounds in 24 hours, and full of saccharine matter. For five days, no improvement, either in the quantity or quality of the discharge, was observable. After that time, however, the abatement began to show itself, but without any diminution in the saccharine principle. On the fourteenth day, the diminution of the discharge was remarkable, not more than 3½ pounds in 24 hours, and the character of the urine much less sweet. On the twenty-fourth day, the discharge was natural in quantity and quality, and before the expiration of five weeks he had left off taking medicine.
Case III. — Mary W. aged 56, (March 1840,) had been subject to a diabetic discharge for eight months: her general health had for some time been very precarious from the cessation of the menstrual discharge. About 7½ pounds of urine were passed in 24 hours, saccharine matter was not so abundant as in the former cases. I gave her the above mixture of mur. ferri, &c. for six days, when a slight abatement was observable, but on the twelfth day the quantity was more than at the commencement. On the fifteenth, the abatement again showed itself, and from this time to the end of four weeks kept continually decreasing. At this time pleuritic symptoms called for a cessation of these remedies and a substitution of others, during which time a slight increase of urine came on; but on going on with the old medicine the improvement returned. She finally ceased taking medicine at the end of eight weeks, feeling her health quite restored, and has no return since.

[The author remarks in relation to the above cases, that the patients were kept upon a strict diet of animal food, and that it is necessary to use the remedy recommended by him in large doses, as he had repeatedly tried small ones without any effect. The cases were of such standing as to time and obstinacy, as to present an unfavourable prognosis.]

Lancet.


Cancer of the gall bladder and of the ductus communis. — M. Fardell gives us in his paper, (Arch. Gen. de Méd.,) on the above subject, three cases of the above disease, which are interesting as presenting some important details in relation to a subject, as yet not much investigated. The cases we observed at the hospital for old women, (Salpêtrière,) a perfect museum of morbid anatomy at all times.

Case 1st, is one in which no marked symptoms existed during life. The patient was a female, 72 years old. At the time of her admission, she had a slight diarrhoea with trifling colicky pains, and was free from fever. The second day, she fell from her bed on the floor and upon the right side, but did not complain much of being hurt. A slight tinge of jaundice was now observed over the body, not extending, however, to the conjunctiva, and which was not present the morning previous. On more careful examination of the abdomen, which was slightly tender and much distended with gas, it was discovered that the liver descended a little below the edges of the false ribs on the right side: and in the most remote portion of the right flank there was a slightly painful tumour, the size and form of which could not be easily ascertained, on account of its
being so deeply seated. The right hypochondriac region was painful, as well as the other portions of the abdomen, but in a less degree. The tongue was dry, the hands slightly oedematous, the pulse not accelerated, but a little hard. The patient died quietly the next day. On post-mortem examination, a quantity of turbid serum in the peritoneum; epiploon adherent, old adhesions. In front of the pancreas a rounded somewhat bossilated tumour the size of a small orange, covered by the left lobe of the liver. This tumour was composed of a fibrous sac filled with clots and with encephaloid matter. It adhered slightly to the base of the liver, and appeared to have its seat in the sub-peritoneal cellular tissue. The gall bladder was enlarged, hard, and somewhat bossilated: it was filled with encephaloid matter and with about twenty calculi. The biliary ducts were natural, as also the liver; nothing of interest was noticed in the other organs.

Case 2d occurred also in a female 72 years old. She had been treated some time before for vomiting and pain in the abdomen. Since then, she was constantly sad and complaining of pain in the abdomen, particularly in the right hypochondrium, and occasionally of vomiting and diarrhoea: a fortnight ago she first became jaundiced. At the time of her admission she was very much jaundiced: severe pain, tumefaction, and tenderness in the right hypochondrium. Bilious vomiting, fever; slight relief from leeching, but soon followed by diarrhoea. A tumour was felt in the right hypochondrium as large as a hen's egg and a little bossilated, but difficult to circumscribe. The diarrhoea continued severe and uncontrollable. She died in about two months after her admission, gradually emaciating under the free evacuations from the bowels, the jaundice continuing to the last. On post-mortem examination the gall bladder was found full of the jelly-like matter, (mat. colloïde,) and had adhered to and opened into the colon by a rounded ulcer three inches in diameter. The walls of the gall bladder were white, but thickened and firm. The liver was healthy, the gall ducts were dilated; the cystic duct could not be traced. The mucous membrane of the large intestine was red, thickened and puffy, and sprinkled with superficial erosions.

[The above case is not considered by our author, neither do we regard it as a case of cancer. Some pathological anatomists have wished to regard the jelly-like deposit as a form of scirrhous and encephaloid, but while it belongs to the same class (hetorologous malignant formations) it appears to be a distinct deposit, and much more rare than either of the others.]

The third case occurred in a female patient aged seventy-five years. She was an habitual sufferer, very much emaciated and feeble; her cheeks of a grayish red; her intelligence very limited; says she has
been ill eight days; heaviness and distress in the head; sight impaired; no chills, or fever, or thirst; but appetite lost; nausea with vomiting. Abdomen, not tender, flaccid. Examination discovered the liver below the false ribs and in the epigastrium; it presented no inequalities—a condition very common in women of advanced age. The tongue contained in its substance two tumours the size of a small nut. This patient continued to live a month longer in a state of complete prostration. At first she had had no fever, but for the last fortnight the pulse at night was considerably accelerated. The body exhaled a very fetid odour. She vomited, occasionally, a little reddish and grumous fluid, and once a small quantity of pure blood. She was able to retain only a little wine and bouillon. She constantly complained of pain in the cardiac region. Her appetite was completely lost. In the epigastrium, immediately within the edge of the cartilages of right ribs, there was a small and slightly projecting tumour, insensible to pressure, and apparently implanted in the liver, which could be distinctly felt in this region. This tumour had evidently escaped notice on our first examination. We remarked also that the respiration was very imperfect about the summit of both lungs. Death occurred gradually without the supervision of jaundice.

On post-mortem examination, the brain was found healthy, as also the heart. The summit of the left lung was the seat of gray induration. The liver was enlarged, but its structure was healthy; only a rounded fibrous cyst of the size of a large nut, and filled with a viscid stringy substance, like glue, was implanted in the left lobe, and partially projecting beyond its surface. The colon adhered closely by cellular tissue to the base of the liver and to the gall bladder. This latter organ was divided imperfectly into three pouches. These contained a yellowish grumous substance of the consistence of soft cheese, and resembling softened tuberculous matter, which enveloped about 50 calculi. The cystic duct was obliterated; the hepatic ducts were normal and contained bile. The walls of the gall bladder were converted into scirrhus. A portion of the ileum had undergone the same degeneration. The stomach contained numerous small scirrhus deposits in the sub-mucous and sub-peritoneal cellular tissue. The mucous membrane of the stomach was healthy, as also that of the small intestine, except over the scirrhus deposits, where it had been absorbed: that of the large intestines was red, but not softened.

Our author next reports two cases of cancer of the liver itself, a brief abstract of which may not be without interest.

A seamstress, aged 57 years, had been subject to frequent attacks of
inflammation of the chest. Eighteen months ago a small deep-seated, not painful tumour, was noticed in the right hypochondrium. About six months ago, I examined it, and found it about the size of a pigeon's egg, not bossellated or painful, producing in fact no kind of inconvenience. The liver did not appear enlarged; the skin was not tinged. The 12th of August, when she entered the Infirmary, she had been jaundiced about a fortnight, which she attributed to a strong emotion. Her health for some time past has been good, with the exception of chronic cough, followed occasionally by vomiting. The tumour in the right hypochondrium existed as before, now as large as a hen's egg, which M. Cruveilhier considered as the gall bladder distended with calculi or bile. It was hard, even, easily circumscribed, immovable, without fluctuation or crepitation, very little tender on pressure. The epigastrium was tender; vomiting after cough; pulse accelerated; febrile paroxysms; emaciation considerable; temper gay. Leeches and laxatives produced only a trifling improvement.

As the case advanced, the vomiting became urgent: the emaciation, and weakness and fever progressed, and the skin assumed a greenish bronzed complexion. The tumour appeared to become more superficial and more painful — indeed the whole abdomen became very painful for days in succession, sometimes lancinating. The liver never descended below the ribs.

In October, the vomiting grew less urgent and finally ceased, but the emaciation, &c. progressed. The stools became involuntary, but from being grayish, they became more yellow, liquid, often containing pure blood. Small tumours could be felt under the edge of the ribs apparently belonging to the liver. The patient finally died on the 12th November.

The liver was enlarged and bossellated, containing masses of softened cancerous matter, the surrounding tissue being healthy. The gall-bladder adhering to the duodenum and colon was enlarged, and so distended as to be hard. It contained bile and pus with numerous calculi. Its walls were thickened; its lining membrane was covered by a pellicle of unequal thickness, and presented numerous erosions. The biliary ducts were enveloped in cancerous matter; the ductus choledochus filled with it; the hepatic duct was dilated, containing calculi. The stomach was healthy; the mucous membrane of the duodenum unequal, rough, and thickened; that of the large intestines was red. Tubercles existed in the lungs.

The next case occurred in a female 64 years old. She had complained for two months of very severe pain of an intermittent kind in the
right hypochondrium — great tenderness on pressure. The liver did not seem to be enlarged, but a small, hard, rounded tumour was discovered in the situation of the gall-bladder. There was no jaundice or vomiting, but frequent eructations, loss of appetite, thirst, constipation, acceleration of the pulse. Leeches procured some relief, but soon obstinate diarrhoea set in. The patient exhibited symptoms of pneumonia, the liver increased in size, the whole hypochondrium becoming dull and tense; epigastrium painful and tender, and the small tumour could no longer be distinguished. Marked jaundice at length supervened, and the patient died five weeks after admission.

The liver on post-mortem examination was enormous, preserving but little trace of its natural structure, being almost entirely converted into a whitish yellow substance rather soft and grumous. The gall-bladder was much enlarged and thickened, containing numerous calculi. The cystic ducts was obliterated. Redness of the mucous membrane of the large intestine; pneumonia.

The last case reported was a patient aged 81 years, who had long suffered from shortness of breath. In January she had symptoms of strangulation of the intestine. After recovering from this, she sunk into that state of gradual exhaustion, common to old people, without local symptoms. She never was jaundiced, but her skin had the earthy aspect of organic disease.

On examination all the organs appeared healthy, except the ductus choledochus and the hepatic ducts. The former was the seat of a softened cancerous deposit; the latter were much dilated — they, as well as the gall-bladder, contained some calculi.

Night Blindness and Common Amaurosis, caused by Onanism and inordinate Venery. Mr. Cane of Kilkenny, in an interesting article calls the attention of the profession to a class of amaurotic cases resulting from a specific cause, which cause being removed the treatment becomes at once simple and eventually successful, if assistance be had before disorganization has taken place. The author details six cases, two of which were cases of ordinary amaurosis and four of nyctalopia. The successful treatment consisted in the abstinence from venereal indulgence, local depletion to the head if symptoms of congestion existed, or aperients, and tonics and nourishing diet, according to the peculiar circumstances of each case. He also mentions in connection with the same cause of disease, that he has attended ten cases of diabetes, seven of which acknowledged the practice of onanism. — Dublin Journal.
Typhoid Fever in new-born Children. M. Charcillay, physician to the hospital of Tours, relates in a late number of the Archives Gen. de Médecine, two cases of what he considers typhoid fever in new-born children. In one he supposes that the disease existed for seven days before birth! Yet no evidence existed that the mother had had the disease or been exposed to its influences. All the evidence of its existence was that the glands of Peyer were found tumesced and in one case ulcerated!

Perforating Ulcer of the Stomach. The number of the Archives Gen. de Médecine for June, contains an abstract of an essay on this subject, by Professor Roketanski of Vienna. Some of his statements are worth remembering, especially as they are founded on more than 100 cases, the disease being very common at Vienna.

The opening in the stomach is commonly circular, and three lines or more in diameter, its edges are sharp as if cut with a knife. On examination, it appears that the loss of substance is more considerable internally than externally, the edges gradually getting thinner in approaching the opening. The walls of the stomach are thickened, and an elevated ring (bourrelet) is seen upon the mucous membrane. The ulcer is almost always in the pyloric half of the stomach, (one exception) commonly in the central portion, and most frequently on the posterior wall; always near, and often upon the lesser curvature.

The size of the ulcer varies from that of a sou to that of a five franc piece, sometimes it is two or three times as large. It is commonly single, 62 times in 79 cases.

At the commencement, these ulcers are commonly circular, those of a larger size are sometimes elliptical, the largest are irregular in shape.

Our author is of opinion that the disease commences in a circumscribed softening, from a change in the vitality in the tissues from some cause unknown. If the eschar is confined to the mucous membrane in which it commences, it often terminates favourably. The sub-mucous tissue becomes fibrous, the ulcer contracts, and the cicatrix is formed by the union of this to the muscular coat. But if the process of destruction goes on, the peritoneal coat is finally ruptured, and the different steps of the process become evident on examination. The perforation is in the centre of the ulcer, and is represented by a circle smaller than that formed by the muscular coat, which is again smaller than that formed by the mucous coat. This perforation is commonly fatal of course, but our author relates a case where the opening was closed by the spleen, and another by the external integuments, although in some cases, the process of destruction does not stop even here.
The symptoms are divided by our author into three periods. In the first, pain in the stomach and difficult digestion, which exist for many years. In the second, the pain becomes more severe, attended by vomiting. In the third, the symptoms of perforation exist, (peritonitis commonly) and may lead to the suspicion of poisoning. Cases of recovery are not very rare, as the existence of cicatrices prove, although there is a remarkable tendency to relapse in such cases.

It is easy to see that such cases might very readily be confounded with other affections, especially with cancer of the stomach. Our author, however, thinks there are some points of diagnosis worth attending to. There is not the vomiting three or four hours after dinner, the dilatation of the stomach in its cul-de-sac, and the fixed and firm tumour we notice in cancer of the pylorus. The vomiting of matter like chocolate grounds does not occur, neither are portions of cancerous matter thrown up as in the medullary fungus. On the contrary, the matter vomited is mixed with brownish flocculi, and sometimes patients vomit large quantities of blood. Careful diet exerts a marked influence upon the symptoms. The age of the patient is also an important consideration, since it is not unfrequent in youth, neither is the cancerous aspect present.

The treatment of our author is principally dietitic. Above all, milk in small quantities, is the proper article of food, fresh or boiled, hot or cold, simple or combined; if pain exist, leeches may be indicated, and alkalies with the warm bath are proper. A rapid amendment must not be expected. If milk does not agree, he recommends soups, (bouillon) mucilaginous drinks, &c. ; he also advises derivatives, as moxas, sinonisms to the epigastrium, and if there be discharges of blood, acids, and astringents, as alum, &c. — Arch. Gen. de Med. from German Jour.

Case of dangerous Uterine Hemorrhage, in which Transfusion was successfully employed. By R. Oliver, M. D.

The patient, a woman 42 years old, had been confined the night previous with her seventh child. At six A. M. she was in an extremely exhausted condition, lying on her back, perfectly conscious, pulse hardly perceptible, occasionally moaning and casting about her arms. Rum and water, and beef tea revived her a little, but on the whole, the symptoms of collapse gained ground, so that at about one P. M. she became quite unable to swallow. The pulse at the wrist and in the carotids had not been perceptible for more than two and a half hours, and the coma was now complete. Under these unpropitious circumstances, transfusion was resorted to at one and a half P. M. a willing supply of blood having been obtained from three of the patient's kind hearted neighbours. The
ordinary apparatus was used, except that a common basin to receive the blood, was substituted for the cup attached to the apparatus — thus obviating the introduction of air into the syringe from the cup being too small. Syringe full after syringe full was thus injected, pausing from time to time to witness its effects, but after at least 12 ounces had been introduced, she still lay pulseless and perfectly insensible. The respiration, however, although faint and low, was distinct and regular, so that however small the quantity of blood in her system, there was still some undergoing aeration in the lungs; but the heart's pulsations could not be ascertained. At length, after persevering steadily and slowly, the pulse began to be perceptible in the arm, and after persevering for a few minutes longer, we had the perfect gratification of witnessing not only the complete restoration of the circulating power, but the return of consciousness, and of the ability to speak. In a few weeks she was moving about in her family as usual, remaining however, for some time longer, rather weak and delicate, with an occasional slight headache, but with none of the prominent symptoms ordinarily ensuing after serious losses of blood. The quantity of blood injected in this case was about 22 ounces.

The author thinks that if again called upon to perform this operation, he should use a much simpler instrument than the transfusing apparatus. A small curved silver tube for insertion into the vein, with a transverse flat collar to keep it steady, is of course indispensable. To this a light, straight, brass stop-cock should be adapted; and when required for use, a soft bladder tied upon the end of the stop-cock would serve for the reception of the blood. — *Edin. Med. and Surg. Journal.*

**Vaccination.** M. Villeneuve, chairman of the committee on Vaccination of the Royal Academy of Medicine, Paris, after examining the reports of forty-one departments of France, in relation to vaccination and re-vaccination, has deduced from them the following conclusions. The whole number of those vaccinated for the first time was 30,413; in 560 of these it was unsuccessful. The number of re-vaccinations was 2199; of these 1976 were unsuccessful. Of those who had been already vaccinated, 365 had the varioloid, and 6 died.

Thus it would appear, that the proportion of cases in which vaccination does not succeed, is only 1 in $54\frac{1}{2}$, while others who have investigated this subject place it as high as $\frac{1}{3}$ or $\frac{1}{6}$.

That in 2199 re-vaccinations performed in persons of different ages and sexes, who had been successfully vaccinated at some previous time, 223 were successful,—so that the proportion of successful cases was as $\frac{1}{13}$ or $\frac{1}{4}$. 
That in 365 cases of varioloid, occurring after well-established vaccination, the proportion of deaths was only \( \frac{1}{15} \) or \( \frac{1}{10} \); while the sporadic small pox kills \( \frac{1}{6} \) to \( \frac{1}{10} \); and when the disease is epidemic \( \frac{1}{4} \) or even more perish.

The author, in conclusion, remarks that the reports from which the above conclusions are derived, are too few and too imperfect to establish a statistical question, yet they are worthy of note.

Annales d' Hygiène.

Mr. Stewart, in an article on the protecting power of vaccination in small pox, published in the last number of the Edinburgh Medical and Surgical Journal, maintains the following conclusions: 1st, That vaccination affords an imperfect protection from smallpox at all periods of life. 2d, That the protection becomes more imperfect as the individual advances in life. 3d, That at the age of puberty, the influence of vaccination, (provided it has been had recourse to in infancy,) nearly ceases,—at any rate, in the majority of cases, at the age of 20, vaccination ceases to exert any protective power whatever. These conclusions are confirmed by Dr. Gregory of the London small pox hospital, in a letter to the author.

Chemistry and Physiology of Digestion. We learn from the London Lancet, that \( \frac{3}{4} \) Professors T. Thompson, Owen, T. Graham, Drs. Prout and R. D. Thompson, have been appointed a committee by the British Association for the Advancement of Science, with a grant of £200, to make a series of experiments on the Chemistry and Physiology of Digestion, and to bring to England St. Alexis A. Martin, the subject of our countryman Dr. Beaumont's experiments.

Bathing the Chest with cold water in Whooping Cough. Dr. Han-nay, in a paper recently read before the British Association, recommends this treatment in cases of whooping cough, stating that he has cured many cases in a few days, and in all, has much shortened the duration of the disease. He has used it with advantage even where febrile bronchitis exists, and would not hesitate to employ it if pneumonia also existed,—indeed he recommends it at all seasons and in all cases.

The coldest water in which a little vinegar, alcohol, or cologne water has been mixed is to be used, enveloping the hand in a towel. This is to be dipped into the mixture, and the whole chest very speedily washed with it, and then dried with a warm towel, so that reaction may ensue. This may be repeated three or four times a day.
[We have copied the above statement, not for the purpose of recommending such indiscriminate and unscientific treatment as applied to all cases of this disease, but because it appears likely to prove a valuable remedial agent in the chronic and a pyrexial form of the disease. In recent cases, and in those attended with acute bronchitis or pneumonia, it would seem likely to prove extremely injurious.]

Report of the London Committee on the Sounds of the Heart. A late number of the Medical Gazette contains an account of the more recent experiments of the committee of the British Association, Drs. Clendining, Williams, and Todd, on the sounds of the heart. A principal object of their investigations was to ascertain how murmurs could be produced by mechanical and other irritations; how, also, by inflammation. It would appear, however, from a perusal of these experiments, that no new conclusions of any practical importance have been established. Indeed, it is plain to us that the preferable mode of studying this part of the subject is at the bedside of patients, and by post-mortem examination, especially, since the mode of the production of the healthy sounds of the heart have previously been so well established by the experiments of this same committee and by others.

To the Editor of the New-York Journal of Medicine:

Gentlemen: — As the operation for dividing the rectus internus muscle in cases of strabismus is still new in this country, and as the pages of your Journal record but two cases in which it has been performed, I have been induced to present the following case for publication.

Mr. C., aged 44, had squinted with the left eye, inward, since infancy. The strabismus was produced during a violent paroxysm of pertussis. The vision in this eye had from that time been imperfect, the patient being unable to see distinctly more than one half of an object at a time, the other half appearing like a dark shadow. On the tenth of October, the operation was performed in the presence of Dr. Buck, and of my preceptor Dr. Hoffman, in the following manner. The patient being seated, the lids were held as usual, and a very small double hook, shaped like the ordinary tumour hook, but having a shoulder about two lines from the points to prevent their piercing the sclerotica, was introduced into the conjunctiva near the cornea, for the purpose of abducting the eye and keeping it steady. With a small forceps I raised the conjunctiva as near the inner canthus as practicable, and divided it in a perpendicular direction with a scalpel, thus exposing the fibres of the muscle. A little blood flowed, which being collected as it were in a cup by the strong contraction of the eyelids, served to impede the next step in the operation, which consisted in passing a small curved
silver director under the muscle, the fibres of which were divided with the scalpel, cutting on the director. The patient was sensible of a strain having been removed from the eye the moment the division of the muscle was completed and on removing the hook, the eye instantly assumed a position in the centre of the orbit.

As the patient was in full health and had not been subjected to any preparatory treatment, venesection was resorted to during the evening, which relieved the headache and slight pain in the eye of which he had complained. On the 11th, a dose of sulphas magnesia was administered, and on the 13th, the patient was attending to his ordinary business, no inflammation having supervened. The inner canthus of the eye was slightly ecchymosed, and somewhat painful when exposed to a strong current of air, but this soon disappeared, and the eye is still perfectly straight. The vision has not been much improved, though he can see a much larger circumference than before, and could now make his way through the streets without the assistance of the sound eye.

With respect,

Your obedient servant,

New-York, Dec. 7th, 1840.

RICHARD H. COOLIDGE.

Curvature of the Spine and Deformities of the Body generally. Dr. J. H. Dorr has opened an Institution in this city, No. 60 Fourteenth-street, for the treatment of the above affections. Having had an opportunity of witnessing the means adopted by the best practitioners in France and Germany, Dr. Dorr proposes to pursue a course that in its general results will, it is believed, be more uniformly successful than any hitherto pursued in this country. The means, of course, are chiefly mechanical, but so adjusted as to leave the limbs free for healthy bodily exercise—a point of the highest importance. Dr. D. refers for his ability to treat these affections, to several distinguished surgeons in this city and in Boston.

Vermont Academy of Medicine. The annual session for Public Lectures, at the above Institution, will open on the second Thursday of March, 1841, and continue fourteen weeks.

The faculty is composed of the following gentlemen:

HORACE GREEN, M. D., Professor of Theory and Practice of Medicine.
ROBERT NELSON, M. D., Professor of General and Special Anatomy and Physiology.
JAMES HADLEY, M. D., Professor of Chemistry and Pharmacy.
JAMES BRYAN, M. D., Professor of Surgery and Medical Jurisprudence.
JOSEPH PERKINS, M. D., Professor of Materia Medica and Obstetrics.
C. L. MITCHELL, M. D., Professor of General Pathology.
EGBERT JAMESON, M. D., Demonstrator of Anatomy.

The fee for admission to the whole course is $50 00
Maticulation fee . . . . . . . . . . 5 00
Graduation fee . . . . . . . . . . . . 15 00

In making a communication to the Medical Profession illustrating the use of the Saratoga waters at the Springs, the writer claims, and feels entitled to an explanation of, the informality and apparent haste with which his remarks are made. If it be considered, that the whole year's business in this place, is thrown into a few weeks, and that there is, in general, time only for the outline of each case to be committed to paper, embracing merely the stronger points of the individual, while the less important particulars are entrusted to the memory of the prescriber, the reason will be apparent why the extract should appear not only brief but informal. Indeed, it seems impossible for even the most methodical and judicious mind to sketch with the pen, a complete and accurate picture of each assemblage of symptoms that presents itself amidst the rapid and bustling scenes at the Springs of Saratoga.

What, then, can be done? I must either refuse the kind offer made of a place in the columns of this Journal, or send the reports accompanied with much of their original haste and rudeness. For, as to any adscititious decorations and filling out from memory months after the original entries have been made in the
case-book, it is utterly to be repudiated, on the ground that every reader, who is not looking more at words than things, will get more correct impressions from the original outline than from any subsequent dilution and modification.

But, I have already extended these apologetical remarks farther than I should have done, had I not supposed it possible that I might wish to trouble you hereafter with other reports on the same subject. After making every allowance for the magnified and disproportionate importance which any subject is liable to assume in the minds of men who are engaged in some insulated department of science, I still think, and fully expect, that all practitioners who are on the field of action, will be desirous of knowing the real and natural effects of the internal and external use of the Saratoga waters at the fountain head. If these are truly medicinal, how much more agreeable and safe to send incurables, whose complaints promise in any degree to be relieved at the Springs in this place; combining all the benefits of journeying, fresh air, new habitations, new company, with the cathartic, alterative, diuretic and tonic medicines that flow from our soil, than to consign them either to the nostrum venders, or to despair. That fatal effects do not follow from sending even unsuitable and ill-judged cases to Saratoga, is evident from the circumstance, that among some thousands of invalids who were found here at any time during the past three seasons, and in the aggregate many thousands, not half a dozen deaths have occurred.

Is it not, then, a matter of humanity and expediency in these days, when a feeble invalid can come from the seat of our national government to Saratoga with less wear and tear than twenty miles by stage, to rescue a sufferer who has had a thorough trial of well ordered medicine, from the hands of steamers and quacks, and from the attrition of nostrums, and send them to enjoy all the benefits of journeying with the delicious and restorative medicines that are to be found in our mineral fountains? These remarks may be attributed to enthusiasm or selfishness. But I can truly say that, had the various mineral fountains of this village and their different constitution, been as fully known to me when formerly in miscellaneous practice as they are now, it would have afforded me much relief in the perplexities arising in the treatment of chronic cases. I hesitate
not to bear the imputation of weakness, or ill-balanced judgment by asserting that, after three years' residence and practice at the Springs, my estimation of their efficacy in chronic diseases is more and more exalted: and that last season was, beyond all former parallel, fruitful of recoveries under the combined influence of hot, tepid, and shower baths, and the internal, deobstruent, alterative, and tonic effects of the waters.

It is probable there are many readers of this Journal who may not be aware that there are ten distinct fountains in the village and vicinity, which vary in their composition, all of which are considered strictly medicinal, and each one the favourite spring with particular invalids. Three years since, Congress Spring was considered the spring; and Congress water and Saratoga water as synonymous. The New Congress, or Putnam Fountain, the analysis of which has since been made and published, by J. R. Chilton, M. D. of New-York, was then, and is still, a favourite spring. But the Iodine Spring, in the northeast part of the village, has been discovered and repeatedly analyzed since, and has been found to be possessed of less iron than any other fountain. Nor does it contain quite half the amount of chloride of sodium which is contained in the old Congress. From both these particulars, it was inferred, that in cases of chronic inflammation in which the Congress and other springs had proved too tonic, the Iodine water might be admissible and useful. Accordingly, early last season, my partner Professor John Delamater, and myself, commenced a cautious internal use of this water, in cases of incipient tubercular phthisis, and pulmonary hemorrhage: and, in the course of the summer, the number of patients of this character, probably amounted to twelve or fifteen. For the first few days we generally added, in each case, some antiphlogistic remedy of moderate power, such as antimonials, calcined magnesia and salines, to counteract the tonic effects of the water. I do not recollect that we bled in a single instance. So far as these experiments went, the result was highly favourable. In none, was the cough, breathing, pulse, or hemorrhage made worse; and most were decidedly improved by the operation. There were cases of inflammation in other organs which yielded in the same manner to the combined action of Iodine water, and saline laxatives. This water bottles equally well with the old Congress: and,
should any physician wish to test it at home before sending his patients here, the fairest decision would be obtained by administering the contents of a quart or common bottle, combined with some saline ingredient sufficient to produce free catharsis, and taken in the morning early. A few days will be sufficient to satisfy the practitioner of its effects, and whether a journey to the springs itself might be expedient.

The fame which the Pavilion Fountain has attracted since its discovery last April, by Mr. M'Laren of this village, has probably reached the ears of most of the readers of this Journal. I could never have fully appreciated the magnitude and the difficulty of the work of constructing this fountain, had I not witnessed the operation. To make a cavity in the ground nearly forty feet deep, and of the size of a small dwelling-house, in any soil, would be something of an undertaking. But when this must be done, nearly the whole distance, through a quagmire, into which are pouring large streams of mineral water, requiring six or eight men, night and day, at the pumps to keep the cavity from filling, and all this accompanied with such an overwhelming discharge of carbonic acid as to cause the workmen to be drawn up occasionally in a state of partial asphyxia, it must evidently require not only money, but decided energy and perseverance. The whole of the mineral currents were collected in the bottom of the excavation, into two large, strong, plank tubes, and conducted so high as to be discharged some two or three feet above the original surface of the soil, where they have ever since been flowing off with the greatest vivacity and beauty. Owing to the singular fact, that these two columns of water are nearly fifty feet perpendicular, the influence of the sun and moon when in conjunction, was so great that, both at noon and midnight, the violence of the ebullition and the rapidity of the current, were so much augmented as at first to produce some very marvellous and amusing reports of audible sounds at the new fountain. The cost of the work has already exceeded $2,000, and the proprietors express a determination to advance much more for building, and ornamental works. There have been two analyses, by respectable chemists from New-York, and another is expected next summer, after the impurities have been washed away, and the saline ingredients thoroughly established.
This water has a deposite on bottling. Yet many invalids and others, ordered so many bottles last season, notwithstanding the deposite, as to render the business of bottling at the spring very brisk toward the close of the season. Medical men need not be told that a change of the iron from a protocarbonate to a percarbonate can be no damage, in many diseases, if there is gas enough to retain the other ingredients in solution. Whatever may be its success abroad, it is certain that thus far it has attracted unwonted attention and favour here. It has produced many unequivocal cures of chronic complaints; and, from its great beauty, its smart, saline, and acid taste, and its central position, it bids fair greatly to add to the medicinal resources of Saratoga. A few miscellaneous extracts from my case-book are adduced in conclusion, in illustration of the external and internal use of the various mineral springs.

Case I.—Minister's Throat Ail, Dyspepsia and Obstructive Costiveness.

Mr. C. H. C., aged 24 years, applied to me, April 4th, 1840. For many years has been so extremely costive that the most drastic cathartics have only irritated his bowels, and increased his sufferings without producing any efficient evacuations. Appetite variable. Tongue clean. Almost every article of food distresses him. Great sensibility to cold—no weather too hot for his comfort. Pulse 65 and soft. Countenance pale. Limbs tremulous. Great debility of mind and body. Throat and muscles of voice invariably fatigued and painful, even after common conversation. Fauces red.

Mr. C. was directed to make no attempts to procure cathartic action of the bowels, but to take daily three or four tumblers of the Pavilion water half an hour before meals; being assured that, by establishing tone in the muscular system in general, the muscular coat of the alimentary canal would be restored to the same condition, and thus the torpor be removed. To quicken the circulation and to invite the blood into the dermoid system, take a mineral bath daily, at 100°, Farenheit, for fifteen minutes, increasing the temperature daily, till the heat becomes uncomfortable and oppressive.

June 4th. For two months Mr. C. has followed the above direc-
tions. To-day was in a bath 20 minutes, at 116°, and without being particularly uncomfortable! There was no mistake about the thermometer. Has gradually reached this temperature. Is careful to immerse the brain, so as to preserve an equal temperature, and circulation throughout all the viscera. Without this precaution, vertigo would inevitably occur, and of alarming character. It was the want of this precaution, probably, that made Dr. Thompson of London, limit the hot bath to 106° as the maximum. With the baths and the internal use of the water, Mr. C. has convalesced rapidly. Persevere with the treatment, and add the liberal use of pulverized mustard in honey before meals.

June 24th. Called in "to boast." Has walked seven miles, to Ballston, to-day; also, about the village. Is very vigorous and florid. Habit full. Eats largely, and of every thing. Has dismissed his brown bread. Says some of his baths have been 120°. His throat less improved then any other part.

Aug. 17th. For two or three weeks, Mr. C. has been stationary. Bowels quite soluble; but he has many of his uncomfortable feelings. Throat sore: continue the internal use of the mustard. Also, sinapisms externally to the throat. Also, suspend hot baths, and take daily a shower bath of half a bucket of cold mineral water.

Aug. 21st. Cold shower very invigourating and warming. Finds half a pailful productive of more reaction than a larger quantity. Continue all.

Aug. 26th. Better in all respects. Throat yet troublesome. Omit mustard. Take, six times daily, a pill composed of one grain of crystallized sulphate of zinc, two grains of myrrh, and one drop of oil of cloves. Continue the internal use of the new Congress; also, cold shower daily.

Aug. 30th. Pulse 66 and soft; throat yet sore and weak. Swab the throat once a day with a solution of 20 grains of nitrate of silver in one oz. water; continue the other remedies.

Sept. 3rd. Much improved.

Sept. 16th. Is sure the zinc pills are co-operating in his recovery. Eats enormously. Every thing sits well on his stomach. So henceforth to omit all remedies but the waters and cold spunging and frictions.

Feb. 10th, 1841. Since the last date, Mr. C. has preached two
or three sermons every Sabbath, and studied severely. Has had one turn of complaining of his throat, which was speedily removed by teaspoon-ful doses, before meals, of equal parts of tinct. of bloodroot and water of ammonia. Remark. — Although the circulation of the red globules in the dermoid system had been fully established by the excessively hot baths, and his tolerance of cold augmented, yet he never would have recovered permanent tone and hardihood, without the succeeding cold showers and the internal remedies.

Case II. Chronic inflammation of the knee-joint, arising from a severe sprain.

July 13th, 1840. J. S. C. aged 30, had a very severe sprain of the knee 15 months since. Has never walked since, without a crutch. Has used from 25 to 30 different medical applications. Is to have daily two pailsful of mineral water at 110°, poured on his knee from an augur hole of \( \frac{3}{4} \) of an inch in diameter, from a height of several feet, to be succeeded by one pailful of cold mineral water applied in the same manner. Within three weeks he left the place, walking without a crutch or staff; as he has not returned to renew the remedy, he is probably quite well.

Case III. Psoriasis Diffusa. Mrs. S. of A. Aug. 21, 1840. Has had salt rheum nine years; more troublesome on face and hands than elsewhere. Sometimes nearly well for weeks. Then unable to immerse her hands in water for a long time. Eats indiscriminately. Nothing offends the stomach. Pulse 90 and soft. Take one teacup-ful of wood ashes, two oz. of sulphur and one quart of Pavilion water; mix thoroughly and wash the affected parts three times a day. Take a teaspoon-ful of antimonial wine every night. Also three tumblers of Pavilion water before each meal. Cold shower every second day.

Sept. 23rd. She departs to-day; all appearance of eruption gone. Has strictly followed the directions during the five weeks.

Case IV. Scrofulous ulceration in various parts of the body accompanied with exfoliation of the bones. — K. S. J. from Massachusetts, aged 17. Aug. 23, 1839. Four years since had what was called typhus fever. Since then, has had ulcers in various parts of the body — large one on thigh for three years; opening
fistulous, connected with a large cavity above. The pus thick and yellow. Had hip disease five weeks last spring. At one time had stiff neck four months. Pieces of bone have come out from various places. Appetite poor. Pulse 80 and soft, tongue coated. Treatment. The Iodine water taken at the spring every morning, sufficient to prove mildly laxative. Also one tumbler from the Flat Rock chalybeate spring at noon, and at five and at nine P.M. In addition to these, a bath of mineral water every second day for 15 minutes, at 110°.

Aug. 27th. Pulse 92, soft. Tongue, appetite, countenance improved. Sweats profusely on leaving bath and feels languid. Capillaries of surface already enlarged, as indicated by more colour of the face, lips, &c.

Sept. 2nd. Pulse 84 and soft. Tongue clean. Baths agreeable after first three or four minutes.

Sept. 17th. Can walk two and a half miles as easily as half a mile when he came. Much more strength and vivacity. Has taken the baths at 112°. Continues the Iodine and Flat Rock waters. He left soon after in a state of steady convalescence.

Case V. Chronic Gastritis. Aug. 1st, 1839. Col. W. G. R. from Connecticut, has spent seven years at the South. For three years past, has had what he calls dyspepsia. Great tenderness at the epigastrium on pressure. Bowels irregular; tongue smooth. Pulse 84 and hard; constant and extreme vertigo. Is always very wretched unless under the most rigid abstinence. Declares life to be a burden; face florid; habit full. Treatment. Five grs. pulv. antimonialis combined with sugar and gum-arabic, every four hours, one teaspoon-ful of calcined magnesia and five tumblers of Congress water every morning.

Aug. 10th. Pulse 72 and softer. Is improving; continue treatment. In the summer of 1840, I was informed that Col. R. completely regained his health, and was in doubt how to dispose of the remains of a very large stock of Congress water which he ordered when he left the Springs the previous season.
Art. II. Observations on Scarlatina, illustrating its connection with a depressed state of the Vital Forces. By T. F. Cornell, M. D.

Having offered in the previous number of this Journal a theory and treatment (hitherto unnoticed by the profession,) for those cerebral symptoms of scarlatina which I denominated S. Encephalica, I propose in this effort, to present some additional illustrations of the rationale of scarlet fever, by fair deductions from established facts.

The most commonly received opinions of the character of this disease are, that it is either simple, inflammatory, or anginose, congestive, congesto-inflamatory, or malignant: while the congestive, and congesto-inflam. forms may be divided into as many different varieties as the disease is capable of producing phenomena. Now, although symptoms would furnish a superficial observer with sufficient data to answer the views he or other men had entertained concerning scarlatina, yet, on close investigation, I think facts will abundantly confirm the theory that it is a reactive fever, typhoid in its tendencies, and produced by a virus peculiar to itself: that in proportion to the degree of morbid impression thus made on the system, or in a ratio to the resisting powers of the economy, will be the effect produced and manifested through the phenomena of the malady.

The two characteristics invariably looked for to designate this fever, have been the sore throat and scarlet efflorescence; while the vital forces have been supposed to retain their accustomed vigour, or to bear a fair comparison with their condition in other eruptive fevers, particularly at the commencement of the pyrexia.

With such views concerning scarlatina, the profession have hitherto prescribed, and with what success the bills of mortality amply demonstrate. The very announcement of its appearance in a neighbourhood, has not unfrequently driven terror through the minds of those most conversant with its nature; while the family circle into which it may enter, very generally consider its stern introduction as the inevitable precursor of devastation and death. It is usually admitted that scarlet fever is treated
with less success than any other equally familiar disease; and when the theories concerning any complaint are followed by remedies calculated to fulfil the indication, and nevertheless, disappoint in their best regulated application, there must be something erroneous in such premises, or they would stand the ordeal of practical tests. If we view the disease as simple in one-fourth,—as inflammatory in one-half—and as congestive, congesto-inflammatory, or malignant in the remaining one-fourth—we sanction the theory that inflammation either simple or associated with congestion, accompanies one-half of the cases; and accordingly demands those active measures which experience recommends as most appropriate. The computation that three-fourths of those labouring under this disease are treated on the antiphlogistic plan, is deviating but little from reality. At various periods and by different individuals, the depletory method has been denounced in toto, for no other assignable reason than the disastrous consequences attending its employment. Recourse would then be had to bark and wine without distinction of cases. In short, it was either combated by evacuants or assailed by stimulants, according to the preconceived opinions of the prescriber; and the actual condition of the patient, excited only a routine interest and corresponding practice. But after perusing all that has appeared on scarlatina, and hunting through the compilations of modern book makers, the reader insensibly pronounces scarlatina the opprobrium Medicorum, and the clinical prescriber endorses his assertion. I am aware that diseases are so modified by contingent circumstances as to defy the most competent to lay down rules with mathematical accuracy for managing them. While it is freely admitted that symptoms must be our constant guide, it ought also to be remembered that they depend on opposite conditions of the system: and if we would simplify scarlatina, we must regard it in a different light than that in which the recorded testimonies of medical writers have hitherto placed it. I believe it is a point conceded by pathologists, that all miasmatic, contagious, and infectious diseases are produced by the deleterious principle peculiar to each being introduced into the circulation. This poison mixing with the blood, alters its quality and renders it to a greater or less extent
unfitted to support the healthy action of the different organs. Now the direct effect of this alteration is,

1st. To modify the functions of the nervous system.
2d. To produce disturbance in the circulation.

The primary effect being to depress the vital manifestations of the organic system of nerves supplying the blood-vessels, it must necessarily follow that the capillary vessels and veins will suffer secondarily in the chain of morbid actions; and therefore it is conclusive, that the reactive power of the blood-vessels will be in subordination to the morbid impression made antecedently on the organic nervous system supplying those blood-vessels.

With these facts let us consider scarlatina in its nature and modified appearances.

1st. Let us suppose a person exposed to the poison of scarlatina; that his system has been the recipient of its virus; and that the period of incubation having passed with some slight constitutional derangement, we find him suddenly seized with a rigour, followed by a disturbance of the circulation.

Now what are we to consider as the rationale of these phenomena? Is it not plausible to infer that the blood is deteriorated by the poison circulating in its mass—that the nervous system which modifies the functions of each organ, has received the first appreciable injury—and that as soon as this morbid impression is received by the nervous system, its equilibrium is destroyed, and the rigour supervenes? The blood being less nutritive, a depressed state of nervous energy is produced, and as the capillaries, or extreme vessels of the surface are affected by this primary disturbance of the functions of the nervous system, an asthenic hyperemia is formed in the capillaries, and consequently, obstruction to the free passage of the blood. Now this disturbed state of the circulation which results, is an effort excited by the stimulus of the obstruction for accomplishing its own removal.

But it may be asked what constitutes the heat of skin and accelerated pulse of scarlatina. I would briefly reply by saying, that they depend on a loss of innervation of the nerves distributed to the blood-vessels, instead of a sthenic condition of the vascular system. Mayo, in his outlines of Human Pathology, says, "that parts from which the nervous influence is withheld,
have less vitality and are more disposed to inflame, suppurate, and slough, than other parts."

And Dr. Abercrombie, in his pathological researches on the brain, says, "that paralytic limbs lose in some degree that remarkable power possessed by the living body in a healthy state, of preserving a medium temperature; and paralytic parts become hotter or colder than sound parts which have been exposed to the same temperature." And this condition Dr. Good accounts for, by the "nervous influence being distributed irregularly, or disturbed, being hurried or interrupted." I also attended a child a short time since, aged 18 months, where the skin was below the standard temperature, the pulse feeble, and at 80; prostration was extreme, and the extremities were cold. Three or four watery stools were passed without any assignable cause; and convulsions ensued. They continued for 24 hours with but little intermission—the power of deglutition was, during part of the time, destroyed. The pulse became very frequent, 160—and the skin burning hot. No depleting measures were used, not even cold applications to the head, or the warm bath, or the pediluvium. I considered the convulsions depending on a loss of sensorial influence, and consequently gave stimulants and antispasmodics freely, whenever the patient could swallow them: and wonderful to say, the child took half a pint of Maderia wine, and half an ounce of Tinct. Assafætid. in 14 hours. The skin became cool, and the pulse sunk to 90, while the child improved, and finally recovered.

Two cases of hysteria also happened under my care, where the fingers of one hand would be alternately as cold as if they had been immersed in ice-water; and after remaining so some two or three hours, or longer, would have their temperature much elevated above the natural standard. These cases defied all treatment, until they were placed under those tonic remedies which produced a forcible impression on the nervous system. The temperature of these parts was indubitably under the direct influence of nervous energy. The blush occasioned on the cheek of an individual is another instance of deficient innervation.

In those cases, where there exists such intense heat of skin, connected with a very frequent pulse, the temperature is rather increased than diminished under the depleatory practice. But
resort to those measures which re-establish the balance of nervous power, and the vis a tergo of the vessels is restored, the pulse becomes less frequent, and the skin perspires. The ingenious Currie found the constricting, and therefore the tonifying impressions of cold ablutions, more effectual than debilitating measures in the treatment of fever accompanied by an intense heat of skin, and compressible pulse. The capillary vessels do not appear to be under the direct influence of the heart, and the more we abstract from the general circulation in many diseases, the more we aggravate the very condition we design to improve. That an accelerated circulation may depend upon a deficiency of nervous energy, is quite apparent, when we reflect how often palpitation of the heart is produced in delicate and irritable females by causes which exhaust the nervous power of the system.

If we would be accurate in our diagnosis, we must rely on the character of the pulse, in a great degree, for that information which no other manifestations of disease can furnish. When we talk about inflammation and congestion in scarlatina, we should ask ourselves whether the pulse is any index, and if so, whether it is compressible or incompressible. Is it a pulse of inflammation, congestion, irritation, exhaustion, or sinking? and this, with other phenomena of the disease, will, in the majority of instances, (nay in almost all,) afford us positive knowledge. Suffer me here to consider the pulse as indicating,

I. Increased action with strength, which is the inflammatory pulse; and is incompressible, ranging from 80 to 120, and is hard, firm, full, and wiry.

II. Diminished action with strength, attending congestion; where the pulse is oppressed, strong, slow, and full.

III. Increased action without strength, constituting the irritative pulse; which is compressible, and ranges from 120 to 170. It is very frequent and weak, or very weak and less frequent.

IV. Diminished action without strength, indicating first, exhaustion, where the pulse is slow and weak; or secondly, the sinking state where it is small, frequent, irregular, and gaseous. These conditions are not of themselves to be viewed as certain signs on which we can assuredly rest; but in connection with the general history of disease, they are of vital importance.
Although this arrangement is not devoid of objections, it appears to me to be the nearest approach we can make towards a distinct conception of the condition of the system when doubts and difficulties surround us. As there have been numerous instances when the disease in its epidemical form has swept three or four children from a single family, while timely, and as was supposed, judicious measures were employed, we are justified in asking "why is it so?" Prof. Chapman of Philadelphia, states that he and his colleague Dr. Jackson, attended in a family where three died suddenly of scarlatina; but how to account for it he knew not.

The distinguished Dr. Graves of Dublin remarks, in speaking of an epidemic in 1834, "that many parents lost three of their children, some four; and in one instance, five very fine children were carried off by scarlatina. He describes one form of the disease in his 'clinical lectures,' as not merely producing fever with sore throat and headache, but such violent congestions of the brain, and determination to the head, as occasioned convulsions and apoplectic coma on the first and second day. A young woman of robust habit was attacked with convulsions on the second day, and died comatose on the third. In her, the scarlet eruption was extremely vivid and general; a fact I notice as a proof that the congestion of internal organs was not caused by any retrocession of the eruption. In truth, the worst cases had the most general and most intense cutaneous efflorescence. When this tendency to the head took place in so violent a manner at the very onset, the patient was seldom saved. Sometimes, however, very active measures of depletion, general and local, relieved the brain, and the case then went on favourably."

"In the second form," he says, "the symptoms were exceedingly violent and intense from the beginning, and the disease set in with the usual symptoms of severe exanthematous pyrexia, remarkable in the very commencement, for the violence of the accompanying headache and spinal pains, and for the great irritability of the stomach and bowels. Indeed, one of the very first symptoms in such persons was full eruption, with nausea, vomiting, and bowel complaint." He proceeds to account for it by saying, "its cause depended not on the stomach, but on the brain, which was irritated and congested. This second form-
was remarkable for the violent excitation manifested from the very beginning in the circulating system, and in the production of animal heat. I have never in any other disease witnessed so many cases of excessively rapid pulse. The acceleration of the pulse abated in all, when an evident improvement in the general condition took place. The temperature of the body was, from the first, considerable, and continued elevated until a very short period before death. The pulse was sharp, but not strong, and resembled the pulse of great irritation, rather than that of true inflammation."

"The most distressing symptom at the commencement of this form of scarlatina, was the sore throat. The fauces were violently inflamed, and deglutition consequently much impaired, while a general soreness was felt in the back of the head and neck; urgent headache was complained of by all, and from the second day, the eyes became suffused: great restlessness, anxiety, jactitation, moaning, and interrupted raving, soon made their appearance, and in many, sleep was banished, or utterly broken by startings and delirium before three or four days had elapsed. The skin was everywhere covered with a scarlet eruption; the surface of the tongue was, likewise, much affected with the same exanthematous redness, and soon became foul, and afterwards dry and parched, The sudden drying of the tongue on the fifth or sixth day, indicated, in this form, a rapid aggravation of the disease; and death, in several cases, was observed to follow this change in twenty-four hours, especially if attended by sudden acceleration of pulse, and increase of jactitation and delirium. In this form, the brain and nervous system seemed to be the parts that suffered most, and many became insensible for several hours before death; others had convulsions; when the patient survived the seventh day, there was a fair chance for recovery, but many, too many, died on the fourth, fifth, or sixth day."

"After I had witnessed a few examples of this form of scarlatina, I consulted with several of my friends and colleagues, and we determined to use the most active measures of depletion in the very first instance that occurred to us. A case was not long wanting. Dr. Marsh and I, were engaged in prescribing for some children labouring under the epidemic: when our at-
tention was directed to a fine boy, and hitherto perfectly healthy, who was, while we were paying our visit, attacked with the first symptoms of the complaint; we immediately resolved that as soon as the stage of rigour and collapse had passed, to visit him again, and act energetically if circumstances seemed to permit it. Accordingly we came again in the course of a few hours, and found reaction already established, attended with vomiting, purging, and headache. The sore throat too, was much complained of, and there was great tenderness of the external fauces. We ordered relays of leeches, eight at a time, to the neck, for the purpose of relieving both the throat and brain, and we administered James' powder and calomel internally. On the next day, the skin was burning in spite of a copious loss of blood from the leech-bites, the eruption vivid and already established, the pulse 140, and there had been little or no sleep. Relays of leeches were again ordered, and again persevered in until severe and lasting faintness was produced, and yet no impression seemed thereby made on the disease! No abatement of its virulence seemed to be the result; for the raving became more incessant on the second night, and on the third day, suffusion of the eye commenced, and the tongue became parched. Shaving of the head, and the most industrious application of cold to the scalp, and various other remedies were in vain applied; the pulse became weaker, the breathing quicker, the strength failed rapidly, raving and delirium gave place to insensibility and subsultus, and the patient died on the fifth day. In this case depletion was applied at once and most decidedly, for we blanched and weakened the boy by loss of blood, as far as it was possible to venture, and yet the disease was not in the least degree checked, nor the symptoms even mitigated."

"A fine boy, thirteen years of age, was attacked in the county of Wicklow, when he was placed under the care of a very judicious practitioner, who did not use either venesection or leeches, but relied chiefly on the exhibition of diaphoretics, particularly antimonials. The boy died on the seventh day, having suffered much from delirium, subsultus, want of sleep, &c. His brother, who was one year older, and a very strong boy, was seized with the disease in Dublin, and placed immediately under my care. I had the advantage of Mr. Rumley's assistance, and we deter-
minded to prevent the supervention of cerebral symptoms if it were possible to do it by means of antiphlogistic treatment. We failed, and our patient died on the sixth day. In short, this form of the disease, when the pulse without becoming strong, at once became extremely rapid, bore venesection badly, and required great caution even in the application of leeches; the nervous symptoms only appeared accelerated by the system of depletion, although the heat of the skin suggested its employment. The derangement of the brain and nerves in this form, depended on something more than the violence of the circulation, and originated in something altogether different from mere cerebral congestion or inflammation. What that something was, I cannot even conjecture; but it was probably the result of an intense poisoning of the system by the animal miasma of scarlet fever. Every tissue of the body seemed equally sickened, equally overwhelmed, and it is probable that the capillary circulation in every organ was simultaneously deranged. It was not gangrene of the throat which proved fatal, for in this form, it never occurred: it was not inflammation of any internal viscus, for such was not found on post-mortem examination of the fatal cases, but it was a general disease of every part."

Such are the observations of the philosophical and ingenious Dublin professor, which I have quoted at considerable length, because of the high source from which they emanate, and also from the accurate description he has given of those symptoms which have ever misled the profession to suppose, as he did, that the cerebral symptoms, accelerated pulse, and hot skin, with vivid efflorescence, depended either on inflammation or irritation and congestion of the brain. But when post-mortem examinations exhibit no structural lesions, he exclaims with that honesty and candour which characterizes his investigations, that there existed a "something" which produced such unmanageable symptoms in scarlatina; but what it was he could not even "conjecture," although he supposed it to be an "intense poisoning of the system by the animal miasma of scarlet fever." If to this condition we now add that this poison "which equally sickens, equally overwhelms every tissue," depresses the vital forces, and prostrates the nervous energies of the system, we solve the dark
problem which has hitherto bewildered the profession in the management of scarlatina.

With these premises, then, let us view scarlatina as the manifestation of a morbid state of the system produced by the introduction of the contagious poison into the circulation, agitating, shattering, or overwhelming the vital forces in a ratio with the severity of the morbid impression; or in proportion as its effects are modified by the constitutional powers of resistance.

In some cases, the amount of poison will be so small, or the resisting powers so strong, as to produce but a moderate agitation of the vital forces. This I conceive to be the scarlatina simplex of books: and in this modification the treatment should be passive. In others, the virus being more abundant, has made a more powerful impression, and shattered the vital forces; but has been succeeded by prompt yet asthenic reaction. Here the resisting powers have been energetic: and this constitutes the inflammatory form of authors. In this instance, the treatment should be first, to moderate inordinate reaction by unirritating means; and secondly, to sustain the shattered forces. Again we witness the accumulated poison producing its more baneful consequences, overwhelming and paralysing the vital forces; and the reaction is either imperfect or wanting. Here the poison has been intense and the resisting powers deficient. This modification, in its various phases, constitutes the congestive, congesto-inflammatory, and S. maligna of nosologists. Here the treatment should be restorative by the use of stimulants, gradually or freely administered, as circumstances will allow.

In carrying out these views with more perspicuity, I will again allude to the fact, that the direct effect of the poison of scarlatina is primarily to depress the vital manifestations of the organic system of nerves, supplying the blood-vessels. That, therefore, the capillary vessels and veins suffer secondarily in the chain of morbid action of the organic nervous system. That the reactive power of the blood-vessels is in subordination to the morbid impression made antecedently on the organic nervous system. And lastly, in proportion as the capillary vessels and veins are supplied with nervous influence, will be their capacity for reaction, and their ability to prevent local congestions, or
hyperemia of the skin and mucous membrane of the alimentary canal.

However, we are not to argue, because the circulation is accelerated, that, therefore, there is an augmented degree of nervous energy imparted, to excite and sustain this condition: for it should be remembered, that it may result from the communication of a deficient, as well as increased nervous influence. To illustrate this position still farther, let us take delirium— and we see it depending on totally opposite conditions of the nervous and vascular systems, while its real character often defies our most elaborate discrimination. A frequent pulse is no valid reason why bleeding should be resorted to; a hot skin affords no satisfactory evidence that antiphlogistics are necessary; nor is a suffused countenance always a sufficient plea for the abstraction of blood. The delirium of mania a potu depends on a defect of sensorial or nervous energy; and all those agents which depress the vital forces, aggravate that condition of the brain on which it depends; whereas in phrenitis the contrary is true, although we may suppose an accelerated pulse and hot skin as an index that there is sufficient nervous influence imparted; yet this condition of the vascular system may exist as a struggle to recover the equilibrium it has lost, by the impression antecedently made on the nervous system, and every artificial means employed to subdue this salutary effort of nature, is only effectual in exhausting her resources and rebuking her officious intruder. This condition I conceive to exist in scarlatina. But it may be said, that bleeding and antiphlogistic measures in the hands of some are found indispensable, and very frequently have been attended with beneficial consequences. All this I do not pretend to dispute, since it may be readily accounted for; although it should not be supposed that the forementioned measures are invariably necessary. For instance, when the vital forces of the system are vigorous, and the shock produced by scarlatina is moderate, and some imaginary or real symptoms of a formidable character supervene, and we combat them by energetic measures, are we to infer their correctness because our patient recovers. Perhaps in the next case similarly attacked, this very treatment may be accompanied with no favourable result and the patient dies. What now must be the inference? Again, delirium tremens has been cured by
bleeding, cupping, blistering, emetics, &c. In a first or second attack, the cure would be spontaneous (in most instances) if unmolested, and when interfered with, the constitution may be capable of resisting the effects of depletion, added to the disturbance it has already sustained by the abstraction of long accustomed alcoholic stimuli. But should the depletory practice be pursued in two or three subsequent attacks, the probability is the patient will die. In this manner, we may easily conjecture why some physicians have been successful in pursuing antiphlogistic treatment; and in a similar way, we may account for the diversity of practice employed in scarlatina. If reaction proves inordinate, I allow it must be opposed by those remedies which are calculated to check it. But I do maintain, that unless this reaction is sustained by a sthenic condition of the forces, our interference is unwarrantable, detrimental, and often, too often, fatal.

That scarlatina furnishes us with that species of asthenic reaction to which I refer, is more than probable. If a reaction be defective, those textures will be most congested whose conformation and laxity of cohesion admit of their blood-vessels being most easily distended, as the skin, mucous membranes, and tonsils, &c. Now as the congested states of these parts depend on a deficiency of tone in the vessels of the part, and as the blood-vessels are subordinate to the organic nervous system which is in an agitated, shattered, or overwhelmed condition; so the indication for treating the disease is to restore the balance of nervous energy first, and the capillaries will resume their normal action, and hyperemia or congestions will be dissipated. Should local hyperemia still continue to exist, they will then be more readily removed by topical means, and the system experience no inconvenience.

To confirm this theory, let us appeal to the practice most confidently resorted to in scarlatina. First, emetics have had their full trial and been most generally approved by all orders of prescribers. Is it asked in what manner they operate? I reply, by their mechanical effect in exciting the muscles to energetic action, thereby disgorging the sluggish and over-distended vessels and inducing healthy action.

Secondly: by thus agitating the whole muscular system, they
give an impetus to the blood, increase the quantity circulating in the brain, and rouse up the depressed nervous centre. Thirdly: they free the stomach and throat from any offensive and irritating matters. As to the treatment most successful for the sore throat after emetics have been premised, none rank higher than stimulating, or astringent gargles, and rubefacient liniments. They excite the local action of these relaxed and overloaded vessels, and restore the balance between the secreting and absorbing vessels. When however the vital forces are below par, the parts run into gangrene, and are only relieved by internal stimuli. Sometimes the topical abstraction of blood will aid materially in unloading the over-distended vessels, particularly when the pulse has considerable firmness, indicating, as it always does, that the vital forces have rallied: but even here the administration of stimuli internally, while we relieve the local difficulty, will much expedite the restoration of the parts.

The cold effusions of Currie were only applied for a short time, and acted as a tonic by constricting the vessels and disgorging the cutaneous capillaries which laboured under asthenic hyperemia. Bleedings, by some physicians, were employed early in the disease, and passive measures then allowed the patient time to recover from the effect, both of the depletion and poison. But when active treatment succeeded the bleedings, death, or a tedious recovery, generally ensued. The mild diaphoretic plan, "in the even tenour of its way," allowed the system to rise under its burden. The purgative system carried off less strength than the loss of blood did,—and therefore Dr. Hamilton found it more successful in his hands than any other remedy. The mineral acids and wines, promiscuously given, had then advocates, and perhaps have been the most successful of any remedies hitherto adopted. They preserved the system from that typhoid sinking, so proverbial in this disease, and aided the forces to recover their lost energy. Even the capsicum infusion has been administered internally with favourable results, and also used as a gargle by many practitioners. All these remedies were observed to do good, but how or why, we are not informed.

I apprehend that there is something more to be attended to in scarlatina than merely to prescribe for the sore throat, and ob-
serve the progress of the eruption, or combat the pyrexial action. There is an intense poisoning of the system, whose effect must be constantly and narrowly watched. There are many secondary symptoms which require that prompt and skillful treatment, which accurate views of the disease can only propose; and there are numerous sequelæ which it should be the earnest endeavour of the prescriber to obviate.

The most important of these secondary symptoms are: First, vomiting and purging without voiding any thing but the secretions of the stomach and bowels, even when food has been taken a few hours previous. It remains as a burden to oppress the digestive organs, which are so paralyzed by the constitutional shock of the poison, that all their efforts are of a spasmodic character and afford no relief. Such a state of the stomach is known often to exist where apoplexy or severe injuries follow a hearty meal, and a similar condition of the bowels is frequently observed in those collapsed states of the system where the normal action is paralyzed. The treatment here should be to excite the stomach into a healthy action, by an emetic if it is oppressed by food, in order that its spasmodic action shall cease. When not oppressed by its contents, but when vomiting and purging attends the cerebral symptoms of scarlatina, they cannot be checked by cretaceous, astringent, effervescing, and like remedies acting directly upon the stomach and bowels. Nor do they depend on the irritated and congested state of the brain, as Dr. Graves supposes, otherwise his treatment would have proved successful. But they have their origin in a deficiency of nervous energy, and require the treatment recommended for Scarlatina Encephalica.

Secondly — The difficult respiration so frequently witnessed in scarlatina, and for which emetics, V. S. leeches, and antimonials are generally prescribed, is dependent upon the enfeebled action of the heart, which fails to propel the blood onward with sufficient force, and allows it to accumulate in the lungs. This condition may exist at the commencement of a severe attack; but, generally, it will be found a secondary consequence, and be treated as an inflammation or congestion. I remember an instance of this kind, where a girl subjected to the fever was sitting up in a chair; dyspnœa and rattling came on, an emetic of
antimonial wine was prescribed to relieve her, and she died in one hour.

Sinapisms over the chest, and stimuli given internally, are our best remedies for an embarrassed respiration where the vital forces are defective.

Thirdly — Suppression and retention of urine for three or four days are not unfrequently met with in that variety which I denominate S. Encephalica. But as sensorial influence is restored by the persevering use of stimuli, this condition is removed.

Fourthly — The rheumatic pains and soreness, which we so often encounter in scarlatina, defying all our caution to avoid the effects of exposure, is a concomitant of debility, and only one species of the morbid sensibility so conspicuous in this disease. Warmth, gentle frictions, and stimulants are of general advantage in removing it.

Fifthly — Sudden tumefaction of the tonsils and throat, very often occur after the third or fourth day, or sometimes not until after the first week; although the sore throat which accompanied the pyrexia at its commencement was readily managed by ordinary rubefacients, fomentations, leeches, &c. Yet these same remedies will now often fail in effecting any benefit, and will generally have a tendency to produce swelling and suppuration in the parts — stimuli judiciously administered, and iodine embrocations, I have found the most successful plan for arresting and dissipating these swellings.

Sixthly — The aphthous sore mouth which occasionally supervenes, is best treated by gentle stimuli and abstinence from every thing irritating. The precip. carb. ferri, and wine whey, have, in my hands, proved a very efficient remedy. Thus it will be perceived that these secondary symptoms may arise in scarlatina, being occasioned by the vitiated condition of the blood, and a deficiency of sensorial influence.

The dropsies and ulcerations which follow scarlatina have hitherto been viewed as inflammatory, while perhaps three-fourths of the cases are occasioned by a relaxed and over-distended state of the capillaries, constituting a general hyperemia, which gives rise to obstructions, mechanical transudation, and inactivity of the absorbents.

Now if we excite the atonic and over-distended vascular sys-
tem, we diminish the liability to permanent irritation, ulceration, or the formation of serous effusion. As these consequences are almost invariably observed in the cellular tissues and mucous surfaces, where the cohesion is lax, we may justly infer that they are the result of a relaxed and over-distended state of the vascular system. Were it otherwise we would find effusions into the cavities, which is very seldom the case. If these sentiments are correct, the corresponding treatment will be obvious to all.

But let us return to the symptoms and treatment of those cases quoted from Prof. Graves' Clinical Lectures, and compare his theory with the actual results of his experience. He described two forms of attack as the disease occurred in Dublin, in 1834. In the first, he says "the disease produced not merely fever, but such violent congestions of the brain, and determinations to the head, as occasioned convulsions and apoplectic coma on the first and second days." This form, I think, may be emphatically called Scarlatina Encephalica, and doubtless depended not on actual determination of blood to the head, but on a deficiency of nervous energy. The "Apoplectic Coma" was occasioned by the sensorium commune — the brain, labouring at the same time under the overwhelming and paralysing influence of the morbid poison. While the convulsions were indicative that the sensorial influence was less intensely prostrated, but only shattered, and still capable of struggling against the morbid impression of the miasma upon the brain.

In the second form, he says "the disease set in with the usual symptoms of severe exanthematous pyrexia, remarkable in the very commencement for the violence of the accompanying headache and spinal pains; and for the great irritability of the stomach and bowels; nausea, vomiting, and bowel complaint were among the first symptoms." — "Its cause depended not in the stomach," he says, "but in the brain, which was irritated and congested." This condition of the brain, (in the second form,) which is supposed to be irritated and congested, I would also pronounce Scarlatina Encephalica, differing from the first only in this particular, viz: that the powers of resistance were more manifest, and consequently there was a great, although defective effort for reaction. By the characteristics of this second form, I think the view I have expressed in relation to the heat of skin and
acceleration of the pulse has ample confirmation. Dr. Graves says "this form was remarkable for the violent excitation manifested from the very beginning, in the circulating system, and in the production of animal heat. He further says, "he has never in any other disease witnessed so many cases of excessively rapid pulse. This acceleration abated in all, when an evident improvement in the general condition took place." In other words this accelerated pulse and intense animal heat, became less evident as the vital forces recovered from their overwhelming shock.

"The temperature of the body was, from the first, considerable, and continued elevated until a very short period before death." Here an "elevated temperature" is sustained until a very short period before death: and when we recollect that this "form of the disease was not in the least degree checked, nor the symptoms even mitigated by the most decided depletion," I think we are justifiable in the deduction that it depended on a loss of innervation. The Doctor proceeds to state, "that after having administered James' powder and calomel, and in spite of a copious loss of blood by leeches, the skin was burning hot on the next day." Had it depended on an increased action with strength, this heat would have subsided under depletion, and the case would have recovered, in all probability. But as it was, no impression was made on the disease, although severe and lasting faintness was produced by "relays of leeches." If after having blanched and weakened the patient by the loss of blood as far as it was possible to venture, the pulse becomes weaker, the skin burning, the breathing quicker, the delirium gives place to insensibility, and the case dies, I think it needs no other argument than the details of this instance to show, that the theory of innervation will account for the unmitigated, yes, the increasing symptoms of the disease under the depressing plan of treating it.

From the history of the cases reported by Dr. Graves, we find that "cerebral symptoms could not be prevented," much less removed "by active antiphlogistic treatment." Also that "the violent excitation" of the circulating system, and the production of animal heat, were not in subordination to, but aggravated by, active depletion, in proportion as the system became weaker — and lastly, that the symptoms continued, or became more formidable,
until a very short period before death. One would suppose that a man of his ingenuity and practical advantages, would have abandoned the practice he pursued, and have resorted to those means best calculated to have counteracted the overwhelming effects of the miasma of scarlet fever. Yet he refrained from giving stimuli to "prevent the supervention of cerebral symptoms," when the lancet, under every advantage, failed to answer his expectations.

In the possession of such numerous facts in relation to scarlatina, I think we are justifiable in adopting the following conclusions. That in those instances where inflammation or congestion have been so strongly suspected, they did not exist, and that it was only a diminished nervous energy, instead of vascular action with strength, which was the fruitful cause of so many unmanageable symptoms. And that, if we will classify the cerebral symptoms, accompanied by a frequent compressible pulse, and hot skin, under the form of scarlatina encephalica; and let the treatment be based upon the theory proposed, we will divest scarlatina of its most appalling features, and humanity of a ruthless foe.

Since my paper on scarlatina encephalica was published, I have had numerous opportunities of observing a satisfactory demonstration as to the correctness of its principles. I have been informed by competent authority, that in one family five children died within a few days of each other, under the old method of treating the disease. In another house, three died in one week; and out of eight attacked in one block, five died in as many days. But I need not multiply examples of a similar character; nor do I wish to be understood as saying that all these laboured under cerebral symptoms, although the majority unquestionably did. But I do wish to impress upon the reader, that where the brain does not suffer prominently, the disease will not admit of the active and irritating measures so constantly made use of in attempting to subdue it. The remedies so abundantly used, doubtless produce an irritation of their own, which, when superadded to that occasioned by the prostrating poison of scarlatina, furnish us with symptoms enough! These symptoms, the product of injudicious treatment and officiousness, call forth a fresh volley from the materia medica; the case becomes more hope-
less, and lingers or dies. Rather than irritate the system by repeated doses, I would say with Southwood Smith — bleed or leech, when circumstances require, and then the subsequent measures cannot be too mild.

But after all that may be said on the treatment of scarlatina, we must fully appreciate the circumstances under which it occurs. The pulse must be our principal reliance, and by its guidance, we may, like the skilful mariner, safely conduct our vessel through the storm, over which human efficiency had no preventive control.

A few years since, my friend Dr. J. W. Francis of this city, furnished Dr. Doane, now health-officer of the port of New-York, with some remarks on scarlatina, which he appended to his edition of "Good's Study of Medicine." I allude to it here, because I consider it an article richly furnished with practical suggestions, and would recommend its attentive perusal to all who are interested in the general management of the disease. In speaking of the treatment of scarlatina, he says "it must be regulated by many concurring circumstances: in its simplest form it is almost supererogation to interpose art where nature is so judicious in her operations; in other cases, mild aperients, sudorifics, simplicity in diet, and attention to cleanliness, may often suffice." As the article is so ably written, and the subject so fully, yet briefly discussed, I should do injustice to the essay and its talented author, were I contented with a limited extract, without reminding the reader that his moments will be more profitably employed by referring to the original in the work alluded to.

Since the publication of the preceding number of this Journal, I have successfully prescribed for about 30 cases of this complaint, many of which were of the severest character. And since the method of treatment was in strict accordance with the principles there advanced, I will subjoin a few as practical illustrations.

Case I. — A girl, six years old, was seized with the fever. I was called to her on the second day. She had a full eruption, and inordinate heat of the skin. Her throat was extensively ulcerated, very fetid, and deglutition extremely painful. She was delirious a great part of the time. Pulse 150, compressible and
small. Lassitude was extreme, and she fainted when raised from the pillow. Tongue dry on the tip, coated on the posterior part, and sordes covered the teeth and lips. Prescrip. Solut. nit. argent., x grs. to 3i of water; to pencil the tonsils every four hours. Ammoniacal linim. to throat, sinapsisms to feet, 6 oz. of Madeira wine made into whey, to be taken during the day, and a teaspoonful of magnesia the next morning. This treatment was continued for three days, when the ulcer healed and the patient was sitting up. Her bowels were merely regulated with magnesia. I now recommended more nutritious diet, and in five days from my first visit she was walking about the room, perfectly well, but weak. She had no relapse, nor any of the sequelæ incident to scarlatina.

Case II.—A boy, ten months old, and very fleshy, had what the profession denominate inflammatory scarlatina. Had some cough; a full and uniform eruption, tonsils enlarged, pulse very frequent, skin hot and dry, eyes suffused, drowsiness and starting in his sleep. Prescription: Emetic of ipecac., and one teaspoonful of magnesia afterward. Ammon. linim. to throat, and pediluv. and sinapsisms. I visited him twice daily, for the first eight days — gave him no more medicine, and watched the case with much anxiety. After the second day, he took a teaspoonful of brandy in arrowroot, three times in 24 hours, which quieted his restlessness, prevented his startings, and induced a moisture on his skin. On the fifth day, his throat swelled very much, for which I used the tinct. iod. 3iss, tinct. Saponis Linim. lapon. camph. 3i. Mix. To bathe the throat every four hours. His bowels were inclined to be relaxed, and the stools were rather liquid. The brandy and arrowroot were continued. Starch enemas were daily administered, and applications of camphorated spirits to the abdomen enabled us to suppress any unnecessary evacuations. The cough and slight bronchial rattle which accompanied it, were met by an infusion of seneka polyg. and demulcents. On the ninth day, he was so much improved that I discontinued my visits.

Case III.—A boy, aged five years, had been sick for two days, when I was called to visit him. His younger brother, who had been actively treated, laid a corpse in the adjoining room, having
just expired with scarlatina. He presented the same symptoms, and alarmed his parents very much. I found him covered with the efflorescence; skin hot, pulse 140 and weak, tongue dry, eyes glassy, throat swelled, and prostration extreme. A laxative enema was immediately ordered; sinapisms to feet, ammon. linim. to throat, and wine whey for drink. Continued the whey for four days, when he sat up. He took one dose of magnesia during this time. He now omitted the wine, took brandy in arrowroot, and was allowed beef tea, soda biscuits, &c. He continued to improve; I ceased to attend on the sixth day, and he entirely recovered.

Case IV.—A girl, aged two years and six months, was attacked with the fever; vomited and purged, and was delirious the first night. I was called to her on the second day, and found her skin hot, pulse frequent and soft, she was entirely conscious, eruption was making its appearance, throat was slightly inflamed. Ordered ammon. linim. to it, toast-water as drink, with sinapisms over epigast. and starch enema. On the third day, she took a small dose of magnesia, and drank arrowroot. She recovered in a few days; no other remedies being used than those now mentioned.

Case V.—A boy aged seven years, was labouring under the fever. I was called to him on the first day of the eruption. He was very delirious at night; skin hot — eyes suffused — pulse 155 and weak — tonsils enlarged and ulcerated — tongue dry and glazed on the tip, and papillated on the posterior parts — bowels had been opened the day previous by senna. This case was put on the use of wine whey at once. He took a gill of wine thus prepared, daily, for one week, together with arrowroot, chicken-broth, and barley-water; linim. ammon. to throat and tonsils pencilled with solut. of nit. argenti. On the fifth day, he left his bed and was much exposed; a troublesome cough and considerable rattle ensued; a dose of Ol. Ricini was now prescribed; sinapisms over the throat, and infusion of seneka with demulcents; he was about the room on the ninth day. About this time there was very extensive desquamation. I now discontinued my attendance. He soon left the house. The weather
was excessively cold, and he had a severe relapse. The glands of his throat swelled to an enormous size; deglutition was almost entirely prevented. He had a high fever, but the pulse was weak. An emetic and dose of oil were prescribed. The next day the fever was increasing; he became delirious and the tumefaction was augmented; tinct. iod. and linim. saponis was prescribed to bathe his throat, and wine whey was freely administered. In three days, the swelling had subsided and he left his bed. The sulphate of quinine was now given. He was soon abroad again, and remained well.

Case VI. — Was a boy four years old, to whom I was called after he had been sick four days. He presented the appearance of a person conscious of all around, but was unable to speak. I found him sinking. His pulse was 145 and weak. His breathing was laboured, and skin purple. Wine whey was ordered immediately, and I remained to see it administered. It being prepared, his head was slightly elevated, while he was requested to drink. He raised his hand to take the vessel, but expired before it reached his mouth.

Cases VII, VIII, IX. — Were children in the same family where this sudden death occurred. They had each a dose of oil given in the commencement of our treatment, and then put under the wine whey. In four or five days, they were all enabled to leave their beds, and had no unpleasant symptoms afterwards. When a few days had elapsed, I stopped to see how they were, and found them as robust as though they had not been sick. One of these had the inflammatory form; one the simple; and the other was more malignant. The throats of each were considerably swelled; but the usual remedies dissipated all difficulties.

Case X. — Was a girl three years and six months old, who was suddenly seized with scarlatina. The fever was high. Efflorescence perfect and vivid. The mucous surface of the mouth was morbidly red; eyes were suffused; pulse frequent and weak; slight delirium; bowels were rather inclined to frequent evacuations, and vomiting followed the introduction of any thing into the stomach; the tonsils were enlarged and red, and the tongue was furred and white. On the fifth day, she relapsed
from exposure. The tonsils were suddenly enlarged, attended with a cough, great soreness of flesh, spinal pains, &c. Restlessness and irritability of temper were extreme. This case was treated by effervescing mixtures, and small doses of soda and ipecac, to allay vomiting and moderate the pyrexia in the first instance; afterwards, dulc. spts. of nitre, and ipecac syr. were given until the third day had passed, when the febrile excitement yielded to gentle perspiration. By ordinary measures the throat was readily managed, and notwithstanding its sudden aggravation on the fifth day, she was sitting up to take her meals at the table, and amused herself about the room, during the third week. My attendance was now considered no longer necessary. While engaged in her sportive pleasures she was violently attacked with great prostration and spinal pain. Her recovery was from this moment doubtful, for she remained in a state of such extreme lassitude and severe distress, as to defy the best directed therapeutic measures we could bring to bear. Laxatives, diaphoretics, Dover pulv. pediluvium, ablutions with warm whiskey, and camphorated spts. gave no relief. Her skin was burning hot; her pulse frequent, and her mind was irritable beyond expression. Her strength began to fail rapidly. Delirium, stupor, moanings, and vomiting, were now giving an alarming aspect to the case. Her pulse became more fluttering, and the temperature of the surface increased. Wine whey was now given, with the impression that she must soon sink under her embarrassments, unless sustained. Dr. Francis was now solicited to visit the case with me in consultation. He perfectly coincided in giving stimulants, to prevent, if possible, that typhoid state from which we would probably be unable to reclaim her. So greatly had this case already declined, that six ounces of wine in 24 hours, continued for two days, produced no sensible effect. Petechiae appeared; the patient grew worse and was rapidly sinking. When aroused, she remained irritable; and except when disturbed, she was either delirious or somnolent. The quantity was increased, hoping to restore her flagging energies, and produce a forcible impression on the nervous system. Accordingly three bottles of the best Madeira wine, containing a pint each, were given in 42 hours, with the effect of rallying the prostrated forces of the system! After this period the quantity
was gradually diminished, and beef-tea was finally substituted. She now convalesced so rapidly as to be sitting up in a few days, free from the embarrassments of scarlatina save debility, which required time for its removal. This case shows how cautious we should be in allowing our patient to indulge in any thing which exhausts the system; and also, to what extent we must push our stimuli in certain instances, before it produces any impression upon the exhausted sensorium.

Case XI. — Was a boy aged three years, delicate, and labouring under scarlatina. He was placed immediately upon the use of wine whey and milk punch. His mouth and throat were sore; pulse very frequent and weak; skin hot; his bowels had been evacuated. He was very much emaciated before he was taken sick. The eruption was distinct, and desquamation very free. The stimulants used, carried him through the pyrexial stage of scarlatina; but after this, the throat and tonsils swelled again, and aphthæ appeared upon the tongue and cheeks. Milk punch and quinine were continued for a few days, as he was extremely languid. But no impression was made upon the throat and aphthæ until tinct. iodine and soap liniment were rubbed on the former, and carb. of iron was given internally. Under this course of treatment he soon entirely recovered, and had no relapse.

One word now in reference to the stimuli, which ought to be administered in scarlatina. Dr. Eliotson and others have strongly recommended the carb. ammon. when the cases assumed a typhoid form. Capsicum, opium, camphor and serpentaria, have been prescribed by others. Bark and mineral acids, although more properly considered as tonics, have frequently been exhibited to produce a forcible impression on the system. Alcoholic stimulants, including wine, brandy, gin, and a farago of cordials have been likewise given in extreme cases. Now in prescribing stimuli in this disease, we are especially anxious to excite and sustain the energies of the economy while we avoid producing any irritation. Carb. ammon. is undoubtedly good to excite it, but it does no more; and if that excitement which it produces can only be sustained by repeating the article in increased doses, we are in danger of producing irritation, which will of itself coun-
teract all the benefit otherwise to be derived from it. Besides, the ammonia only excites, while we find it necessary to sustain that excitement by something more substantial than the volatile carbonate. The same may be said of camphor. I am aware that opium may prove stimulant in small doses, but in scarlatina I am disposed to consider its effects as noxious. It paralyses the functions, and produces a more unpleasant train of symptoms than any other remedy with which I am acquainted. When given to allay pain, or to answer some other indication, than merely to quiet the morbid excitement of scarlatina, its use is undoubtedly judicious and beneficial. I consider capsicum too irritating, except in the gangrenous throat, and then its topical application would be quite sufficient. Serpentaria, quinia, and the mineral acids, are too slow in their operation if the case requires a prompt impression. Spirituous stimuli I have found free from these objections; by their diffusible impression they act instanter upon the nervous system, restore the defective energies of the economy, and by giving a healthy impulse to the shattered functions, prevent many of the evils otherwise the concomitants of scarlatina. Of this class, good Madeira or Teneriffe wine made into whey, in my hands, has proved more efficacious and less objectionable than any other. I am in the habit of preparing it by boiling two parts of milk, and when ebullition takes place, adding one part of wine; then straining it, and mixing a small quantity of white sugar to make it palatable. Some use a greater proportion of milk, but in concentrating the whey, children will take it quite as readily; and where they refuse, and the case requires stimulants, we are not so likely to be defeated: and if it be thought advisable to dilute it, this may be done at any time by adding arrowroot, barley-water, &c. The addition of ammonia enhances its stimulating properties, and in very malignant cases had better be employed in conjunction. But wine whey prepared as above mentioned, constitutes the simplest, least irritating, most accessible, efficacious, and manageable remedy I have ever used as a stimulus. Brandy and gin, united to warm water, arrowroot, gruel, and the like, may be administered with equally good effect where their influence is required. But since they are more heating, they may be objectionable in critical cases, although I have not frequently met with such instances.
The time and quantity, however, are of more importance than the selection of the article. To prescribe stimulants in all cases would surely be going counter to the sober dictates of common sense; and to avoid them under all circumstances would be to manifest but little practical sagacity. The proper time of their employment can only be determined by him who investigates the case. To defer them until the vital spark is leaving its tenement would only mortify and chagrin the prescriber, and to commence too early would be equally reprehensible. The quantity must be regulated by the demand for its exhibition and the effect produced. This principle I think may be urged with much propriety in many other diseases, and particularly those which are denominated congestive and irritative. The peculiarity of the seasons so modify the effects of disease upon the animal economy, and the powers of resistance are in such opposite conditions from contingent circumstances, that a stern deference must be paid to the character of each, and our practice based upon the condition of things as they exist.

One remark in relation to the state of health previous to scarlet fever. Many children I find are labouring under some acute or chronic affection of the head, thorax, or abdomen, before they are seized with the fever; and consequently the symptoms are rendered more formidable and embarrassing. Complications are thus produced, which are calculated to deceive the physician, and require the precaution of avoiding Scylla, while he shuns Charybdis. When any local inflammation exists at the commencement of the pyrexia, it is best combated by local remedies, except where the reaction is so strong as to admit of venesection. The most frequent of these inflammations are located in the thorax. This perhaps may be owing to the circumstance that scarlet fever prevails generally at those seasons of the year when the pulmonary organs are first to suffer with disease. The mucous membrane of the stomach and bowels has generally been supposed to be highly irritated and congested, if not actually inflamed; but perhaps this condition of things in the majority of instances has been produced by the administration of emetics, purgatives, and those diaphoretics which irritate the digestive apparatus. Here again, a secondary irritation or inflammation may be formed, not by the disease, but by harsh mea-
ures. Without controversy, such a state is frequently occasioned in this manner, and should excite our most rigid attention.

Notwithstanding the multifarious opinions of individuals in reference to the treatment most proper in scarlatina, I opine that it cannot be difficult for the unbiased mind to determine what course he ought to pursue, provided he only faithfully regards the history of the disease and the existing condition of the pulse as his criterion. If these considerations are constantly and suitably attended to, it matters but little what the seasons are, what the state of the vital forces, or what the severity of the attack. The principles to which I have just referred will indicate what plan of treatment is best calculated to succeed.

I am not ignorant of the fact that stimulants and tonics have been hitherto adopted in the treatment of scarlatina by the medical profession, and am free to acknowledge their superior qualifications for passing verdict upon their respective usefulness. But I am not aware that they have been employed under the circumstances for which this, and my former essay, contended for; nor have I been enabled to discover in the writings of our most competent men any satisfactory solution of the symptoms and character of scarlet fever. Therefore I have submitted my humble efforts for professional consideration; and if they shall be instrumental in diminishing the mortality of scarlatina, my highest gratification will be promoted, and my imperfect attempt abundantly recompensed.


The promulgation of a new system of medical investigation, claiming to be more strictly in accordance with the true spirit of inductive philosophy than the methods hitherto pursued, must, if it be of sufficient importance to excite any attention, create not a small interest in those whose feelings are enlisted in the advancement of science.

Compared with the amount of laborious research which has
been bestowed upon the several departments of medical investigation, how few are the known principles and laws which govern vital, morbid, and therapeutic operations! Contrast, in this respect, medicine with chemistry, astronomy, and physics! Whence this difference? It certainly is not attributable to a deficiency of active zeal, patient industry, sagacious or philosophical acumen, in those who have been devoted to medical investigations. It probably arises from the numerous, great, and peculiar difficulties inherent in the subjects and the investigations themselves. These are of such a character, that the true mode of the application of the inductive philosophy to this department of science, has not been pointed out satisfactorily to all minds, or, at least, has not been declared in the magnitude and importance of the results of any particular method.

To say that this field of science has experienced none of the fertilizing influence of the Baconian philosophy, would betray a great ignorance of medical history. If we have not by means of this philosophy learned the true road to truth, it has taught us to avoid a thousand paths of error. Nor has its influence been wholly of a negative character. It will not be denied that the science of medicine has been progressive, when we consider the many improvements and discoveries in exploration and examination, and the great accumulation of observations made on the living and the dead body. These have already led to important facts, and valuable practical results. Still, as an inductive science, when compared with the other natural sciences, it is infancy contrasted with manhood. Individuals are not agreed concerning the principles to which many of the more striking phenomena are to be referred. Hence, they differ, necessarily, in the methods of induction; since similar methods, properly pursued, would, inevitably, lead to the same results. This, as it has been remarked, is to be attributed to the peculiar character of medical investigations, and to the nature, variety, and extent of the subjects to be investigated.

If this be a correct statement, it follows, that the solution of the following question is a grand desideratum, viz.:—what is the true method of prosecuting our study?

On assuming that the Baconian philosophy, properly applied, is fully adequate to the development of truth in all departments
of knowledge, in what consists the proper mode of the application of the Baconian philosophy to these subjects?

It is probable that these inquiries could not at the present day be answered by any individual to the satisfaction of every mind. But, if any one were to apply to them the energies of a powerful intellect, with feelings not narrowed by prejudice in favour of any particular species of investigation — a mind unbiased by any of the doctrines of the day, and enriched with a profound acquaintance with the principles of this philosophy in its application to the other sciences, and the circumstances which modify its application to this department of investigation — such an individual would have a field sufficiently vast, together with incentives sufficiently great in the importance of the service which it may be possible to render to the science.

The numerical system, as it is called, purports to be a truly inductive method of investigation. The acknowledged abilities of its author, his great industry and integrity of character, the high standing of those who have cordially embraced and lauded this method, and, to these considerations may be added, the facts which are declared as its results, all recommend the system to our examination. And a little examination of it as illustrated in the works of Louis, will not fail to convince a reflecting mind that it is deserving of profound attention.

Our purpose is to offer a few remarks upon this system with reference to the following inquiries: — To what extent is it capable of being applied to medical subjects? How far will its results be of practical value? And what is the amount of influence which it is calculated to exert upon medical science?

The results of its application already attained, although not insignificant, are small in comparison with what are to follow, according to the expectations of its advocates, when it has been longer pursued, and, by its general adoption, physicians of all countries co-operate with each other in carrying out and extending its principles.

Hence, in endeavouring to satisfy ourselves as to the propriety of giving our confidence to these anticipations, although we should not omit the consideration of what it has already accomplished, we must form our opinions, principally, from a consideration of the
system viewed abstractedly, as a method of induction applicable to medical science.

But I would wish it to be understood, that I do not presume to have answered these inquiries fully and satisfactorily even to my own mind, and that it is far from my object to undertake a philosophical disquisition on the nature and scope of this system. I design only to express some of the ideas which have occurred to me in my reflections upon it; and should my discursive remarks happen to elicit discussion from those qualified to elucidate the subject, I shall have reason to regard them as having fulfilled a purpose sufficiently useful.

In reflecting upon this mode of investigation, the first inquiry which arises is, in what consists its difference from those already known and established. Has Louis discovered a system essentially different from any hitherto pursued? We think not. It appears to us that the novelty of his system consists in the extension of a mode which has always influenced more or less medical opinions, and in giving to it a greater degree of completeness and precision.

Practical physicians have, in every age, arrived at certain rules in the prognosis and therapeutics of diseases, by means of the same species of comparison, excepting that it has not been performed in this systematic, rigid, and exact manner. In forming, for example, the prognosis of a particular case, at the present day, the majority of physicians, assuredly, rely more upon the general result of their observations of cases resembling more or less nearly the one under consideration, than upon inferences a priori, (as this term is applied by Louis,) from their knowledge of anatomy and physiology, and their general principles of pathology. It is a fact daily observable, that practitioners, who, from a deficiency of anatomical and physiological knowledge, are able to reason profoundly and correctly concerning the character, location, and tendencies of diseases, nevertheless frequently possess a much greater accuracy of prognosis, and a better judgment of the relative value of therapeutic agents, than those who can apply a greater amount of scientific acquisitions, but whose observations have been limited. What young practitioner, who in certain cases of doubt and perplexity, has submitted with pleasure and confidence to the guidance of an older
and more experienced member of the profession, whose speculative notions would perhaps amuse him from their manifest absurdity, has not felt this statement to be true.

If, in the common mind, too much importance is attached to mere experience in the physician, as this term is usually understood, it is by no means an unmeaning term. It enables those whose pathological views are crude and imperfect, to exhibit, on some occasions, a sagacity in predicting the progress of disease, and the effects of remedies, which is truly surprising.

These qualifications are the results of numerical comparisons, although not involving data, which have been recorded, and actual processes with figures.

The value of this experience will depend on the capacity of the individual for observation and induction, together with the number of observations and the degree of attention bestowed on them. It will, of course, be enhanced to an extent corresponding with the degree of anatomical and physiological knowledge.

If this view of the results of what is commonly denominated experience in medicine, be correct, it furnishes an explanation of the fact, that physicians in different periods, and those also who at the same period maintain doctrines entirely opposite, concerning the character of certain diseases, may, nevertheless, agree as to important principles of therapeutics, with reference to the same diseases.

If there exists this identity of the numerical method, in principle, with that by which practical observers have always arrived, more or less, at important facts relating to the history and treatment of diseases, it is an important consideration in an inquiry concerning the value of this method.

That its novelty consists in extending, systematizing, and perfecting a principle of investigation, which has, to a certain extent, ever been in operation, and the value of which has always been appreciated, does not render it less calculated to inspire confidence in its excellence, than if it were entirely of new creation or discovery.

It might be conceived that the latter might be more agreeable to personal ambition, but we have reason to believe, that the predominant motive in the breast of Louis is the love of truth.

It has frequently been made a subject of regret, that those
who, by long observation of disease, have acquired a practical skill, truly valuable, should do so little toward extending its benefits to others, and toward the advancement of the science. Their active duties, generally, are so engrossing, as to leave little or no leisure for literary occupations; and, when it has been attempted, being unaccustomed to represent clearly before their own minds the principles upon which they act, they fail, as a matter of course, to make them apprehended by others. In this respect, they resemble the skilful artist, who guides his pencil by the principles of his art to his own mind, unerring in their application, but which he cannot embody in rules for others.*

Now it appears to us, that it is the peculiar merit of the numerical method to substitute in the place of this undefined, untransferrable experience, a systematic pursuit, extending its application, increasing its value by rendering its results definite and exact, and promoting the advancement of the science by rendering both the results and the data accessible to every member of the profession.

In the first place, it possesses the advantages of mathematical precision. If we were to inquire of a practical physician concerning the results of his experience as to any therapeutic agent in a certain disease, he would in reply, perhaps, give us an account of a number of cases which were prominent in his recollection, where it seemed to produce good or bad effects; or, he would say, in general terms, that he had more frequently found it beneficial, or injurious. We should attribute to his reply an importance, greater or less, according to our knowledge and estimation of the individual. But how much more satisfactory would it be, if he could present to our view the exact number of cases in which he had employed this agent, the circumstances connected with the individual cases, and the results which follow from an accurate enumeration and comparison of them. We should then know, precisely, what value to give to the inferences he had obtained; and the value of these inferences would not be affected by any circumstances connected with the individual, excepting his capacity for observation and his integrity of character.

* Vide Discourses by Sir Joshua Reynolds.
In the first instance, how many things there are to render the information we receive nugatory and delusive! When we consider the circumstances under which medical observations are generally made—the attention distracted by a variety of cases, and with intervals, greater or less, between the occurrence of analogous diseases; how exposed must the inductions necessarily be to error from the imperfections of memory, and how many and great the liabilities from various influences to perversion of the judgment in forming comparisons!

Thus is it, that different individuals, on many points, entertain the most conflicting opinions, each confident of truth from "experience!" Where are the data by which one is to decide between such opposing conclusions? There is nothing positive and exact. They have, therefore, really no more importance than may be attached to the authority of those who have passed them. Hence it is, that in the degree of confidence which we give to medical opinions, we are apt to fall into one of two extremes. First: an undue skepticism with regard to all opinions. Second: an equally undue attachment to the opinions of those whose abilities we best know and respect.

On the other hand, the numerical system is, certainly, in a great measure, free from these imperfections and liabilities to error. The data are before us, carefully recorded and preserved. Being satisfied that these are worthy of confidence, it is in our power, in order to convince ourselves of the correctness of the results, to verify the inductive process. In other words, whatever facts are developed, are demonstrable. They are not merely opinions. They can derive no increase of force from individual authority. They belong not to individuals, but to science.

In the second place, the "numerical system" possesses a much greater capability of extension, and more comprehensiveness than belong to mere "experience."

If it be impossible by mere "experience," without recorded data, to attain to anything like mathematical accuracy in points of the most striking and the simplest character, how much more impossible to store in the memory all the varied details of cases so as to associate them and compare them in every particular!

To Louis does not belong, by any means, the sole merit of
having enforced the importance of preserving minute and faithful records of disease, and of carefully inspecting bodies after death; but he has been the first to show how circumstances, which, considered with reference to individual cases only, would be deemed accidental, contribute, in the comparison of a great number of cases, to very important results.

The induction of important principles from data, which, when viewed disconnectedly, appear unimportant, constitutes one of the most striking features of this method. Thus it gives an interest, and furnishes inducements for the study of minute details, which did not before exist — for it teaches us the mode of rendering them useful to science. The works of Louis afford illustrations of the justness of these remarks.

It is, in the third place, an important recommendation of this method, that the facts which by it are discovered, can be made common, be transmitted, and accumulated from age to age, constantly preserving their exact, demonstrable character. On this point we may quote the words of Louis.

"We are constantly told of the 'experience of ages' in medicine; but how can this experience be ever embodied, if those who write, instead of saying, I have seen so many and so many times, merely say, I have often seen or seldom seen? By determinate observations the experience of one man may be added to that of another man. But how can the experience of one who says more or less, rarely or frequently, be added to another, who, in like manner, says, more or less, rarely or frequently? Suppose thousands of authors to have proceeded in this manner, it is as if there had been none at all. If then there is a mean of embodying the experience of ages, it is the numerical method."

These are some of the most prominent points in which the excellence of the numerical method seems apparent. Our limits will not allow us to dwell longer upon them, or consider others which might be added to them.

From the considerations which have been presented, in conjunction with those which will suggest themselves to the reflecting physician, our readers will, probably, unite in the conviction, that between this method, and what has hitherto been designated

*Treatise on Bloodletting.
"experience" in medicine, we may with some qualification adopt the language of Louis: "the difference of truth and error; of a thing clear and truly scientific on one hand, and of something vague and almost worthless on the other."

In these remarks, the "numerical method" has been considered as compared with, or, rather, as taking the place of, what has been called "experience" in medicine. That science will derive from its application much advantage, the circumstances which give it its superiority sufficiently indicate. But, is it going to produce a revolution which will change entirely the aspect of medicine? Are the principles of pathology and therapeutics hereafter to be determined with mathematical precision, and their application reduced to rules possessing the "inflexibility of arithmetic?" In short, is medicine, through its instrumentality, destined to become an exact science?

It would seem that the enthusiasm of some of the ardent disciples of Louis embraces all these aims. But we do not, much as we esteem its many advantages, entertain such expectations. As a method of investigation, we do not regard it as capable of superseding other modes of research, but, as one which is to be pursued in conjunction with other methods. We conceive it to be too limited in its character and scope to constitute more than a collateral instrument in the prosecution of the science.

We do not perceive in what manner this new method is calculated to affect our estimation of, or confidence in, other means, by which, as has been hitherto believed, medicine is to become more and more a rational art. Physicians will speculate and reason concerning vital actions, and their relations with morbid agents; and they will be influenced in the treatment of disease, by the conclusions to which they arrive from their speculations and reasonings. It cannot, and, in our view, should not be otherwise. We do not mean to imply, that abstract and merely speculative opinions are not to be deprecated in medicine. We mean to say, that, to us, it appears improbable, and indeed impossible, for the physician not to form for himself, or to adopt, certain principles founded on physiological and pathological reasonings, which will preside over his therapeutic measures; and
that we are to look for principles by which medicine is to become a truly rational art, (if it is ever to become such,) not to the numerical system alone, or chiefly, but to deductions from physiology and pathology, when these sciences shall have attained, comparatively, to a state of perfection. Until this be attained, there must be different doctrines in medicine.

It must be confessed that when we take into view the history of medicine, and, also, consider the diversity of doctrines which divide physicians at the present day, the prospect of a science based upon clear, demonstrative, permanent principles, seems far distant. But, on the other hand, when we remember, that it is only within a few years that minute anatomy has been studied, and the existence of properties pertaining to living tissues, distinct from mechanical and chemical properties has been recognised, we cannot but feel, that in our present knowledge of organized bodies we are but infants, and that it may be hardly going too far to say that the science of life and disease is yet to be born!

In our view of the subject, we may hope that medicine will become a science of well defined principles, when we have determined with accuracy and precision, the laws which preside over and govern vital actions and operations. This is, certainly, very far from being attained at the present time; but shall we declare it unattainable? For ourselves, we delight to trust and believe that a day is to dawn on this vast field, such as illumined physical science when Newton established the principle of universal gravitation. It may be years and centuries distant, or it may be near at hand! In the mean time, so far from waiting inactive for this imagined epoch, the anticipation should incite us to more diligent industry in all the departments of investigation—for it is only from facts accumulated from every department, and by every mode, that this sun will arise to shed its light upon the places where we are now groping in darkness!

As to the precise extent which the 'numerical system' promises to benefit our science, we do not feel prepared to express an opinion. To determine this, appears a matter of great difficulty; and, we are free to confess, that we have arrived at no definite conclusions upon it. That it will confer great benefit, as we have said, we think cannot be doubted. Has it not already, in the hands of its founder, developed some important facts? It
has taught us certain relations of different pathological conditions with each other, and with morbid symptoms, of which, before, we were ignorant. In short, it has made already some valuable additions to our knowledge of the history of chronic and acute diseases in general, and of certain of them in particular.

What farther additions may be made under the combined efforts of a great number of philosophical observers, cannot be foreseen, but that much will be accomplished, surely, does not admit of doubt.

But the 'numerical system' has not as yet, thrown any light on the immediate effects of morbidic agents upon the economy, and on the manner in which their influence is exerted to produce disease. It has not taught us to understand better the character of those actions which constitute morbid processes. Nor, does it profess to be adequate to these ends. But what physician will be willing to practice his profession without some opinions, or some doctrines on these points? He who imagines that he does or can divest himself of them, as it seems to us, deceives himself. Discouraging as appears the prospect of arriving, speedily, at such a degree of knowledge on these points as will entitle medicine to the appellation of a rational art, we cannot deem the expectation so extravagant as to suppose that the 'numerical system' will satisfy all the objects of medical inquiry. There is far more reason to despair of medicine ever becoming a mathematical than a rational art.

It is hardly necessary to add, that, in these remarks, our object has been, simply, to express in a few words, a belief that the expectations which appear to be entertained by Louis, and some of his enthusiastic admirers, with regard to the prospective results of the 'numerical method,' are, by far, too extravagant; without going into an exposition of the reasons which lead us to this opinion. Having, however, stated some of the particular circumstances which recommend this method, and give it superiority over what has been denominated medical experience, we will present, briefly, some considerations of an opposite character, which, to our minds, appear to have considerable weight.

I. There seems to exist a difficulty in the number of elements which must be disregarded in the general calculations from a large number of cases; which elements, in the cases considered individually, are of more or less importance.
Take a disease, the distinguishing characters of which are strongly marked, and readily appreciable—for instance, _pneumonia_—bringing together only those cases, in which, as far as it can be ascertained, the individuals were in health when seized with the disease; placing them, as far as possible, under similar circumstances, and subjecting them to the same treatment. How many circumstances there are, peculiar to the cases, individually, which would influence, more or less; the progress and the termination of the disease! The constitutional differences, congenital and acquired; idiosyncrasies; peculiar susceptibilities to disease in certain organs from previous disease; diversity of habits; hereditary predisposition, &c. &c.—it cannot be said that these are of no account when we consider the cases individually. According to Louis, who has considered this objection, these circumstances, the number and varying character of which prevent their being comprised in the enumeration, do not affect the value of the general results, because, when a great number of cases are brought together they mutually compensate for, and neutralize each other. Were these results only to be regarded in the light of statistical facts, this reasoning would not, perhaps, be objectionable. But, principles of pathology and therapeutics are of value to us as practitioners of medicine, only in so far as they are applicable to individual cases. We are not called upon to treat a great number of patients _en masse_, without separate and individual examination; hence, we must take into full consideration all the peculiar circumstances which are connected with the disease in each case, and not confine our minds to those which are common to it in all cases. Supposing then, that we have ascertained and reduced to rules a course of treatment which is most successful, _ceteris paribus_—still, guided by these alone, in individual cases, should we not be liable to error? Granting, that it is a desirable object to obtain such rules, and that, when obtained, they should be borne in mind, and ought to influence our measures, (of which there can be no doubt,) still, it remains for the practitioner to determine all the peculiar circumstances in every case, which are to modify the application of these rules; and does the numerical system furnish any new mode of discovering or appreciating these contingent circumstances?
So far from this, in the formation of these rules, these circumstances are wholly disregarded. The idea which we would express, may be illustrated by the principle upon which life assurances are made. By calculating the mean duration of life from data furnished by the bills of mortality, very exact results are obtained, in so far as they apply to a large number of individuals. The probabilities of life being thus accurately ascertained, from them can be adduced, just what it is worth to risk a specified sum of money against the circumstances which may cause death. But do these calculations and results, individually considered, diminish the uncertainty of life! Suppose that as physicians, we might propose to form some opinion as to the probability of our own death within a certain period of time, to which should we attribute the most importance, the calculation of chances, or an examination of our own bodies as to their peculiar susceptibilities and predispositions, the external causes of disease to which we are exposed, &c. &c.—to circumstances, in short, which, in the former calculations, are not taken into account? This is, to be sure, a matter concerning which, under ordinary circumstances, it is impossible to form any precise opinion; but, in as far as we might presume to come to any conclusions, should we not be influenced more by rational than numerical facts?

This objection does not deny to the numerical method great utility. It must be, surely, of great advantage to know the effects of certain measures, (our remarks now apply more particularly to therapeutics,) in certain diseases, as exemplified in the comparison of a multitude of cases carefully collected. Results thus obtained, should be preserved, and influence us at the bed-side of the sick. But, (if the objection be a valid one,) in the treatment of our patients, we are to be guided not the less, and, indeed, more especially, by circumstances peculiar to each case, which have not been embraced in the general comparison from which these results have been deduced.

Let us apply this view of the subject to the general result of Louis’ researches on the value of bloodletting as a therapeutic agent in pneumonia. He has demonstrated, that, regarding its influence in shortening the disease in the aggregate of cases, it is less efficacious than has been supposed by the majority of prac-
tical physicians. This, however, does not prove, that, in certain instances, bloodletting does not exert a very great influence in cutting short the disease. It is plain, that the latter may be entirely true, and, nevertheless, the results of Louis' analysis perfectly correct at the same time. What then if we are influenced in these cases wholly by the general results of bloodletting! Shall we sacrifice these patients to our general principles, or shall we determine on venesection, and measure it by the particular indications, which present themselves without reference to the numerical results?

To illustrate this point still further, suppose the numerical method to be applied to other subjects, and for other ends, than the investigation of disease. Or, suppose, for instance, it were to be applied to ascertain the general results of the treatment of diseases by medical practitioners. The procedure would be, 1st. (were it practicable,) to collect a large number of cases of individuals taken sick who were not subjected to medical treatment, to determine the mean duration of illness, the number of those who died and of those who recovered, &c.

II. To collect an equal number of cases where medical treatment was received, and in like manner, the mean duration of illness, the number of deaths, and of those who recovered.

This comparison would be a fair one in order to demonstrate, in general, the efficacy of medicine and physicians. The differences of diseases, &c. would mutually compensate in the two collections of cases, so as not to affect the correctness of the result, provided the number of cases was sufficiently large. Of course, we cannot venture to say what the result of this enumeration and comparison would be, but would Louis, probably, be willing to risk his own character as a physician on the result? If it were against the profession and art, does it follow, that as practitioners, or as patients, individually, we are to relinquish confidence in its usefulness? As practitioners, and as patients, we should not be willing thus to dispose of those cases in which, as we are convinced, judicious treatment will be followed by successful results. As practitioners, the grand object is to distinguish those cases in which it is our duty to trust to nature unassisted, and to determine upon the best measures in those cases in which art may be useful. As patients, the object is to
discern between the ignorant pretender and the scientific, judicious practitioner. Would the results of the numerical method which had been pursued, afford much aid in the attainment of either of these objects?

Other illustrations might be presented. For example, we might consider the system as applicable to a determination of the rules which regulate human conduct on certain points, in certain situations, or under certain circumstances. We might inquire, supposing numerical results on this subject were attainable, (which they certainly are,) whether in regard to a particular individual, we should not deem a knowledge of his character and motives far more important in enabling us to form a predetermined of his actions. But we will not pursue the subject further.

II. The numerical system must be confined in its application to a certain class of diseases: for it requires certain conditions, which, by no means, pertain to all the diseases which the physician is called upon to treat.

It requires, in the first place, that the disease shall possess such distinguishing characters, that a person properly qualified may recognise it without liability to error. It also requires that a disease shall pursue a certain determinate course. It supposes the practicability of determining the commencement of the disease and the period of convalescence.

Typhoid fever may, perhaps, comprise these qualifications, as also, for example, the eruptive fevers, pneumonia, and the inflammation of certain tissues.

But, assuredly, they are not possessed by a large proportion of the cases which occur in a general practice. We are called upon to treat affections, which, in addition to the diversity arising from their seat, derive their entire character from the operation of a thousand different circumstances. We are called upon to treat disorders which have become imperceptibly established, and which are as gradually to be remedied. In many of them, it is the chief difficulty to ascertain their seat, character, and tendencies. In short, if there were not such difficulties, we should not be without an established nosology, since its advantages would manifestly be very great. Until it be practicable to determine the distinguishing characters of different affections sufficiently to associate them together under common appellatives,
it would seem to be impossible to subject them all to numerical comparison.

III. As it regards pathological facts in this enumeration of cases, it is evident, that only those changes which are appreciable by the senses after death can be embraced. That this is insufficient to lead us to understand the proximate causes of disease, the results of Louis' investigations go to show. In the cases of the typhoid affection which he has collected, he has found one lesion only which is constant, viz: ulceration, or softening of the elliptical patches of the ileum. This he does not presume to consider the proximate cause of the disease. The slightness of the lesion in some cases, and its disproportion to the morbid symptoms, would not permit this conclusion. He calls it, from its constancy in a greater or less degree, the anatomical characteristic of the disease. The obligations of science to Louis should be acknowledged for this discovery; but it is impossible to rest satisfied with a system which does not promise to lead us farther into a knowledge of the conditions in which consists the disease in question. It may be that we shall never penetrate the mysteries of this and other affections; but, for ourselves, we are prone to entertain other expectations: and for their fulfilment we look to physiological discoveries yet to be, together with a better knowledge of external agents in their relations with the organism.

These are some of the considerations which lead us to have little confidence in that magnitude of influence, which, it is believed by some of the more sanguine advocates of the numerical system, it is calculated to exert upon the character and condition of medical science. That its results are important, and will be of still more importance, no one who gives proper reflection and examination to the subject, as we think, can doubt. It is, of course, impossible to foresee the amount of influence which it may exert. But we do not conceive, that, at a future period, men will look back upon it as constituting the great era in the history of the science.

We have not directed any remarks to its claim of being the only true application of the inductive philosophy to medicine. In as far as the nature of the calculations is concerned, and their results, there is, certainly, nothing to call forth objections.
As it appears to us, however, the results furnished by this method, are *afterwards* to be subjected to induction. Its calculations do not, at once, bring us to principles; but it furnishes materials, which, by means of logical comparison and inference, are to develope principles.

An examination of the works of Louis, will, as we think, illustrate the correctness of this remark. The system is, then, to be considered, not a new method of logic; nor a discovery of the application of the inductive philosophy to medical subjects; but an improved mode of attaining certain medical observations or facts, for generalization.

It is, moreover, to be remarked, that, in the application of this method, we are not perfectly secure against error, from the fallaciousness of the senses, the imperfections of judgment, and the influence of prejudice; and, to these may be added, a deficiency of that honest love of truth, which is an indispensable requisite in the philosopher, or man of science. In the examination of symptoms, the grouping of cases, and the inspection of the tissues after death—the sources from which its data are derived—it contains no new provisions against the liabilities to error incident to human weakness.

We have already extended our remarks farther than we intended; but, before leaving the subject, there is a single point upon which we would say a few words; and this is, the proper use of the expression, *a priori*, in medicine.

In speaking of the numerical method as one of rigorous induction, Louis attaches, in contrast, this appellation to the application of principles derived from physiological and pathological reasoning to the explanation of disease. We are disposed to regard this general reference of the expression, both improper and unphilosophical. We understand the expression, *a priori*, to mean either the application of a principle derived from the investigation of a certain series of phenomena, to another series of a different class or character; or, the application of principles found upon speculation alone, not attained by logical generalization. But it is very evident, that, in ascertaining principles or general laws, by a legitimate induction, *a posteriori*, it is impossible in any instance, to collect together and compare *all* the particular facts over which these principles or general laws extend.
Nor is this at all important. It is only necessary to assemble a number of well established facts, sufficient to serve as data for a just generalization. Having obtained, by a proper induction, general principles or laws, they may then be applied to other phenomena than those which were subservient to their discovery. The object of science, after having ascertained certain principles or laws, is to seek out new phenomena having analogies with those already examined, and to extend, as much as possible, the application of these known principles and laws over the operations of nature. This is a *synthetic* process, which cannot with propriety be denominated, *a priori*, reasoning.

Now, directing our attention to medicine, it is to be considered, that the phenomena manifested in the body in disease, as well as in health, are *vital* phenomena. Disease and health, it is to be borne in mind, are only relative terms, and the division of phenomena into physiological and pathological, is in a measure, arbitrary, and instituted for the sake of convenience. In each case, they are the results of certain actions peculiar to life and organization, developed under a variety of circumstances. When, therefore, we bring a known principle or law in physiology to the explanation of certain phenomena of disease, it is not extending a principle or law derived from one series of phenomena to another series of a character essentially different. It is in conformity with the spirit of the inductive philosophy, to extend, in this manner, as much as we can, any well established principle relating to vital actions either of health or disease. The question only is, are the principles which we would extend, *true*, i.e. have they been established by a *fair* induction? Being satisfied of this, the next step is, to extend them as much as possible, bringing under them every phenomenon which they may embrace, and determining the laws which modify their application to any particular facts.

No one can doubt, that the great source of error in medical reasoning, has been the adoption and application of suppositional principles, or those founded, solely, on hypothetical assumptions, instead of logical deductions. In reality, we suppose it is the methods by which principles in physiology and medicine are too often *formed*, as well as *applied*, against which Louis would particularly protest: and it would not be deemed important to no-
tice this point, if it were not that the manner in which he applies this expression, is calculated, as it appears to us, to give rise to erroneous impressions, which should be guarded against. Louis has proposed a method of investigation, which he believes to be alone calculated to furnish pathological and therapeutical principles, worthy of reliance. On the other hand, as it seems to us, it is probable that the majority of the members of the profession, will regard this method as inadequate to the ends which it proposes to fulfil. If the latter view be the true one, it follows, that if our knowledge of disease and remedies is ever to consist of well defined principles and laws, it must be in a great measure from other sources than the numerical system. Hence it is that, (being ourselves unable to be reconciled to the belief that the science will never advance farther than the operation of this system promises to carry it,) we feel it to be important, to state our objections to the sweeping application of the expression, *a priori*, to all other methods of medical reasoning.

The truth is, medicine is not to derive its advancement, as a science, from any *single* source or method of investigation, but, from *all* rational and philosophical methods, collectively. It is a peculiar science. The object is to ascertain the character of certain deviations from the natural order of things. The natural sciences, in general, *end* where this *begins*.

Their purpose is accomplished, when the principles and laws which regulate the natural succession of phenomena are discovered. In addition to this, are to be considered the circumstances which render the study of vital phenomena one of peculiar difficulty. This results from the varying character of vital actions; the diversity of organized parts, most of which are concealed from view, and cannot be observed while the body is animated with the vital principle; the sympathetic relations and reactions of these parts upon each other; the multitude and variety of external influences, and the obstacles in the way of experimental observation. From all these causes, it follows, that the application of the inductive logic to this department of truth is attended with much more difficulty than in the other natural sciences, and that the science is necessarily slow in its advancement. In these respects, the sciences which appear to bear the nearest analogy with medicine, are the science of *political eco-
nomy and meteorology. As it regards the numerical method, it has occurred to us that it is entitled to a position in medical science similar to that occupied by meteorological registers in the one, and by statistical records in the other, of the sciences just named.

In conclusion, we would observe, that whether the views we have presented be correct or not, they will not be without good results, if they should happen to induce any to investigate the subject, and to study the works of Louis.

As far as we are personally acquainted with the views of those who have given more or less attention to the subject, there exists a difference of opinion as to the merits of the system. This was to have been expected. Doubtless, some are inclined, from the love of novelty, to embrace the system with eagerness, merely because it is new. There are others disposed, in their enthusiasm, to attribute too much importance to anything, the advantages of which are in reality great. It is also natural to suppose, that those who have derived instruction from the lips of Louis, and been personal witnesses to his zeal and ardour in the search after truth, may be among the number of those who are too sanguine concerning its results. On the other hand, whenever any plan is proposed out of the beaten track, there are those who are ever ready to dispute and cavil, from a spirit of unprofitable skepticism, or from motives more unworthy.

It is also to be feared, that many physicians are so established in their opinions, that they will not listen to a method which leads to conclusions different from those they have long entertained. And there are others who will find this method too tedious, requiring too much time and exertion in its application. These will find it easier to treat it with ridicule than to adopt its requisitions.

Diversity of opinion, however, from these several causes, will not affect the ultimate destiny of the system. This must be determined by its actual results, which time will declare. But, to all who are desirous of making the best application of time and opportunity for personal improvement, and the advancement of the science, it is a matter of considerable importance to determine, whether there are good grounds to anticipate abundant returns from the diligent cultivation of this method, or whether
it is to derive an ephemeral reputation from the mistaken zeal of its partizans, and then go to be added to the list of systems, which have had their day, and are now forgotten.


Among the numerous class of affections of the lower extremities which occur, especially in children, paralysis of the mm. extensores pedis, plays a far more important part than is generally understood. The verdict of "a weak ankle" is indiscriminately applied to a variety of affections, and patients, after having duly gone through a course of rubbing the ankle with various salves and lotions, etc., are sent to the instrument maker with the instruction to get an instrument for a weak ankle, which, generally without reference to the nature of the affection, consists of two iron splints with joints corresponding to the ankle joint, and attached to a high-quartered boot; in addition to this, the parents get the consolation that their child will "outgrow it."

If we put the question, what is a weak ankle? we will generally have the answer, a relaxation of the ligaments of the ankle joint: but among the large number of weak ankles that have come under our observation, we may confidently say, that we never saw a case arising from that cause. In almost all cases we found that a paralysis of the extensor muscles of the foot, was the real cause of the evil. The simplest way of ascertaining this is, if we lift the affected foot off the ground, we find the toes, or rather the whole foot, drop down, and the patient has but little, or no power to raise the point of the foot. There is a simultaneous relaxation of the ligaments of the ankle joint, but that is secondary, and only in consequence of the want of support from the action of the muscles.

It seems that the muscles in front of the leg are more subject to a paralytic affection than almost any other set of muscles in the whole body. In the first place, the lower extremities being
farthest from the central organs, are, generally, more subject to paralysis; and then, where the paralysis is not complete, or where the limb partially recovers from it, the extensores of the foot, being naturally much inferior in strength to their antagonists the muscles of the calf, are always the chief sufferers.

Let us now, for a moment, consider the effect of this paralysis. In cases where the cause which produced a paralysis of the extensores, acted in a different manner, and as a stimulus upon the flexoress, and produced in them a spasmodic contraction, or where that cause has not affected the flexoress at all, they will, no longer controlled in their action by antagonist muscles, contract permanently, and talipes equinus, or as the case may be, talipes varus, will be the result; as it is not at present our object to speak of these deformities, we will leave them out of the question. Where the gastrocnemii either do not contract at all, or not sufficiently to produce either of the just named deformities, and where the m. tibialis posticus, in particular, is completely paralyzed, the foot is apt to take that form in which it would be called talipes valgus; and in most cases, even where we could not strictly call the affection talipes valgus, we will observe an approach to it, the planta pedis looses its arch, and the inner ankle descends and becomes more prominent.

In walking, if the foot is raised off the ground, the point of the foot drops down, and the patient is obliged to exert the muscles of the thigh, to give a jerk or a swinging motion to the leg, for the purpose of getting the foot, as it were, out of his way. At the same time, although in standing, the patient has the power of turning the foot in, yet in walking, we generally find the toes much turned out, because the farther the foot is turned out, the less impediment does it offer in walking, by dropping down. In cases where the muscles of the thigh are not sufficiently strong to give this jerk or swinging motion to the leg, the foot is turned out still more, and the leg is dragged along without raising the foot from the ground, with the tibial margin of the foot looking forward. This swinging motion of the leg, produced by an exertion of the whole body, or as the case may be, the dragging of the leg together with the unnatural turning out of the foot, in either case, might easily mislead a superficial observer as to the diagnosis; and we have seen several cases of this kind that had
been mistaken, either for an affection of the hip-joint, or for an affection of the spine.

In most cases, we find the animal heat and the general nutrition of the whole extremity lessened, which proves that the disease originally affected the whole extremity, but that the extensores, as the weaker part, were, in the end, the chief sufferers.

As we have been very successful in the treatment of these cases, and especially, as we have applied an instrument which we believe better calculated for the purpose than any other hitherto in use, and which is based upon principles which we claim to be the first to have applied in this manner, we have been induced to lay our manner of treatment, with the instrument, accompanied by the foregoing brief remarks, before the profession.

In the instrument we allude to, and of which we here give the outlines, the drawing being taken from an instrument for the left foot, the want of action in the extensores muscles is supplied by spring power. It consists of an outside splint, $bb$, attached to a boot, $a$; with a joint, $c$, corresponding to the ankle-joint; above this joint a spring, $ee$, is riveted upon the splint, which plays in a small eye attached to the part of the splint below the joint. This spring is so arranged, that it bends the splint in the joint, with the angle of the joint looking backwards; the upper part of the splint is fastened with a girdle, $d$, below the
knee, and when the patient walks, as soon as he raises the limb off the ground, the spring brings the point of the foot up; and when he puts the foot again to the ground, the weight of the body counteracts the power of the spring, and the point of the foot descends again. The above drawing is taken from an instrument with the sole of the shoe placed horizontally,—consequently the upper part of the splint being free, is acted upon by the spring, and bent forwards; if that is fastened with the girdle to the leg, of course the lower part, and with it the foot, will be acted upon by the spring.

We have seen this instrument act to perfection in a lad who had received a wound which separated all the extensor tendons upon the instep, and who had, in consequence, lost all power of raising the foot. He walked very badly, and only by means of a string attached to the point of his shoe, by which he raised the foot at every step with his hand. With the above instrument, he walked without limping in the least. In this case, the instrument was of course only applied as a palliative, without any idea of effecting a cure by it. To an operation which we proposed for the purpose of reuniting the separated tendons, the family would not consent.

We also use the same instrument after the operation for club-foot and talipes equinus, when the patients begin to walk, with the view of making the ankle-joint limber, and have, in that sense, alluded to the instrument in some papers which we published some time ago upon the subject.

In the case now in question, the paralysis of the extensor muscles of the foot, we combine with the use of this instrument the external application of strychnine, dissolved in a spirituous lotion, with which the limb is rubbed morning and evening; and when it can be done conveniently, we also bathe the whole extremity in warm swill, (the residue of distilleries.) Cold baths generally are injurious on account of the diminished vitality of the limb. The gait of the patients is much improved immediately after the application of this instrument, and the swinging or dragging of the foot is much lessened; but after this method of treatment has been persevered in for some time, they also walk much better, even if the instrument is left off for a day. After a time, the patients, or their nurse, observe that they can raise
the toes and the point of the foot a little; and gradually, although very slowly, they recover the use of the extensor muscles.

In cases which require a strong spring power, and where consequently a heavy spring would be necessary, we use two splints like the one above described, one outside, and the other inside, joined together behind, above the calf, with springs to each. The springs must, however, not be too powerful, because in that case they work the heel out of the boot.

Some cases have come under our observation, where, simultaneously, the extensors of the leg also, were paralysed. The patient, when sitting with the foot hanging down, can neither raise the foot nor the leg. In these cases, we have extended the splints above the knee with joints corresponding to the knee-joint, and springs attached to them to assist the extension of the leg; these springs are arranged in a similar manner as those on the ankle-joint. In these cases, the ligaments of the knee will generally be found in a relaxed state, and the knee, when the weight of the body rests on it, inclines to bend backwards. The joints in the splints must therefore be so arranged that they do not allow of bending backwards, otherwise the action of the springs would do more harm than good, by increasing that inclination in the knee to bend backward.

Art. V. Case of Encephalocele, with Remarks. By S. P. White, M. D.

My attention has been drawn to this disease, for a few months past, by the occurrence of a case in my own practice. Notwithstanding, we have had a number of excellent papers published on this disease, I was somewhat embarrassed and misled in the early period of the treatment of this case; and it is with the view of preventing others from meeting with the same embarrassment, that I offer these brief comments.

The cause of the difficulty I encountered, was owing in a great measure to the erroneous name given to the disease by Sir
Astley Cooper, and other authors, and which consequently leads to an erroneous view of its pathology, in perhaps the majority of cases.

Sir Astley Cooper denominates the disease, Fungus of the brain, and makes the following remarks. "Usually, some days after the brain has been wounded, the divided parts begin to unite by the adhesive inflammation; if this process cannot effect a cure, granulations form, which at length project through the opening of the skull, and give rise to the fungus. Upon proper treatment, the safety of your patient depends. If you do not repress the growth of the fungus, there will be violent constitutional irritation, and the life of the person will be destroyed; but on the contrary, if you attend to the condition of the wound, and prevent the fungus from rising, you will succeed in effecting a cure." It will be perceived that Sir A. Cooper does not speak of it as possessing the character of hernia, or as a simple protrusion of the brain.

Sir Charles Bell, in his work on Operative Surgery, speaks of it as possessing a fungoid character, and as being vascular and organized. Mr. Abernethy conceives "that such tumours proceed from an injury of part of the brain; that an effusion of blood into the substance of the brain ensues; that the deficiency of the bone allows the blood to expand and press the brain and its meninges through the vacant space of bone; that the dura mater soon ulcerates; and that the tumour, pushing through the opening, now increases with a rapidity proportionate to that with which the hemorrhage takes place within."

Now, the objection to Mr. Abernethy's theory is, that the protrusion does not take place soon enough to confirm his views. Some days or weeks generally elapse before the protrusion takes place, when, if it is owing to hemorrhage within the brain, it should occur at a much earlier period.

Mr. Hennen, in his work on the principles of military surgery, states, that it has not appeared to him to proceed solely and exclusively from any one cause, but to depend on several, sometimes acting singly, and often in combination.

Dr. N. R. Smith, in an excellent article upon this subject, gives, I think, the correct view of its nature, and immediate cause, as well as treatment. He says, "that the most frequent and fatal tumour, which thus issues from the surface of an ex-
posed brain, is the brain itself, protruded by the unremitting impulse of the arteries of the organ;" and then gives very satisfactory reasons for advancing the opinion.

So far as the following case is concerned, it appears to corroborate his view of the pathology of the disease. The mechanical support being removed from the brain, by the loss of a portion of the skull, and its membranes, and the constant impulse or distention being kept up by the circulation and respiration, account readily for the tendency to protrusion. With this protrusion, there may, undoubtedly, be more or less fungus springing up from the brain, or dura mater, or pia mater. That the tumour in the following case consisted of the brain, I am satisfied, because, upon slicing off a portion, it resembled the brain in appearance; and it was affected materially by the state of the circulation and respiration.

On the 17th of May, (1840,) I was requested to visit Timothy O'Brien, aged six years. Upon examining his case, I found a compound depressed fracture of the left parietal bone. There were three wounds of the scalp, each about one inch long, meeting in the centre, attended with considerable hemorrhage; and were caused by a brick, thrown by a man with the view, probably, of taking his life.

Dr. Covel was in attendance, and as the lad was rational, the Dr. proposed that we should dress the wound, and wait until symptoms of compression should appear. To this proposition I made no objection, but in the course of the evening, vomiting came on with a disposition to stupor. It was then decided that the operation of trephining was necessary.

By the request of Dr. Covel, and with his assistance and that of Dr. A. C. Post, I proceeded to the operation. The original wounds were extended at each extremity with the scalpel; the cranium being exposed, a small trephine was applied near the greatest depression, and having perforated the skull, the elevator was passed under the depressed portions; and they were successively raised and removed. The fracture we found quite comminuted, as the spiculae removed amounted to the number of 16 or 18 pieces. One of the pieces, about half an inch long, was driven into the brain, and about half a teaspoonful of the cerebrum escaped when it was taken away.

One or two projecting points of the skull were trimmed off
with Hey's saw; the integuments were brought together with sutures and adhesive plaster, and the usual dressings were applied.  

During the first week after the operation, the patient continued rational, but was somewhat restless at night, had a frequent pulse, a furred tongue, and some pain in the head.

In the course of that week, he was bled from the saphena vein, cathartics and enemata were administered, and cold applications were applied to the head.

At the first dressing on the 6th day, we found about half of the wounds of the integuments had healed, and the discharge rather fetid.

At the second dressing, on the 7th day, we observed the commencement of an encephalocele, which had the appearance of an ordinary fungus about the size of a large chestnut, but it appeared to be partly covered by the scalp. It was dressed at first with dry lint, adhesive straps, compress and bandage.

During the residue of the month of May, the fungus gradually increased to the size of a Madeira nut, was of a grayish colour; it pulsated with the same regularity as the heart and arteries, and the discharge of pus was copious and of good appearance.

The boy continued rational, and the symptoms generally were all favourable, such as a good appetite, and regular bowels. About this period, however, he had occasionally a frequent desire to void his urine, particularly after the application of the sulphate of copper.

The treatment during this period consisted in the use of lint moistened with lime-water, adhesive straps, compresses, and the four-headed roller. Occasionally, the tumour was touched with the sulphate of copper.

During the month of June, the general symptoms continued favourable, with the exception, occasionally, of an accelerated pulse, and a coated tongue. Whenever the lad cried, the tumour evidently increased in size.

The hernia continued obstinate, and was treated, by applying at different times, the nitrate of silver; the saturine lotion, in place of the lime-water; and the Ungentum Hydruargyri Super-nitratris spread upon lint, and applied with compresses; a piece of tea-lead and bandages. All of these applications had a favourable effect, particularly the citrine ointment.

The granulations improved in appearance, and cicatization
White on Encephalocele.

commenced. At the latter part of the month, two or three pieces of the cranium exfoliated.

During the month of July, the head was dressed daily, but owing to the want of care, on the part of the patient, or rather to his being careful to loosen the bandage, the fungus increased and became troublesome.

With the scalpel, I sliced off pieces of the tumour at different times, sufficient perhaps to fill two teaspoons.

They appeared to be of a medullary character, and when removed, the surface of the brain was much inclined to bleed. The tumour was touched with the nitrate of silver, and dressed with the citrine ointment. A few times, I touched the edges gently with the caustic potass, and with good effect. The alum water, with compression by means of graduated compresses, had an excellent effect.

As the case was somewhat obstinate and perplexing, I consulted a number of our judicious practitioners.

One advised the nitric acid diluted; another, compression with sheet lead; another, lint stiffened with paste; another, graduated compresses. Their prescriptions were all used with good effect. Finding it still exceedingly difficult to effect constant pressure by means of a bandage, I resolved to ascertain what could be done by means of a head-truss. Dr. Knight, No. 1 Ann-street, was accordingly invited to see the patient, and to contrive an article of the kind. By reference to the drawing, it will be seen that he has succeeded very well.

Figure 1 represents the spring passing over the forehead, and parietal bones.
No. 2, the pad made of German silver, and an India rubber cushion pressing over the hernial opening.

No. 3, an India rubber strap, passing from one extremity of the spring to the other, around the occiput.

No. 4, another strap, passing over the head, and under the chin.

No. 5, another strap, passing from the middle of the spring on the forehead, to the occipital strap, on a line with the longitudinal sinus.

This truss, which has a gentle spring, was applied, and as long as it was worn, it pressed the tumour down to a level with the cranium. But the lad became rather uneasy with it, and I was obliged to substitute occasionally the paste-board and bandage. Under this treatment, the tumor was kept down, the granulations became healthy, and the surface cicatrizéd, about four months after the occurrence of the accident.

Upon taking a review of the case, it is quite remarkable, that the boy, from the commencement of the injury to the termination of the treatment, should have retained his reason; and what is still more surprising, that he should lose two teaspoonsful of brain, without manifesting any particular effects from the loss. The only effects I have observed lately, are, occasional peevishness, from increased irritability of temper, and increased frequency of the pulse.

Were a similar case to fall under my care, I think I should be very careful to apply early a piece of paste-board or tea-lead as a preventive measure. Let the first application be simple cerate spread upon a pledget of lint; then a linen compress; over that, one or two pieces of paste-board or tea-lead, and over that the four-headed roller. If the pressure should not be sufficiently strong and steady, then recourse could be had to the head-truss with a gentle spring. This instrument should not of course be continued if it is followed by symptoms of compression. After recovery, it could be used, likewise, as an article to protect the brain from injury. Instead of placing a piece of silver into the opening of the cranium, as is generally proposed, the surgeon would be placing it where it properly belonged, over the integuments, as a shield to the brain.
Art. VI. An Essay on Puerperal Fever. By Philip A. Davenport, M. D.

A year's residence as an assistant physician in the New-York Alms House, has lately afforded me a rare opportunity of witnessing the interesting and fatal disease, which I propose to consider in the following pages:

And though I can lend but feeble aid in dispelling the mysteries which envelop it, it may not be uninteresting to dwell upon the instructive scenes, which the bedside and the dead-house presented during that terrible endemic, and to compare what I myself have seen with the experience of others.

A brief sketch of this endemic has already been communicated to the profession in the 5th No. of this Journal by Dr. A. F. Vaché, the resident physician of the Alms House.

The 20 cases annexed to his paper, reported by my colleagues Drs. McLelland, Osborn, and Cock, and the writer, with some unpublished cases in my possession, will form the basis of this essay.

It is my purpose to consider the disease generally, in as brief and concise a manner as possible, while I shall endeavour to be full and explicit in the circumstances which bear upon the endemic to which these pages are more particularly devoted.

Etiology. — Of all the causes of puerperal fever none holds a more important station, than that which we shall in the first place consider, a vitiated state of the atmosphere.

In hospitals, this cause of infection is singularly rise; and in no state of the system does it exert a more baneful influence than in the puerperal. Crowded apartments are the most common cause of this impure state of the air, and readily give rise to our most dangerous types of fever; as we see occurring in jails, hospitals, and in the crowded steerage of our passage ships. In the lying-in ward, in addition, the air is infected by the respiration of a large number of children, and by offensive exhalations from the lochiae, perspiration, faecal matter, &c.; and if the most perfect cleanliness is not observed, the air is rendered still more infectious. Often the presence of the sick in the same or neighbouring apartments, increases still further the difficulty.
Baudelocque says, "a vitiated atmosphere is injurious not only after delivery, but even during pregnancy; it may influence the solids and fluids of the female to such a degree, that peritonitis will be inevitable."

The nature of this deterioration of the atmosphere, has as yet eluded all investigation; it is supposed to consist of minute deleterious particles, inappreciable to the human senses, termed "miasmata." The cause of these miasmata in some cases we have shown; often none is recognised, and the destroyer is known only by his work of death. That the disease at the Alms House was in the first place produced by "idio miasma," I think I can render probable, by considering the circumstances under which it originated.

If I am asked why the legitimate effects were not produced till after delivery; I can only say that the causes were fully at work before the commencement of labour, but were not sufficient to produce their pernicious effects till the great and sudden change in the female and her increased susceptibility at this time permitted them to operate successfully. The fever commenced last winter (1839, and '40,) at the Alms House, when the poor were congregated in unusual numbers within its walls; and beds were placed on the floor of the receiving ward for pregnant women for additional patients, where already the ward was too much crowded. In this ward, a large room in the 3d story of the East Wing, the females remain till the approach of labour, when they enter a similar apartment opposite, separated by a narrow hall.

The lying-in ward, though at this time considerably crowded, was always in a state of perfect cleanliness; the beds were changed after each delivery, and particular attention was paid to its ventilation. The receiving ward was cleanly, but far more crowded; it was less perfectly ventilated; the windows being less frequently opened, and the room kept very warm. There was occasionally more or less disturbance, and patients have complained that their sleep was interrupted, or could not be obtained till a late hour of the night. In one instance, a case of puerperal convulsions was brought on by fright, and labour prematurely followed. There was but little sickness in that wing of the building which was principally appropriated to aged females, and kept in a neat and cleanly
condition; with the exception of a ward in the first story directly under the lying-in ward (in the third story.)

This was reserved for the lowest class of patients; was excessively crowded; poorly ventilated, and there were some cases of chronic disease there; this, with the effluvia from their old rags and bedding, rendered the air vitiated and offensive.

During the month of January, when the fever commenced, this ward contained at one time forty inmates; and three cases of typhus fever actually originated in the ward. It was then cleaned, the women distributed, and typhus did not afterwards make its appearance.

During the continuance of the fever, erysipelas prevailed to a considerable extent in the hospital, (which is always well ventilated and kept in a state of admirable cleanliness,) and in the other buildings composing the Alms House establishment. A patient who had recovered from puerperal fever, remaining in the hospital, was attacked with severe erysipelas of the head and face. And during the present winter, when a number of cases of puerperal fever have again occurred, erysipelas has also been prevalent in the institution.

For the last twelve or fifteen months, it would seem that there has been an unusual tendency to epidemic disease, and often of a typhoid character. In the winter of 1839 and '40, the children at the Long Island Farms were mowed down in large numbers by an endemic influence. An incurable diarrhoea, followed by mortification of either extremity of the alimentary canal, often with the loss of the eyes, defied the efforts of medicine. A child was bled for pleurisy, and two others for fever; mortification soon set in. Ophthalmia could not be treated in the usual manner without rapid ulceration of the cornea. Cases of scarlatina all followed the same course, and all terminated fatally. (See Dr. Morrell's paper in the 5th No. of this Journal.)

In the January number of this Journal, Dr. Cornell, in speaking of his experience in ninety cases of scarlatina which he had met with during the previous year, says, "the sudden manner in which the disease invades the system; the high constitutional irritation which succeeds, and the fruitless attempts in many instances to relieve symptoms simulating inflammatory action, as phrenitis, by bleeding, leeching, purging, antimonials, and the like, excited a
belief that scarlet fever was not of a sthenic character, but dependent on irritation with an exhausted or shattered state of the vital forces and typhoid in its tendencies.” He also gives a case of puerperal fever which yielded to quinine and opiates, instead of requiring the usual powerful antiphlogistic treatment of sporadic puerperal peritonitis.

In the Lying-in Hospital, in Marion-street, two cases of puerperal fever occurred after a short interval, but on cleaning the ward the disease did not return. The disease is said to be prevalent in private practice in the city also, at the present time.

For the last few months, smallpox has also been prevalent. In the New-York Hospital much erysipelas has occurred, and cases of typhus fever have originated in the house. At St. Paul’s College, Flushing, diarrhoea has recently prevailed extensively among the students. We shall presently have occasion to observe how much the fever as seen at the Alms House differed from ordinary puerperal fever. One of the cases that outlived the first violence of the attack, died from extensive mortification of the mouth, exactly resembling the cancrum oris of children, and spacelation of the subperitoneal cellular tissue of the abdominal cavity.

Contagion is the next cause of puerperal fever which we shall notice. It would be foreign to my present purpose to consider the arguments in favour of and against the doctrine. The only facts bearing upon the question, which have come under my own observation, are the following:—

During my attendance on the cases of fever in the Alms House, when almost living at their bedside, I was called to a case of labour in the Black Hospital, where the disease had not yet appeared, in the absence of Dr. Cock, who then had the charge of that department. That patient died of puerperal fever. Several others were then delivered by Dr. Cock, and no unfavourable symptoms followed. In his absence a second time, I attended another patient, and she too, took the disease and died. In one or both of these instances, I took the precaution to change the greater part of my dress.

Dr. Hoffman visited in consultation one of our earlier cases; he delivered a female that night, who was attacked and died with puerperal fever. Some incidents occurred to Dr. Belcher of this city, about this time, which rather tend to confirm the doc-
A case of puerperal fever occurred in his practice, and in the course of about two months, six or eight cases followed, and four of them proved fatal. These cases did not occur in succession, but in a number of intervening cases; there seemed to be a predisposition to the disease, which was overcome by Calomel & Dover's powder, and other remedies. In a disease as rare as puerperal fever, the occurrence of so many cases among the patients of a single practitioner is at least worthy of note.

Much difference of opinion has existed with regard to the question whether puerperal fever is most liable to follow difficult or easy labours, and those of long or short duration?

Of 23 cases occurring in the Alms House establishment, seven were severe labours, and their duration was as follows:—10, 12, 26, 26, 42, 56 hours, and one lasted between three and four days; nine were noticed as easy labours; and of these nine, the three labours whose duration is recorded, occupied but 2, 4, and 5 hours respectively. The length of three other labours (their degree of severity not being noticed) was 4, 6 or 8, and 28 hours, and of three cases no account was recorded.

Of the tedious labours, one patient was delivered of twins after a labour of 12 hours. The case of 26 hours labour was complicated by a narrow pelvis, retention of the placenta, hourglass contraction, and hemorrhage.

The case of 42 hours was protracted by a ligamentous band across the vagina which required division, and by slight deformity of the pelvis rendering a diminution of the head of the child necessary.

In the case of 56 hours, there was also a small pelvis, and the operation of craniotomy was again resorted to. With these facts before me, I have ample reason for believing that puerperal fever may follow short and easy labours as well as those of greater duration and severity.

Is puerperal fever more common after first than succeeding labours?

Out of 88 cases mentioned by Dr. Collins of Dublin, 44 occurred after first labours; 16 after 2d; nine after 3d labours, &c. In another epidemic in the same hospital, out of 114 cases, 68 were first pregnancies.
Of Ferguson’s cases, out of 204, more than 80 were first labours; and out of 68 deaths, one-half were patients with their first children. Duges finds that one-third more first labours than second were attacked; and Campbell, that of 85 attacked, 29 were confined with their first children. In the endemic at Bellevue, 13 out of 23 cases occurred in those who had given birth to first children; 2 cases in those who had been delivered of their 2d children; three of their 3d children; two of their 4th; one of her 5th child; one of her 7th, and of one no record was kept. First labours, I therefore conclude strongly predispose to puerperal fever.

The presence of a putrid fætus is another in the list of the causes of this disease. During the prevalence of the endemic, a patient in the hospital aborted in the early months of pregnancy; the child was in an advanced stage of decomposition, but the mother recovered without an unfavourable symptom.

Hemorrhage is said to aid the development of puerperal fever.

In two cases at the Alms House there was severe hemorrhage, the patient losing in one case about two quarts of blood.

The effect of climate and seasons in predisposing to puerperal fever is an interesting and disputed question. Doublet says that labours are attended with the greatest danger in cold countries, and that as we advance towards the South, the danger diminishes. This, however, has been denied. The question of its relative prevalence in different seasons is almost as undecided. Some contend that it is more common and more fatal in the cold months, as Delaroche, Tenon and Duges; on the other hand, Thomas Cooper, White, and others consider it more fatal in the hotter months. Some distinguished observers consider the dry air most favourable to its development; others the moist, and some believe the cold and humid, or warm and humid most likely to produce it.

The clashing statistics of writers prove that whatever influence warm or cold weather may exert, neither strongly predisposes to the disease.

The endemic of which I am speaking commenced on the 17th January, during which month there were three cases. There were seven in February; six in March; one in April; six in May.
During the present winter months a number of cases have again occurred, the particulars of which I have not been able to obtain.

The Alms House, it will be recollected, is situated on the borders of the East river; the ground is marshy, and the windows of the ward where the fever originated overlook the river.

The weather, during January and February (1840) was noticed as mild and humid.

The regimen during pregnancy, and after labour, is said to have considerable influence in the production of peritonitis, such as an insufficiency, or bad quality of food, the use of exciting drinks, &c.

The patients confined at the Alms House, are often the most degraded that our rolls of poverty and infamy can furnish. They occasionally enter the institution with constitutions impaired by intemperance and vice, and precarious means of subsistence. And after reaching it, the scanty diet of a poor house with confinement in crowded rooms, and want of exercise, is but little calculated to restore their wasted energies. As the wards are always open to the friends of the inmates, dietic arrangements are almost futile, and I have understood, since leaving the establishment, that patients were sometimes supplied with alcoholic drinks even after recent confinement.

Exposure after delivery is frequently the exciting cause of peritonitis.

In one of the cases, the chill and pain in the abdomen shortly succeeded exposure by leaving her bed for the purpose of evacuating the bowels. Chronic affections of the lungs, brain, uterus and appendages are known among the causes of puerperal fever.

Attempts made to produce abortion in various ways; too great compression of the abdomen after delivery; the caesarian section; artificial delivery; suppression of the lochia, as by cold, astringents, moral emotions, &c.; suppression of the milk; constipation; retention of the placenta, of clots, and of the lochia, are all causes of puerperal fever which we can merely allude to without enlarging upon them. Moral emotions are much insisted on by some writers in the production of this disease, particularly by the French, who are fond of attributing most diseases to moral causes; and with a nation whose passions are so lively and
so powerful, it may be a cause more frequently in operation than among us where all emotions are more cold and guarded. Proofs of its influence, however, are sufficiently abundant.

Symptoms. — Puerperal fever may appear during the operation of labour, and at any time after delivery before the parts concerned in parturition have returned to their natural state; which usually occurs in 30 or 40 days.

It makes its appearance, usually, from the 2d to the 5th day after confinement. At this time, most of the cases at the Alms House commenced; though some few began in about one day after delivery, and one case did not occur till the 19th day, a period remarkably late for the disease to occur — and I may remark, en passant, that the prognosis is always better, the later the period at which the patient is attacked; and accordingly this patient did recover, while so many about her perished. The disease is usually ushered in by a chill of variable duration and intensity; sometimes partial, often extending over the whole body. In our first 16 cases, the chill occurred in 10 instances; in four, it was doubtful, and in the remaining two, it probably did not occur. In one case, the chill was preceded 12 hours by severe pain in the abdomen and back. In some instances an accelerated pulse was noticed for many hours before any other symptom was manifested. Great heat of skin; thirst and headache follows. The headache is often intense: in one instance intense headache accompanied the chill, and for many hours the patient referred all her pain to the head. The pulse rapidly rises to 130 or 140.

In our cases, the pulse was uniform only in its rapidity; sometimes full and hard, sometimes small and easily compressed, occasionally full and bounding; it was generally however small and irritable.

Pain in the abdomen is felt; commencing over the uterus, or in one of the inguinal regions, it rapidly spreads over the abdomen and back. The pain is constant, is increased by pressure, and is aggravated at short intervals, at times causing groans of agony.

The patient lies on her back, with her knees flexed, and any motion is attended with increased pain. Its intensity is variable, often so great that the weight of the bed clothes will give
uneasiness; at others so slight, that considerable pressure may be made without complaint, or during a great part of the progress of the disease it may be entirely absent. The pain is generally the most violent in sporadic cases; in some epidemics, it is so slight that the disease is recognised with difficulty, and the patients rapidly sink as if smitten by the secret influence of some deadly poison; the medical attendant unconscious of the danger, till death renders him familiar with the silent symptoms of the malignant destroyer. Both of these classes of cases were met with in our endemic. Generally however, the cases were of the most insidious nature; the patients seemed blind to their own situation, and would often deny the existence of pain and of the disease, which their wild and anxious countenances indicated. In Case I, the abdomen was "but little sensible to pressure;" Case X, complained of no pain when pressure was made over the abdomen, and no pain seems to have been present during the whole course of the disease. In case XI, the pain was not remarkable, and was relieved by pressure.

Pain then is not a diagnostic symptom of puerperal fever.

But to return—tympanitis soon appears; in our cases it was an early and pretty general symptom, and occurred in the cases where the pain was trifling or absent.

The tongue at first natural, soon becomes coated, often thickly, with white or yellow fur; it becomes darker and dryer, and red at the tip and edges, as the disease advances. As the disease goes on, the pulse becomes more and more frequent; the respiration becomes accelerated and laborious, and thirst increases. There is great restlessness, continual tossing; and the features assume an appearance of peculiar suffering. Then comes that fatal symptom the green vomit; whole potsful of dark green bilious serum, are thrown off without effort in great gushes; and delirium frequently sets in six or eight hours before death and closes a scene brief, but truly terrible. Erythematous patches are occasionally seen during the course of the disease on various parts of the body, the face, neck, arms, and between the fingers.

In one remarkable case, the patient referred all her pain to an erythema about as large as the palm of the hand, on the calf of her leg. In case I, a laborious catching respiration, as if a full
inspiration gave excessive pain, which was located at the point of the sternum, was the first symptom that attracted attention: inflammation of the peritoneal coat of the diaphragm, probably gave rise to it, though I do not recollect the appearance after death.

**Morbid Anatomy.** In speaking of post-mortem appearances, I shall strictly confine myself to those which were seen in the endemic at Bellevue. The peritoneum was always more or less injected. Sometimes this injection was very inconsiderable, and even questioned, as in Case XI; at other times pretty intense, though we never saw anything like gangrene; and it was usually greatest on the peritoneal coat of the small intestines, where the convolutions met each other; though that over the uterus, diaphragm, liver, and kidneys also suffered. In some cases, the peritoneum was softened, and could be readily peeled off in strips, in which vessels could be seen when held up to the light. In Case IV, which died 32 days after the attack, the peritoneum both of the parietes and of the intestines was generally healthy; slight vascularity was however observed in one or two places as on the commencement of the descending colon, at its sigmoid flexure, and on the peritoneum of the pelvis.

To give an idea of the relative frequency of the different degrees of injection, I will state, that in about five cases the injection might be called intense — in seven moderate — in four, slight if existing at all.

The effusions of inflammation, in the abdomen, appeared in every case, and were proportioned to its extent as seen in the peritoneum.

As to the nature of these effusions; they were of three kinds, all frequently met with in the same case, and mingled together — serum, lymph, and pus.

The thin liquid effusion seen in 14 out of 18 post-mortems, (and two of these exceptions even doubtful) appeared to be coloured serum rendered turbid by minute particles of lymph floating in it. Sometimes the effusion presented the character of serum rendered thick and turbid by pus as well as flakes of lymph. This fluid was generally of a dirty cream-coloured appearance; in 4 out of the 18 dissections, of a brownish red; and in one instance, the cream-coloured and red fluids were seen
in different parts of the same abdomen. In one case, the abdomen contained a small quantity of pure serum, (lymph besides however.) The quantity of effusion, in 5 out of 18 cases, was about one pint—in five others, about half a pint—in two it was doubtful whether there was any morbid effusion, and in Dhal's case, (that proved fatal about a month after the attack,) and in another case unpublished, there was none. After our repeated dissections it was found that the fluids irritated the skin and created upon it small pimples. About that time a small sac containing pus, appeared on the index finger of my right hand, which I presume originated from inoculation with those fluids. Notwithstanding it was laid open and freely cauterized, it has occasionally discharged, when opened, pus in very small quantities at long intervals to the present time, now about a year since its appearance. The skin over it is now thickened and hardened, with a doughy feel,—the follicles are enlarged, and filled with small tow-like dossils, which can be readily picked out with the point of a knife.

Lymph of a light yellow gelatinous appearance was effused, in a few cases in large quantities; generally found in the greatest abundance in the triangular furrows formed by the convolutions of the intestines; but often lying in considerable quantities on the serous coat of the diaphragm, uterus, kidneys, spleen, and other organs of the abdomen.

In the 18 examinations, lymph was noticed in 11 cases; in two there was none, and in the remainder, none is mentioned.

We found often a great deal of difficulty in deciding whether an effusion was lymph, or pus, which remains last to be spoken of. The most common seat of this purulent fluid was in the pouch between the uterus and bladder. In one case only, it was clearly decided to be pus, and here the liver, uterus, and diaphragm were bathed in the same substance.

There was one other case, where the matter was puruloid, and in another case, the cells of the cellular tissue in this place seemed infiltrated with pus, and once the secretion between the intestines was thought purulent. These four cases then, are the only instances where clear pus was found on the peritoneal surface of the organs of the abdomen.

Let me here allude to the interesting case of Anna Dhal, which
terminated fatally 32 days after the attack, where the "whole subperitoneal cellular tissue of the pelvis extending to within half an inch of the kidney, and to a considerable extent the adipose tissue had degenerated into a singular kind of shreddy matter resembling lint soaked in pus;" anteriorly, too, the peritoneum was separated from the walls of the abdomen by an abscess four inches in diameter containing pus; the usual effusions were here absorbed, and but a drachm or two of clear serum was found in the cavity of the pelvis.

The effusions of blood mentioned by Broussais and others, were not seen in any of our cases.

We shall next notice the appearance of the uterus; of the external coat of the uterus we have already spoken in connexion with inflammation of the peritoneum. Under this coat, in some few instances, deposits of purulent matter or lymph were found.

The substance of the uterus, with one exception only, (out of 18 post-mortems) was noticed to be diseased. In this case, the walls when cut into were of "a grayish tint, dotted with dark points becoming more numerous internally, and near the fundus a mass somewhat resembling softened tubercles, dipped into the substance of the organ by numerous roots;" (this was the case proving fatal 32 days after the attack.) The interior of the uterus however presented the greatest evidence of disease; and in 13 out of 18 dissections, morbid appearances were discovered; in three it seemed natural; and in two cases the appearance was doubtful. When laid open the whole internal surface was seen covered with a peculiar secretion resembling lymph, perhaps one-eighth of an inch thick. This secretion was of various tints in different subjects, and in different parts of the same uterus. Sometimes it was of a bright pink, or a dark red, often of an ashy gray or a greenish gray, sometimes chocolate coloured.

In one instance, it presented the exact appearance, without the odour of gangrene, and appeared like a mixture of pus and lymph. This secretion was also of various consistence, sometimes thin, loose, and flocculent, at others thick and tenacious. It also adhered with different degrees of tenacity to the lining membrane; sometimes it could be readily scraped off with a scalpel; at others it was firmly adherent. In two instances, the secretion was noticed to have a very fetid odour, though the examinations were
made, one, one and half hours, the other sixteen hours after death.

The mucous lining of the uterus, when this secretion was removed, was sometimes perfectly healthy in appearance, at others (in three or four cases) it was found slightly injected.

This singular exudation, extended in some few instances into the vagina.

No pus was ever found in the vessels of the uterus; and though they were occasionally stained with blood, we could not detect any inflammation of their coats.

Appendages of the uterus. — Fallopian tubes. — The appearance of the Fallopian tubes was particularly noted in 11 cases.

The following are the lesions noticed in these organs.

In six cases, pus was found in the Fallopian tubes, (in four of these it occurred in both, and in two cases in the left.)

In two other cases, an opaline fluid resembling milk and water was found.

In seven cases, the Fallopian tubes were injected either in their substance, their peritoneal, or mucous coat. In the case of Dhal, the right tube was enlarged, sacculated, and filled with pus in its outer two-thirds. The uterine orifice of the left was plugged up by fibrin.

Ovaries. — Their appearance was noticed in 13 cases. They presented traces of inflammation in 11 cases, (9 in both ovaries — one in the right, and in one instance the side was not specified.)

The marks of inflammation in these organs were the following: enlargement — vascularity — deposition of pus — small abscesses — deposition of lymph on the peritoneal coat of the ovaries, and infiltration into its substance.

Stomach and Intestines. — On opening the abdomen, it was found that the gas was contained entirely within the alimentary canal; none escaping from the cavity of the abdomen. The stomach and intestines usually contained in greater or less quantities the green fluid before spoken of.

Out of 16 examinations, the stomach presented traces of inflammation in 15 cases. In 10 of these cases, the traces of inflammation were considerable; patches of injected surface (seven of the 10 cases,) were on the cardiac portion; with or without thick-
ening and softening. In the remaining five, there was thickening and softening, though injection could not be perceived. In two of the cases, where the inflammation on the cardiac portion was very intense, small ulcers, a line in length were seen. In one of these cases, the patient vomited considerable quantities of bright blood some six or twelve hours before death.

The intestines presented but little worthy of note; there was occasionally some injection of their mucous surface, but generally their examination did not repay the trouble of performing it.

Liver.—Occasionally softened. It was sometimes gorged with blood—once or twice of a marbled yellow colour when cut into.

Gall Bladder.—Now and then distended with viscid bile.

Spleen.—Occasionally softened.

Pancreas.—No lesion observed.

Urinary Apparatus.—In a few instances pus was found in small quantities in the pelvis of the kidney and in the bladder: and in two cases, the kidney was slightly more vascular than natural.

Chest and Vessels.—"The lungs were usually moderately congested." In many cases, the right cavities of the heart were filled with blood. No pus found in any of the veins. "The iliacs, vena cava, and large uterine veins were generally stained with blood on their inner coat, where the examination was made after seven hours."

Head.—The head was examined in nine cases, and in all the membranes of the brain were more or less injected—fluid was effused in five cases.

It would have been interesting to have followed the children of those who had suffered from puerperal fever; but I have not observed with sufficient care to enable me to say positively whether the mortality among them, has been greater, than is usual among children born in Alms Houses under ordinary circumstances: my impression is that it was so.

During the present winter, on dissection, abscesses were found in the testicles of several children dying some two or three weeks after birth, children of those who had either suffered from puerperal fever, or had been exposed to the causes which had produced it in others. On examining another child three or four
weeks old, of a patient convalescing from puerperal fever, the peritoneum was found inflamed; the abdomen contained 3vi. or 3vij. of bloody serum with flakes of lymph floating in it, and a layer of lymph covered the liver.

In still another case, about the same time, where the mother died of puerperal fever, the child dying when about eight days old, as was supposed from cyanosis, on dissection the peritoneum was found decidedly inflamed, but no lymph or other effusion.

In another case of puerperal fever (which was cured) the child was stillborn, and had livid spots on the head and face; the placenta presented white patches on the foetal side, appearing like deposits of fat, its substance was broken down, and following the placenta, was expelled a dark coloured fluid of the consistence of pus.

We have now considered the principal lesions, that occurred in the endemic at Bellevue; and if the disease was dependant on physical alterations it was a metro-peritonitis. My own opinion is, that we have no alterations of structure sufficient to account for the resistless symptoms which so rapidly overwhelmed the unfortunate patients; and my readers, I think, will agree with me in considering the disease as principally a constitutional malady of a typhoid nature, whose symptoms and mortality may have been aggravated by lesions in the cavity of the abdomen, but that these were not the essential features of the disease.

Treatment. — Bleeding. — In this country, fortunately, as yet, we have had but little to do with epidemic puerperal fever, and bleeding, with rare exceptions, has been the great and effectual remedy in the forms usually met with by the American practitioner. It was consequently boldly resorted to in the onset of the disease; it was tried most faithfully, it failed most signally, with the exception of two cases, and one of these of a more inflammatory nature than the greater number of those attacked. Out of the 22 cases which form the basis of this essay, all terminated fatally but four.

Of these 22, in 11 cases was general bleeding resorted to; all of these died but one, and in that case the prognosis was more favourable from the circumstance of the great length of
(time 19 days) which elapsed between her confinement and the appearance of the disease: (here calomel and opium were also used.)

In Dhal's case, we have even in the midst of a typhoid endemic one of those cases, where the lancet was indicated and overcame the first violence of the disease, which proved eventually fatal. We find a robust young German woman in the bloom of health, suddenly seized with all the symptoms of acute inflammation, and especially with a hard and full pulse of 150. A full bleeding, with the application of leeches is followed by relief of the prominent symptoms, the pulse becomes soft and compressible — the pain in the abdomen is relieved.

On a return of the symptoms, bleeding a second and a third time, with full leeching, is again resorted to, and the patient becomes more comfortable under it, and the pulse slower and softer. The most dangerous periods of the disease, those at which almost all had sunk were now past; life however was only prolonged, for at the expiration of a month, exhausted nature sunk under a dangerous complication.

Bloodletting is by far the most important of the remedies of puerperal fever, but it is not to be blindly adopted. If indicated at all, it is an agent of tremendous power in the cure of the disease, an agent whose place can be supplied by none other; while on the other hand, if it does not absolutely do good, it will unquestionably be productive of the most serious injury. This we see fully exemplified in epidemics, where every patient that was bled, died; while in others, every patient not bled also died. These apparently contradictory conclusions can only be reconciled by the fact, that practitioners were treating varieties of the disease essentially different in their nature, and of course requiring different treatment. "Where the affection of the peritoneum is acute inflammation, and that of the constitution is inflammatory fever," bleeding is our most certain remedy. Sporadic cases are for the most part of this nature. When epidemic in hospitals or elsewhere, bleeding is to be used with more caution; then it is often of a low typhoid type, and bleeding only prostrates the remaining strength of the patient — such has been the experience of those who have witnessed the disease at Bellevue.
Leeches are a most valuable adjuvant to general bleeding; and as occurred in Cases II. and IV. will often remove pain in the abdomen which general bleeding will not affect. When venesection too, has been carried as far as we dare to use it, and in those cases where the symptoms are not so decidedly inflammatory as to authorize the use of the lancet, as in Case III., leeching is a valuable substitute.

But of all the varied modes which were pursued in the treatment of the cases at the Alms House, none has been found as successful as that by calomel and opium, or Dover's powder, without depletion, with a view to bring the system as speedily as possible under the mercurial influence, and it was noticed that the gums of those who died were rarely touched.

In two of the cases treated on Blackwell's Island by Calomel and Dover's powder simply, (in one, perhaps both, mercurial ointment was also applied to the abdomen and thighs,) without bleeding or leeches, salivation followed and both patients recovered.

Another case treated by calomel and ipecac, and subsequently by calomel and opium with mercurial ointment, proved fatal about eight days after the attack; very slight, if any, salivation taking place, though calomel was administered throughout the disease. Not having seen the cases at the Alms House during this winter, I am unable to give the statistics of the cases which have occurred; but I am informed by those who have seen and treated them, that the calomel and opium treatment has been much more successful than any as yet adopted. Though the disease I believe to be essentially milder in its features, than when it first commenced its ravages in the Institution.

In Case VII, after bleeding, a full dose of opium was given, and afterwards x grs. of calomel every three hours — it was speedily fatal.

Case III. resembles the mild cases of fever to which Dr. Gooch has attracted attention, and which Dr. Ferguson refers to under the name of false peritonitis, in which bleeding is so injurious and opium is the best remedy.

Large doses of bark were tried in one instance, not however until after a bleeding of 3xxiv. — the case was fatal.

In four cases, Brenan's treatment by oil of turpentine was fairly
and faithfully tried, without any other remedies that could affect its operation—the result was death.

In the other cases, the treatment was so diversified that I will not hear speak of it. In conjunction with all these remedies, the usual auxiliary means were also resorted to; purgatives of calomel, salts, magnesia, &c.; blisters to the thighs; mercurial ointment; warm fomentations; bags stuffed with bran, and from time to time steeped in hot water, were found very effectual in long retaining heat and moisture. In Flynn's case, sinapisms to the breast determined the flow of milk which had been arrested, and mustard pediluvia relieved violent cramps in the thighs and legs, returning after the violence of the disease was past.

Pencilling the whole abdomen with nitrate of silver to vesication, is a remedy which I have not seen recommended or tried. But from its efficacy in resolving deep-seated inflammation if applied early, and of producing absorption when matter has already formed, and from its value as a local application in erysipelas, to which the puerperal fever of hospitals bears so strong an analogy, I think it at least worth a trial; and particularly in those cases where the debility is so great as to forbid even the application of leeches.

Injections of the solution of this salt, into the uterus, might also be advantageous by changing the action of vessels secreting the diseased depositions, which our post-mortems have shown us are so abundant on its mucous lining.

Art. VII. Excision of the Elbow Joint, in a Case of Suppuration, and Caries of the Bones. By Gurdon Buck, M. D., one of the Surgeons of the New-York Hospital.

I am not aware that another case of this operation occurring in this country, has been made public, except the one by Dr. Warren of Boston, communicated by him verbally to Prof. Velpeau of Paris, and alluded to in the second edition of his Médecine Opératoire, under the article "Excision of the Elbow Joint." Prejudice, or some other reason, appears to have deterred American Surgeons from resorting to it, notwithstanding the strong
testimony in its favour, particularly in England and Scotland. A desire to confirm this testimony, and secure to this valuable operation the favour it deserves, and thus rescue some fellow creature from the deformity of an amputated limb, induces me to offer the case incomplete as it is, with such details of its progress, and after treatment, as will be of service to those who may have occasion to repeat it.

John Wharton, a seaman, native of England, aged 25 years, with sandy hair, and fair complexion, was born of healthy parents, and had always enjoyed robust health, till within the last two or three years, when he had a severe attack of fever at sea in the month of July, soon after leaving a southern port. Several of his shipmates sickened and died of the same disease. While suffering from it himself, he was much exposed to wet and cold. Since that attack he has occasionally had pains in his back. On the 10th of last June, he was admitted to the hospital with inflammation of the right elbow. This commenced spontaneously six months before, with pain in the joint, and was followed in about six weeks, by a slight stiffness which prevented complete flexion and extension, but still allowed him to use his arm and continue his usual occupation, until within two months prior to his admission. During these two months, which he passed on his voyage from Amsterdam, he was also disabled by lameness in the left hip. The condition of his arm, when admitted, was as follows:—it was kept in an extended position, the joint stiff and painful on attempting motion. There was increased heat and swelling about the elbow, with oedema of the forearm and hand. The arm was gradually brought to a right angle and supported in a sling. Cupping was directed every three days, and after several repetitions, blisters were resorted to. This plan of treatment was persevered in, without benefit, till the 13th of July, when the swelling had somewhat increased, and distinct fluctuation was perceptible over the external condyle. He suffered but little pain except on taking a deep inspiration, when he felt acute pain extending from the joint down the forearm. The greatest degree of swelling existed over the condyles and olecranon. Encouraged by previous success in similar cases, I now tried the actual cautery, and applied it five times over the posterior surface of the joint. On the separation of the eschars
copious suppuration was established and kept up by appropriate dressings. August 11. An opening formed over the outer condyle and discharged a large collection of thin yellowish-white matter; ordered poultices. October 8. An extensive collection of matter had formed above the elbow on the posterior and inner surface of the arm, covering its lower third; the parts around were oedematous, and doughy; with increased heat, and a shining appearance of the skin. It was punctured, and discharged a large quantity of thin ill-conditioned fluid, mixed with lumps of curdy matter. Up to the 16th of January last, no improvement took place, notwithstanding various methods of treatment were resorted to; on the contrary, the disease of the elbow had extended, and the patient's general health had been affected by the constant local irritation. He had suffered at times from febrile paroxysms coming on with chills, and attended with profuse perspiration and acute pain in the back at the lumbar region, that extended to the right side along the crest of the ilium, the character of which was obscure. His general strength had been pretty well sustained, and with few exceptions he had been able to go about. The organs of the chest were healthy. It was now obvious that no further delay was admissible, and recourse must be had to amputation or excision. The condition of the limb at this time was as follows:—It was kept at a right angle in a sling, and admitted only a slight degree of motion at the joint; the swelling though very considerable, was confined to the immediate vicinity of the elbow, above and below which, the limb was very much wasted from long inaction. The opening over the outer condyle had ulcerated to the size of half a dollar; and at the bottom of it, the head of the radius lay exposed, and rotated with the pronation and supination of the hand; though covered with granulations, the edge of the bone could be felt rough, and in a state of caries. Along the inner margin of the joint, there were two small openings with swollen edges; one, an inch below the olecranon, at the bottom of which the probe encountered this bony process in a denuded state; the other, at the same distance above the inner condyle did not communicate with the bone. The skin and subjacent tissues covering the proterior surface of the joint were thickened, and of a dusky redish colour; there was but little increased heat in the part, and very little pain. The discharge was
abundant and mixed with synovia. He retained the power of rotating the hand, but could not clench his fist. There had been an improvement in his general condition for several days previous to the operation; his appetite was good; his tongue clean, and bowels regular. He slept well, and was able to be about the whole day, though his countenance was rather languid and his cheeks flushed; pulse 92 and weak. He has suffered considerably of late, with pain in the back and left hip, but is now much relieved.

Operation. — January, 16th. A tournequet being first applied to the arm high up, the patient was laid on his left side, and the right arm supported, with the elbow elevated and hand depressed.

A transverse incision was first made across the triceps muscle at its insertion, with a straight bistoury introduced (its back turned towards the ulnar nerve) at nearly a finger's breadth above and on the radial side of the inner condyle, and carried down to the bone; the point of the bistoury being made to graze its posterior surface and emerge at the outer condyle, while the edge was corrected obliquely downwards, so as to keep close to the surface of the olecranon process.

Two longitudinal incisions were made from the extremities of this transverse one, extending an inch and a half above the condyles; similar ones were made, in continuation, below them, all forming together the letter H. The superior flap was dissected up from the bone, but the inferior included only the skin and fascia. The olecranon process being freed from the muscles and ligaments inserted on either side of it, was sawed about two-thirds through, at an inch and a quarter from its extremity, with the common amputating saw, and the section of it completed with a chisel and mallet. The ulnar nerve was drawn to the inside, while the muscular and ligamentous attachments were dissected from the condyles close to the bone. The disease appearing to have extended above the external condyle, it became necessary to make this section oblique, so as to include one inch of the extremity of the bone on its outer edge, and only half an inch on its inner. Nearly half an inch was then sawed off from the head of the radius, after first protecting the soft parts by slipping over it a slitted band of muslin, that served as a retractor. The rough inequalities of the bone, as well as the cartilage covering the
coronoid process were pared away with bone forceps. All the soft parts were infiltrated and thickened, and the joint itself coated with a morbid product of a gelatinous appearance. This condition embarrassed the operation by obscuring the parts and rendering it difficult to detach the soft parts from the bones; a considerable portion of this morbid tissue was dissected out. All the articular surfaces were found to be denuded of cartilage, rough and very vascular; at the bottom of the concavity of the olecranon, ulceration had extended into the cells of the bone and formed a cavity capable of holding a small pea. The roughness extended an inch above the outer condyle, as already noticed.

The newly divided bony surfaces, though very vascular, had a healthy appearance. The hemorrhage was moderate during the operation, and only a single ligature was applied. The edges of the transverse incision were brought together by two sutures, and those of the longitudinal incision on each side by as many more, one being introduced above, and the other below the intersection of the two incisions. No suture was admissible to the incision below the outer condyle from the existence of the ulcer at this point. Introducing the sutures, it was noticed that the upper longitudinal incision on the inside extended to within a finger’s breadth of an old sinus; it was therefore prolonged to the sinus. Five sutures in all were employed, and between them strips of adhesive plaster applied, over which dry lint was placed, covered with a compress spread with simple cerate, and secured by a figure of eight bandage. The operation was a very painful one, and occupied about thirty minutes exclusive of the dressing. The limb was placed on a pillow, in a position intermediate between extension and a right angle. On removal to his ward, the patient took an anodyne draught containing tinct. opii. 3j; that was repeated in two hours, and at evening was ordered an effervescing mixture every two hours.

Jan. 17th. Patient has passed a comfortable night, and had considerable sleep; he is free from pain; his pulse is 120, and temperature natural. There has been a free oozing of bloody serous fluid from the wound through the dressings. I divided some of the turns of bandage over the elbow on account of swelling of the forearm, directed the dressing to be kept wet with spirit lotion; at evening he was comfortable and free from pain
in the back and hip, with which he suffered before the operation; pulse 108.

18th. Has passed a good night; pulse 96, without fever; directed to take half an ounce of epsom salts, and was allowed stewed prunes. At evening, the swelling of the forearm had diminished. He has had two evacuations from his bowels.

19th. Has had a pretty good night; experienced slight chills in his shoulder and arm after midnight, which he attributes to the lotion; pulse 96; temperature natural; left cheek flushed. A warm infusion of opium was substituted for the lotion.

20th. Has slept but little, though free from pain and uneasiness. Dressed the wound for the first time, and found adhesion had taken place between the edges of all the incisions; the ulcer over the head of the radius had improved in appearance and discharged a considerable quantity of pus; the old sinus at the upper extremity of the wound on the inside also discharged freely: the sutures were left undisturbed, and the dressings reapplied as follows:—the joint was enveloped in a compress split into four tails, and spread with simple cerate, and over it strips of muslin were loosely applied, after the manner of the many tailed bandage. The limb was then laid in a guttered tin splint, bent at a very obtuse angle, and well padded with cotton; the whole supported in an easy position on pillows; his pulse was 104. He was allowed a few oysters and one pint of porter.

23d. Patient has been comfortable since last report; has had good nights, and taken food with satisfaction. Suppuration is copious, and there being no free outlet on the lower side of the elbow, the matter accumulates between the ends of the bones beneath the adherent flaps, and at each dressing, requires to be evacuated from the opening on the outer side. Two remaining sutures were removed, (the others having been so at the second dressing.) The guttered splint proving inconvenient, I discontinued the use of it, and placed the limb on a well stuffed hair pad, and found it far preferable. To prevent motion as much as possible during the dressing, an assistant suspends the arm by means of two bands placed at a hand’s breadth above and below the elbow, the patient himself, at the same time steadying his hand. While held in this position, the parts are cleansed, and after fresh dressings have been arranged upon the pad, the limb is replaced.
I began to tighten the bandages to-day with the view of making slight pressure. An inflammatory induration is observable on the inner side of the arm along the course of the vessels extending two-thirds up, and accompanied with some tenderness. His bowels are moved spontaneously every day, and he perspires some at night.

26th. Suppuration has diminished nearly one half since last report, and the swelling has subsided, his general condition continues favourable, and he is allowed a generous diet.

27th. After passing a comfortable night, patient was seized with a smart rigour, followed by fever and vomiting that threatened an attack of erysipelas, which is prevalent in the hospita. Directed calomel grs. viij. Rad. Rhei pulv. grs. xv, which was rejected soon after being taken. The effervescing mixture was then given every hour, and at bed-time, a pill of calomel grs. v, pulv. opii. gr. j.

28th. Erysipelas has appeared on the posterior and inner surface of the arm from the elbow to the deltoid muscle suppuration is moderate from the wound. Tongue loaded with yellow fur. No evacuation from the bowels. Directed to take a seidlitz powder with epsom salts every four hours, till they are moved. An infusion of opium to be applied to the arm after smearing the erysipelatous surface with Unguent Hydrarg.

29th. He has passed a more comfortable night; pulse 108; his bowels have been freely opened; his tongue is still loaded, and he inclines to vomit. Erysipelas has extended over the deltoid. Suppuration has abated in the wound. Ordered tart. antim. gr.j.; rad. ipecac p. 3j. and a narrow strip of blister across the shoulder to circumscribe the erysipelas in this direction.

31st. Erysipelas has spread to the wrist below, and over the scapula above. The skin of the forearm is somewhat tense and firm; above the elbow it is soft and supple. Suppuration is pretty free, and of healthy quality; his tongue is cleaner; his bowels bound; pulse 112, and temperature natural. Ordered compound infusion of senna, that was followed by three evacuations, and in the place of infusion of opium, a lotion of

Acet. p.umb. p. 5 ss.
Spirit vini. Rub. ½ iv.
Tinct. opii. 3 ii.
Aq. Font. 5 xij. M.
1811.

Feb. 2d. Erysipelas has disappeared from the neighbourhood of the joint, and extended to the back and nape of the neck. He had considerable fever last evening, and complained of twitching in all his limbs. The discharge is more copious from the inner side of the elbow. Covered the erysipelatous surfaces on the back and neck with cloths spread with simple cerate, and ordered effervescing draughts.

3d. Erysipelas is spreading around the right side of the chest and over the clavicles; his general condition is pretty favourable. The swelling of the arm has further subsided. Applied the many tailed bandage from the hand to the shoulder; penciled the margin of the erysipelas with nitrate of silver; ordered to take at bedtime calomel grs. iij, P. Dover. grs. v, and the following morning the compound infusion of senna.

4th. The erysipelas has been arrested wherever the nitrate of silver was applied. It is now spreading towards the face and scalp. He has passed a comfortable night; his pulse is weak; his bowels have been moved; the wound appears well. Repeat the nitrate of silver.

8th. Erysipelas has disappeared; patient is comfortable; the arm was placed in a paste-board casing at right angles. Allowed a more generous diet; oysters and a pint of porter.

9th. Patient has had a slight rigour, and is feverish; no appearance of erysipelas remains, except a flush on the cheeks. The elbow appears well; the discharge is thinner, but not more abundant. Stopped oysters and porter; ordered effervescing draughts, and liquid nourishment.

12th. Patient sat up yesterday four hours; the arm in a paste-board splint, supported by a sling at nearly a right angle; the discharge from the inner side has nearly ceased. Resumed a more generous diet. Enveloped the joint in strips of adhesive plaster applied after the manner of the many tailed bandage, and commenced making passive motion more freely.

13th. The adhesive straps were found too irritating to the skin, and were left off.

19th. Patient is able to sit up all day and walk about the ward. He suffers again from his old complaint, pain in the back over the region of the right kidney, extending around the right side to the abdomen; there is some tenderness on pressure,
but no swelling or induration. Ordered cups to the part. Ulcer on the outside of the joint has diminished in size, and suppurates but little from the old sinus on the inside; a lemon coloured viscid fluid is discharged in small quantities. The arm can be drawn up by the sling so as to bring the fingers to the mouth, and can be extended out to a large obtuse angle. Began using a machine adapted to produce gradual extension to a straight position.

March 8th. There has been a progressive improvement in the condition of the elbow since the last date. The swelling and thickening of the tissues have diminished so far that the joint may now be considered of its proper size; its form is tapering from the joint upwards and downwards, and when flexed, is rounded at the elbow instead of being sharp; along the track of the inner and transverse incisions, three or four small openings with swollen edges still exist, from which oozes a slight discharge of viscid fluid, the ulcer on the outside is reduced to half its former dimensions, and suppurates but little; the patient is not yet capable of flexing and extending the arm, though he is conscious of returning strength in the limb; he can grasp an object with some force with his fingers. The hand inclines to a state of pronation, and is susceptible of being rotated only within narrow limits, so as to describe about one-fourth of a circle of which the inner edge of the hand is supposed to form the centre, and its outer edge, the circumference; any attempt to increase the degree of supination causes pain along the outer edge of the radius at the junction of its inferior and middle third. In moving the elbow, no feeling of crepitus has at any time been perceptible. The treatment has consisted in friction of the entire limb with spirit; simple dressings to the elbow, with a roller bandage from the hand to the shoulder; together with the use of the machine alluded to above, to extend the limb to a straight position. His progress has been retarded for a fortnight past, by the pain in his back, obliging him to keep quiet in bed, and thus preventing the use of his limb. I hope hereafter to give the further result of this operation.
HOSPITAL REPORTS.

Report of attendance in the Second Surgical Division of the New-York Hospital, from July 1st 1840, to January 1st 1841.

By Gurdon Buck, M. D., one of the Surgeons to the Hospital.

Of the seven wards belonging to the Second Surgical Division, six are appropriated to seamen and one to patients of the lower class, with accidents, and other surgical diseases. At the commencement of the period embraced in this report there were

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the house</td>
<td>54</td>
</tr>
<tr>
<td>Admitted during term</td>
<td>244</td>
</tr>
<tr>
<td>Making in all</td>
<td>298</td>
</tr>
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</table>

Of which, there remained on the first of January

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
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<tbody>
<tr>
<td>Cured</td>
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</tr>
<tr>
<td>Relieved</td>
<td>17</td>
</tr>
<tr>
<td>Died</td>
<td>11</td>
</tr>
<tr>
<td>By request</td>
<td>12</td>
</tr>
<tr>
<td>Eloped</td>
<td>4</td>
</tr>
<tr>
<td>Disorderly</td>
<td>3</td>
</tr>
<tr>
<td>Transferred</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>249</td>
</tr>
</tbody>
</table>

Those cases only that were discharged will enter into this report; of those remaining in the hospital at the close of my term of attendance, a few possessing special interest either from having been operated on, or from other circumstances, were retained under my care, and will be noticed, so far as their treatment is complete.
The following is a list of the diseases for which the patients were admitted.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Number of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fractures</td>
<td>21</td>
</tr>
<tr>
<td>Luxation</td>
<td>1</td>
</tr>
<tr>
<td>Necrosis</td>
<td>1</td>
</tr>
<tr>
<td>Injury of the Head</td>
<td>2</td>
</tr>
<tr>
<td>Inflammation of the Joints</td>
<td>4</td>
</tr>
<tr>
<td>Venereal Diseases</td>
<td>69</td>
</tr>
<tr>
<td>Diseases of Genito Urinary Organs, not Venereal</td>
<td>15</td>
</tr>
<tr>
<td>Ulcers</td>
<td>26</td>
</tr>
<tr>
<td>Contusions</td>
<td>26</td>
</tr>
<tr>
<td>Wounds</td>
<td>19</td>
</tr>
<tr>
<td>Inverted Toe Nail</td>
<td>2</td>
</tr>
<tr>
<td>Inflammations</td>
<td>5</td>
</tr>
<tr>
<td>Diseases of the Eye</td>
<td>4</td>
</tr>
<tr>
<td>Abscess</td>
<td>1</td>
</tr>
<tr>
<td>Burns</td>
<td>4</td>
</tr>
<tr>
<td>Periostitis</td>
<td>3</td>
</tr>
<tr>
<td>Sprain</td>
<td>1</td>
</tr>
<tr>
<td>Erysipelas</td>
<td>5</td>
</tr>
<tr>
<td>Glandular Swelling</td>
<td>1</td>
</tr>
<tr>
<td>Epistaxis</td>
<td>2</td>
</tr>
<tr>
<td>Eruptions, not Venereal</td>
<td>12</td>
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<tr>
<td>Furunculus</td>
<td>1</td>
</tr>
<tr>
<td>Deformities</td>
<td>2</td>
</tr>
<tr>
<td>Delirium Tremens</td>
<td>4</td>
</tr>
<tr>
<td>Oedema</td>
<td>2</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>16</td>
</tr>
</tbody>
</table>

249

Of the eleven fatal cases, one died of syphilitic cachexia, with eruption, and ulceration of the pharynx and larynx.

One of inflammation of the brain, consequent upon injury of the head.

One of infiltration of urine with sloughing.

Three of Delirium Tremens (one with comminuted fracture of the os bra-chii.)

Two of fracture of the spine.

One of phthisis pulmonalis (entered with stricture of urethra.)

One of profuse suppuration following erysipelas phlegmonodes of lower extremity.

One of sloughing after paralysis from injury of the spine.

The following surgical operations were performed: trephining, one; cutting into the urethra, two; amputation at the shoulder joint, one; excision of the elbow joint, one; division of the tendons in the ham, one; sutures after wound of the intestine, one; trephining the tibia for necrosis, two; operation
for deformity of the hand, one; removal of the toe nail, two; injecting hydrocele, two.

I propose to make a few remarks on some of the diseases enumerated above, and give in detail, such of the cases as possess sufficient interest.

Fractures: of the lower jaw, one; spine, four; ribs, three; clavicle, two; os brachii, three; radius and ulna, one; os femoris, one; patella, one; tibia and fibula, (simple) two; ditto, (compound) one; tibia alone, one; fibula, one. Total, 21 cases.

Fracture of the Lower Jaw.—The only case of this injury was a double fracture between the angle and condyle of the right side, and the incisor and canine teeth of the left. It was caused by the wheel of an empty cart passing over the face, and was attended with much contusion and swelling of the cheek. The result however was favourable, and the fragments united without deformity.

Fracture of the Spine. — Of the four cases, three were fatal, and one recovered. In one of the three fatal cases, no fracture could be discovered, though paralysis had followed the injury.

Case I.—Fracture and displacement between the twelfth dorsal and first lumbar vertebra, with fracture of seventeen ribs, and comminuted fracture of both thighs.

Daniel Loftus, aged 50 years, born in Ireland, was admitted Oct. 2d, with severe injury that happened four days before, while he was employed in undermining a bank of earth on Section 14, of the New-York and Erie Rail Road.—The spine was fractured and displaced between the last dorsal and first lumbar vertebra; the latter was forced behind and to the right side of the former, so that its spinous process was ready to protrude through the skin. Both thigh bones broken into several fragments without lesion of the skin. Paralysis of sensation as well as motion was complete in the lower extremities. There had been no evacuation of urine or feces since the accident. The bladder was very much distended, and reached nearly to the umbilicus, causing tenderness on pressure in this region. The pulse was small, weak, and of natural frequency. Respiration heaving, but apparently easy. Tongue dry, and covered with a yellowish brown coat, thirst constant; the abdomen somewhat swollen and tympanitic.

A purgative of calomel, gr. x. and jalap, gr. xv. was given, and followed by enema, and the catheter directed to be used four times in 24 hours.

Oct. 4th. No evacuation of the bowels was yet procured, the urine accumulated rapidly from the quantity of drink used to allay his incessant thirst. Ordered one drop of croton oil with an ounce of castor oil.

Oct. 6th. Free evacuations from the bowels followed the use of the oil, after which the abdomen became flattened; passed a sleepless night. The fractures of the ribs were first noticed, though not to the extent afterwards ascertained to exist.

Oct. 7th. The patient's symptoms continued without change, the urine re-
tained its healthy appearance, and the bowels remained costive after the operation of cathartic medicine; at 3 P. M. he began to sink, and died at 8 P. M., having survived, much to our astonishment, this severe injury, nine days.

Post-mortem Examination 14 hours after death. The skin covering the spinous process of the first lumbar vertebra was ulcerated and thin; the muscular and cellular tissues on either side of the spine, above and below the fracture, were infiltrated with blood. Complete separation and displacement had taken place between the last dorsal and first lumbar vertebrae, so that the anterior and superior edge of the body of the latter overlapped the inferior edge of the transverse process of the former, and lay on the right side of its spinous process; the left transverse process of the first lumbar vertebra rode upon the spinous process of the last dorsal and projected beyond it; by this means the spinous process of the first lumbar vertebra was made to protrude backwards and to the right, a distance of three finger's breadth beyond the line of the spinal column, and caused a very prominent angular deformity at this point.

The division of the spinal marrow was complete. All the ribs on the left side, except the first, were fractured from two to six inches distance from their anterior extremities. The 4th, 5th, 6th, 7th, 9th and 10th, of the right side, were also fractured, but with less laceration and displacement than on the left side, and at points more remote from their anterior extremities. A thin layer of plastic lymph covered the surface of the inferior half of the lower lobe of the right lung; the substance of the lobe was solid and of a grayish red colour, was easily broken down under the fingers and exuded a thick chocolate coloured fluid; in the centre was an extensive cavity filled with a similar fluid and lined with a distinct membrane of a grayish yellow colour, smooth and tough, as thick as a sixpence. The upper portion of this lobe was in a state of red hepatization, and the posterior part of the upper lobe was engorged. The left lung was healthy. The heart was healthy and the pericardium contained about an ounce of serum.

Blood was found extravasated between the folds of the mesentery on the left side of the spine, and those of the meso-colon of the same side, as well as around the left kidney, the lower edge of the spleen, and into the cellular and muscular tissues about the lumbar vertebrae. There was a partial dislocation of the first lumbar vertebra on the second, so that the body of the former was pushed half an inch behind the latter.

The muscles of both thighs were softened and infiltrated with bloody fluid of a chocolate colour; the bones of both were comminuted, those of the right limb more than the left.

Case II.—Fracture of the Fifth Cervical and Second Dorsal Vertebrae. Extravasation of blood upon the brain.

Francis Goodhue, aged 33 years, a porter, born in Massachusetts, was received Oct 28th, in the afternoon, with injury of the spine, from a bale of hay falling on him two hours before admission. He was unable to speak though evidently conscious; the lower extremities were completely paralyzed. The pulse was 52,
weak and irregular, the temperature below the natural standard, the countenance pale, and the respiration was performed without motion of the ribs. Priapism also existed. The abdomen was tympanitic though supple. The spinae process of the second dorsal vertebra was more prominent than the rest, and slightly moveable, but without crepitus. Ordered wine sangaree till reaction should commence, and a large sinapism to be applied to the abdomen and chest.

Oct. 29th, morning. Patient passed a restless night. Reaction commenced late in the evening, and is now fully established. His pulse is 100, tense and sharp, the skin hot, and respiration 38 a minute, and labored. Patient lies with his eyes closed and in a state of stupor, from which he can be only partially roused, his pupils are contracted, and the vessels of the conjunctiva injected. The eyes protrude forward. Abdomen is tympanitic and tense. Ordered venesection to 3½xvi, and calomel grs. x with jalap 3½j. On introducing the catheter very little urine flowed. In the afternoon the pulse again became frequent and tense, with hot and dry skin. Venesection was repeated to ten ounces, and enemata given to move the bowels, but without effect.

Patient died at 8 P.M., the skin being relaxed and bathed with clammy sweat for two hours preceding.

Post-mortem examination, 14 hours after death.

Blood was extravasated into the muscles on either side of the spine, at the lower part of the cervical and upper part of the dorsal regions; bloody fluid flowed from the nose and mouth. The fifth cervical and second dorsal vertebrae were fractured through the bony plates that unite the spinous with the transverse processes. A circumscribed ecchymosed spot, two inches in diameter, existed under the scalp, at the vertex. The vessels of the pia mater, covering the surface of both hemispheres of the brain, were injected with blood, the posterior surface of the right hemisphere was covered with a thin layer of fluid and coagulated blood; there was no effusion into the lateral ventricles, and the cerebral substance was of good consistence. On removing the cerebellum a quantity of blood was found in the occipital fossæ, that subsided into the vertebral canal on raising the head. On exposing the sheath of the spinal cord, from the fourth cervical to the middle dorsal vertebra, the cavity of the arachnoid membrane was found distended with bloody serum mixed with bubbles of air. The cord itself exhibited no marks of injury. Four ounces of fluid blood were found in the cavity of the left pleura, and extravasation had taken place beneath this membrane, on the right side of the spine and at the roots of the lungs. Both lungs were very much engorged with blood, particularly at their posterior part. The stomach contained a quantity of crude alimentary matter. The bodies of the vertebrae, noted above, were also fractured, with slight displacement.

Case III.—Supposed Fracture of the Ninth Dorsal Vertebra.

Recovery.

Daniel Manning, aged 41 years, a labourer, born in Ireland, was admitted in the morning of July 14th, immediately after a fall from a scaffold, sixteen feet
high, upon a pile of stones, by which he injured his back. There was complete paralysis of the right leg, with impaired sensation, and partial paralysis of the left. The lower half of the abdomen was swollen and tympanitic, and all its muscles in a state of firm tension. Over the ninth dorsal vertebra a depression existed, and pressure at this point gave severe pain. No constitutional disturbance had yet been excited. Frequent vomiting occurred during the day, and uneasiness in the lower part of the abdomen from distension of the bladder. Effervescing draughts were ordered, and an enema with half an ounce of spirit Terebenth. The catheter to be used four times in twenty-four hours.

15th. Vomiting had ceased, and the enema had been retained; the abdomen was swollen and tympanitic, but less tense. The pulse was natural. Ordered mixt. eccoprotic 3 i.

17th. His bowels moved without his being conscious of it, but not till after two drops of croton oil with an ounce of castor oil had been given, when the swelling of the abdomen subsided. Urine high coloured. His pulse was 60 and sluggish; and he complained of severe pain in the back and both thighs.

20th. The urine is still high coloured, and deposits a copious albuminous sediment at the bottom of the vessel.

22d. Patient begins to recover the use of his limbs, is able to bend the right leg, and turn in bed with facility.

23d. The urine has become natural in appearance, and without albuminous deposit.

Aug. 17th. Has recovered the use of his lower limbs, so as to walk about with the aid of crutches, and has passed a small quantity of urine, at times, without an instrument. Paralysis of the sphincter ani continued. The seat of the injury is no longer painful on pressure; the depression remained the same as noticed at first. Ordered a blister over the pubes.

20th. Patient has acquired some control over the sphincter ani.

28th. Has passed his urine for a few days past involuntarily. The use of the catheter is continued. Ordered Tinct. Lyttae gutt. x. ter in die.

Sept. 3d. Applied a blister over the sacrum.

6th. The functions of the bladder have improved. Patient is able to pass some urine by natural efforts; and walks without the aid of crutches or cane. Was discharged with instructions to use the catheter when necessary.

Case IV.—Supposed fracture of the cervical vertebrae; paralysis. Sloughing sores, &c. No lesion of the spine found after death.

John Raymond, aged 36 years, seaman, born in France, was admitted April 16th, with injury of the cervical vertebrae, from a fall the day previous, from the fourth story window of a house. All the limbs, as well as the rectum and bladder, were paralysed. About a fortnight after his admission he recovered the use of his bladder, and at a subsequent period, that of his rectum. The paralysis of the limbs continued till death, which took place the first of July, from the irritation and exhaustion produced by sloughing sores over the sacrum and trochanters.
Post-mortem examination. — The spinal canal was laid open from the atlas to the middle dorsal vertebra, and the medulla spinalis found perfectly healthy, as well as its investing membrane. No sign of fracture or disease of the vertebrae could be discovered. The cerebrum and cerebellum with their membranes were healthy and of good consistence.

Fractures of the os bracchii. — One of the three cases of this injury proved fatal from delirium tremens. One of the other two was treated in the usual manner, and was remarkable only on account of the length of time required for union of the fragments. Nine weeks elapsed before the splints could be dispensed with, and the patient allowed to begin using the limb.

The third case was treated with the starch apparatus, which was applied a week from the accident, after the swelling had subsided.

Case V.—Comminuted fracture of the os bracchii at its neck, terminating fatally with delirium tremens.

Daniel Ford, aged 25 years, a seaman of very athletic frame, born in New-York, was admitted July 10th, with injury of the left shoulder, of which he gave the following account. On the seventh inst. he fell from a staging, a height of about six feet, upon his shoulder and arm, in an elevated and extended position; the same day, and the day following, powerful extension was made on the supposition that the shoulder was dislocated, since which the parts have swollen very much and became discoloured. His present condition is as follows: the left shoulder, and neighbouring parts of the neck and chest as well as the arm and upper third of the forearm, are very much swollen, tense and elastic; the inner surface of the arm, from the axilla to the elbow, has a raspberry colour, shading off at the edges to a brownish purple. Pain is referred to the upper third of the arm, and very distinct crepitus is felt between the insertion of the deltoid and the joint. Dimensions by measurement, from the acromion process, around the axilla, 19 inches; of the sound limb 16. Circumference of the arm at the margin of the axilla, 14 inches; sound limb 11. Above the below, 12; sound limb 10. The pulse is distinct at the wrist, and the temperature natural. The general condition of the patient is apparently good.

Ordered Magnes. Sulph. ʒ. The limb to be kept wet with evaporating lotion.

12th. Has passed a sleepless night, with delirium; his pulse is weak and frequent; has tremors. Ordered a pint of porter. At evening delirium had increased, and he was ordered brandy and anodyne enemata.

13th. Has passed another sleepless night, with increased delirium; is exceedingly restless, and attempts to get out of bed. The swelling has increased considerably, and ecchymosis has extended to the top of the shoulder and on
the outside of the arm; it is impossible to keep the limb in a quiet position; the face is flushed, and the skin bathed in perspiration; the pulse weak and frequent. Ordered Tinct. Opii 3 i every two hours. At evening all his symptoms were very much aggravated. Ordered an enema of Tinct. Opii 3 ss with starch 3/4, and Tinct. Lupulin 3 i in a draught of porter, every two hours, in the place of laudanum and brandy. After the enema he became tranquil for a short time, when the symptoms recurred with the same violence as before, and continued till one o’clock, A. M., when he died.

Dissection of the Shoulder.—Extravasation of blood had taken place into all the tissues surrounding the upper half of the os brachii. The neck of the bone was obliquely fractured, and comminuted with numerous sharp spicula. The upper fragment was drawn upwards and outwards, and formed an obtuse angle with the lower one. The joint was uninjured, as well as the acromion and coracoid processes.

Fractures of the lower extremity.—Simple fractures of one or both bones of the leg were treated with the starch bandage, with the most satisfactory results. At the expiration of a week or ten days from the injury, and after the swelling had been reduced by cooling lotions, the limb was put up in starch; and in two or three days, when it had become dry and solid, the patient was allowed to get out of bed and walk about with crutches. No further attention was generally required till consolidation of the fragments had taken place, when the whole was removed, and a common roller bandage substituted. The advantage of this method is obvious, not only in the saving of trouble to the surgeon, but in procuring much comfort to the patient. If the violence that has caused the fracture is not very great, and the case comes early under treatment, before swelling has commenced, the starch bandage may be applied without delay; and thus the confinement of the patient to his bed be still further curtailed.

Luxation.—The only case of this injury that occurred, was one in which the head of the os brachii was thrown into the axilla. The patient was a very robust and muscular man, 36 years of age, who was admitted two hours after the accident, having already been subjected to attempts for its reduction for nearly an hour. The method, to which we resorted, was to suspend him by the wrist from the ceiling, and allow the arm to bear the whole weight of the body. While in this position, three grains of tartar emetic in solution were administered, which, in the space of ten or fifteen minutes, produced great relaxation and faintness. At this moment he was taken down, and the arm brought promptly to the side, the elbow being at the same time pushed upwards. The shoulder was now found to be reduced, without our having appreciated the exact moment at which it took place.
Case VI. -- Necrosis of the tibia. Application of the trephine for the removal of the sequestrum.

John Hughes, a boatman, born in England, aged 16 years, was admitted Nov. 5th, 1839, with the above disease. He had previously enjoyed good health, and his appearance was indicative of a robust constitution. Before the disease in question, he had had, in spring and autumn, attacks of severe pain in both knees, unaccompanied with swelling, which lasted three or four days. The history of the present disease is as follows. In the autumn of last year, while engaged in his ordinary work on a farm, he was suddenly seized in the afternoon with such severe pain in the right knee that he reached his home with difficulty, though not far distant. No injury, or other circumstances, preceded the attack, to which it could be attributed. The same evening, swelling commenced, extending from the knee to the ankle, and the pain increased, accompanied with fever, thirst, &c., &c. In about a week, a pimple appeared over the middle of the tibia, and being punctured, gave vent to a large quantity of pus from which he experienced great relief. The discharge continued abundant for a fortnight and then abated, but has never entirely ceased. During the following winter, he went about with the aid of crutches, the limb continuing swollen. In the spring, he resumed his occupa on with his usual activity, and has continued them up to the day of his admission. Early the past summer the upper part of the tibia became exposed, since which the discharge has been more abundant, but without prejudice to his general health.

Present condition of the limb: the whole leg from the knee to the ankle is very much swollen, the tibia itself is expanded and increased in volume, and the skin covering it, shining, hard, and tense; at two finger's breadth above the instep are two small fistulous openings with swollen edges leading to denuded bone. Over the middle of the tibia are three similar openings, and at its upper and broadest part, an extensive surface of bone is bare, at the bottom of an oval ulcer, two and a half inches long, and one and a half broad. The edges of this ulcer are callous and rounded from the turning in of the skin. The exposed bone is of a dull whitish colour, and can be moved up and down within its encasement. A probe placed in contact with the bone at the bottom of one of the sores, over the middle of the tibia, moves, at the same time showing the continuity of the sequestrum at this point. The patient suffers no pain in the limb. The veins ramifying upon the outer surface of the leg are somewhat varicose.

Operation. Nov. 16th. The upper extremity of the sequestrum extending upwards, beyond the oval opening already described, could only be disengaged by dividing it across, and this was done by removing a circle from its middle with the trephine, and then cutting through its edges, with the bone forceps, after which the upper fragment was drawn away. The lower fragment of the sequestrum was too long and too firmly locked in, to admit of removal through the oval opening already existing, it was therefore necessary to extend it downward, which was done in the following manner. An incision was made from its inferior margin, along the anterior edge of the tibia, to one of the fistulous
openings in the middle of the leg, the edges were dissected up, and the surface of the bone laid bare, over a space two fingers in breadth, and five or six inches in length. A circle was then removed with the trephine, from the middle of the tibia, at the lower part of the incision, and two parallel cuts were made with a convex saw joining these two openings. On removing the included portions of bone with the aid of a chisel and mallet, the sequestrum was brought into view, but was so large that it was necessary to dilate the opening still more at its upper part, which was done with the chisel and mallet. This portion of the bony encasement of the sequestrum was half an inch in thickness, rough and uneven upon its outer surface, and spongy and vascular in its texture.—With the aid of strong forceps, the sequestrum was brought away after reducing it to two portions, that together formed a piece nine or ten inches in length, with rough edges, and sharp spicular extremities. But little hemorrhage occurred during the operation. The cavity of the wound was filled with lint, and a roller loosely applied. The same evening he had a rigour, followed by fever. The constitutional disturbance that succeeded, kept within moderate bounds, and was treated with saline cathartics, anodynes and diaphoretics. Poultices were applied to the limb.

On the 29th Nov. The ulceration had spread beyond the wound, and involved the indurated thickened tissues around.

Dec. 6th. The sore took on a sloughy character, particularly at its lowest part; his pulse was weak, and his appetite indifferent. Ordered to take sulphate of quinine, gr. i, ter in die — a pill of opium of one grain every six hours, one pint of porter daily, and generous diet. The sore to be kept wet with an infusion of opium, of half a drachm to a pint of boiling water, with the addition of one drachm of nitric acid. Under this treatment the sore soon improved and put on a healthy appearance.

Dec. 16th. The cut edges of the bony shell were cast off and the whole cavity was filling up with healthy granulations.

Dec. 30th. A portion of sequestrum of about three inches in length was removed from the upper part of the cavity of the tibia, not however without considerable difficulty and disturbance of the granulations, in which it was imbedded; the operation caused much pain and brought on a hysteric paroxysm, which was relieved after taking a draught of tinct. aasafætid. 3 j. and solut. sulph. morph. 3 ss. in mint water.

April 25th, 1840. Since the last report the condition of the limb has gradually improved, the cavity left by the removal of the sequestrum was now nearly filled up, and the skin was cicatrized over the upper part; a superficial sore still exists over the middle and lower part. The two fistulous openings at the lower part of the tibia, noticed from the first, continue to discharge a small quantity of matter, and allow a probe to be passed an inch in depth, where it encounters a rough sequestrum that is firm and immovable. That it is detached however, may fairly be inferred, from its coexistence with the one at the upper part of the tibia. The whole limb is much larger than its fellow, owing to the expansion of the bone. The patient’s general health has been very good for several months past.
A second operation, was performed for the removal of the lower sequestrum. A longitudinal incision was made five inches in length, extending above and below the fistulous openings; and a transverse one of two inches, crossed the middle of it; the angles were dissected up, and the surface of bone exposed. Two trephines were applied; the first included the openings in the bone, and the second, larger than the first, was applied below, leaving an interval of an inch between the two, and this was removed with a chisel and mallet; the sequestrum was then broken down with a strong forceps, and taken away piecemeal: a very painful operation. Erysipelas attacked the limb a few days after the operation, and was accompanied with excessive oedema. As it subsided, subcutaneous abscesses formed about the ankles, and upon different parts of the leg. Up to the time of his discharge from the Hospital the condition of the limb progressively improved: the extensive openings made by the operations, were filled up with bony matter, so that the surface of the tibia was convex and even, excepting at the upper part, where there remained a depression, at the bottom of which was a small fistula leading to rough bone, the whole tibia was still very much expanded, making the limb much larger than its fellow; two or three superficial sores in a healing state existed upon the shin.

Discharged, August 7th, 1840.

Injuries of the Head. — One of the two cases that occurred proved fatal from inflammation of the brain.

Case VII.—Wound of the scalp. Fracture of the ribs. Inflammation of the brain.

James Ash, a seaman, aged 50, born in Ireland, was admitted Sept. 22nd, with an injury from falling into a vessel's hold, a height of about fifteen feet. A wound existed over the occipital protuberance on the right side of the median line, and extended down to the bone, which was denuded but not fractured. There was also a contusion of the nape of the neck, and fracture of the 8th or 9th ribs on the right side near their middle. There was no constitutional disturbance; the pulse was calm, and the temperature natural; but the respiration was hurried and painful. Directed a broad bandage to be applied around the chest, magnes. sulph. ½ i. and a cooling lotion to the head.

26th. Patient complains of his head, and at evening has considerable excitement. Take calomel, gr. x., rad. jalap pulv. gr. xv., and be cupped on the temples.

27th. Still complains of his head, and has suffered much from pain in the side, excited by vomiting after taking the calomel and jalap. Cups to be applied to the side.

At evening. Vomiting still continued, and patient became very apprehensive he would not get well, and wanted his friends sent for. To take effervescing draughts every two hours.

28th. Has passed a very restless night, and in attempting to walk across the
yard this morning, would have fallen had he not been caught by the nurse and assisted to his bed, after which he became insensible and was slightly convulsed. Three hours after this attack, insensibility was complete, his eyes were drawn to the left side, the pupils contracted, and the conjunctiva injected, respiration was irregular, suspended at short intervals, and accompanied with inflation of the cheeks. There were slight convulsive movements with tremors of the muscles of the abdomen and upper extremities. The temperature was natural; the pulse 80, very weak and small. He had a slight cough which had existed from the first. The wound was again examined carefully, and dilated, but no fracture could be detected. Ordered cups to the temples, a large blister over the right side, and a stimulating enema containing tinct. aloes 3 i. At evening, the patient continued in the same state of insensitivity, his respiration was more laboured and stertorous, with accumulation of mucus in the air passages; the pulse was full, strong, and bounding; the skin hot and dry. Blood was drawn from the arm by a large orifice, with no other effect than that of reducing the pulse; died the same night.

Post-mortem examination, 13 hours after death.—There was no effusion into the cavity of the thorax; old adhesions of the right lung to the ribs were found. Pneumonia in the first stage was found in the upper lobe of the right lung; the lower lobe was in a state of transition from the first to the second stage. The same condition existed in a less degree in the left lung. There was a fracture of the 7th, 8th, and 9th ribs near their middle. Blood was extravasated between the folds of the meso-cecum.

Head.—A large quantity of dark blood flowed from the lateral sinuses on taking out the brain. Patches of yellow lymph were observed on the under surface of the cerebellum beneath the arachnoid membrane. That part of the surface of the right lobe of the cerebellum that corresponded to the external injury, presented a circumscribed softened portion that extended deep into the centre of the lobe, where it was of the colour and consistence of thick chocolate. No fluid existed in the ventricles. No fracture of the cranium was detected.

Case VIII.—Wound of the scalp, followed by convulsions; successfully treated by trephining.

Andrew Harris, a labourer, born in Ireland, aged 50 years, was admitted Sept. 3rd, in a state of intoxication, with an injury of the head of which he was unable to give any account. At about four finger's breadth above the right ear, there was a wound of the scalp an inch and a half in length, with uneven edges, detached from the periostium: the bone was denuded at the bottom of the wound, but no fracture could be felt. An hour after admission, he was seized with convulsions, accompanied with stertorous breathing that lasted four or five minutes, and left him in a state of insensitivity; from which he was aroused by sinapisms, so that he sat on the side of his bed and attempted to converse. Ordered calomel gr. x. rad. jalap p. 3 i.

4th. Patient has had twelve paroxysms that lasted about four minutes with
convulsions affecting all the limbs; he is now more rational, though quite confused; his pulse is 88 and weak, his tongue moist and somewhat furred, the temperature natural, and respiration calm. The body and limbs are thickly scattered with a scaly eruption, having the characters of psoriasis. Sinapisms to be repeated to the lower extremities.

5th. He lies in a state of profound stupor from which he can be only slightly aroused. Convulsions have become more frequent, lasting from two to five minutes, and affecting alike all the limbs. The abdomen is hollow and its muscles retracted towards the spine. The eyes are closed, the right pupil more dilated than the left; other symptoms remain the same. After a consultation held at noon, the trephine was applied over the seat of injury. No fracture was detected, but on removing the circle of bone, fluid blood escaped from between the cranium and dura mater, and continued to flow freely for half an hour. During the operation the patient was restless, and after it was finished, he appeared to notice persons around him, but was unable to speak.—Ordered to take calomel, gr. x. rad jalap pulv. 3 i.

6th. The convulsions have been less frequent since the operation. The patient’s countenance wears an idiotic expression; he notices those about him with a vacant smile, and makes use of some incoherent expressions. His bowels have been freely moved but without his asking for assistance. Abdomen as last noticed. Pulse very weak, and temperature scarcely natural. Cutaneous sensibility very dull and sluggish. It is only after the skin has been pinched for some time that he gives signs of feeling it.

7th. Has had but three convulsions since last report; his intellect continues the same, his bowels are very loose, and move without apparent consciousness on his part; his pulse is weaker and less frequent. Ordered wine in arrow-root and strong beef tea.

8th. Patient is more rational, and makes known his necessities; his bowels are checked, his pulse is better, the temperature of the surface is natural, cutaneous sensibility remains the same. Ordered a blister three inches by seven, to be applied to the inside of each thigh. The torpor affecting the intellect as well as the powers of sensation and voluntary motion, gradually passed away. His convalescence was retarded by an obstinate diarrhoea, attended with pain in the bowels, and considerable fever at evening: a slough also formed over the sacrum. Under the treatment pursued, which consisted of a carefully regulated diet, tonics and anodynes, he recovered so as to begin to sit up early in the month of October, from which time to the 16th December, when he was discharged, he daily gained strength. A complete circle of bone, involving the whole thickness of the cranium, was thrown off from the margin of the opening left by the trephine, and had separated in such a way that the outer table of the circle was double the width of the inner.

Inflammation of the joints.—Of synovites of the knee-joint, three cases; suppurative of the elbow-joint, one—total, four cases. The treatment of a case, inflammation of the synovial membrane of the knee-joint, consisted in the application of a very large
blister, covering the sides and front of the joint, and was resorted to immediately, where the temperature of the joint was but little elevated above that of the rest of the limb. Where there was much increased heat, leeches and cupping, with emollient poultices, were first employed, till the temperature was reduced. On the second or third day after its application, when the inflammation excited by the blister had abated, the swelling began to subside, and the effusion to be absorbed; at the end of a week or ten days, when the surface had healed, the joint was enveloped in straps of adhesive plaster, applied after the manner of the many-tailed bandage, under which the cure progressed rapidly. With this local treatment was also conjoined the use of constitutional remedies, such as salts and antimony, a strict antiphlogistic regimen, and confinement to bed; which were rigidly enforced in the early period of the disease.

The case of suppuration of the elbow-joint will be found on page 330.

Venereal Diseases.—Of primary form; Gonorrhoea, 13; gonorrhoea with orchitis, eight; gonorrhoea with chancre or bubo, four; balanitis, one; chancre, five; chancre with phymosis, one; chancre with paraphymosis, one; bubo and chancre, 19; patchy-sore and bubo, three;—total 55 cases.

Of secondary form.—Warts on the gland and prepuce, two; eruptions, three; ulceration of the throat, two; rheumatism, two; of mixed character, five;—total 14 cases—together, 69.

Gonorrhoea was treated at its onset with demulcent drinks and a vegetable diet for a few days, and then with the copaiva mixture; when accompanied with severe choree, opium and camphor were given, either by the stomach or per rectum, in the form of suppository. When the disease was obstinate and resisted this treatment, bougies smeared with balsam copaiva were introduced into the urethra, or injections of solution of nitrate of silver, (two to five grains to the ounce,) were resorted to.

Orchitis supervening on gonorrhoea, was treated with adhesive straps, enveloping the testicle so as make equable pressure, and in most cases, this method was followed by a speedy cure; sometimes the veins of the scrotum were first punctured, but in several instances recourse was had immediately to straps, even
when the symptoms were so acute that the patient could scarcely endure the handling of the parts necessary for their application. A few cases have occurred in my experience where straps could not be borne at all, on account of the aggravation of symptoms they occasioned, or where, after appearing to be beneficial for a while, it was necessary to desist from their further use.

In treating the other forms of primary venereal disease, mercury was generally employed, except in a very early stage where only the glands or prepuce were affected, in which case the sores were freely cauterized with nitrate of silver, and then healed up with black wash. A concentrated solution of corrosive sublimate and muriate of ammonia was found the most efficacious and speedy caustic for the removal of venereal warts, as well as condylomata about the anus. Great caution is required in its use; only a small group of the warts should be touched at once, and the neighbouring sound parts should be protected; a single application often suffices for their removal. In one of the cases treated, this morbid growth was so exuberant under the prepuce as to prevent its being retracted, and caused phymosis. To get access to the disease, it was necessary to slit up the prepuce on its dorsal side, after which excision was resorted to, as well as the use of the above caustic.

The secondary forms of syphilis were treated with Dupuytren's pill, (composed of Cor. Sublim, gr. ⅛, Pulv. Opii gr. ss, Extract Guiaic gr. iij,) night and morning, together with the compound decoction of sarsaparilla as a diet drink, and the warm bath two or three times a week. Sometimes Dovers' powder was also given at bed-time.

In the irregular and mixed forms of this disease, a solution of hydriodate of potass, in doses of five to ten grains, three times a day, produced very favourable effects.

Diseases of the Genital and Urinary Organs, not Venereal. Incontinence of urine, one; retention of urine, six; abscess of the scrotum, two; hydrocele, four; orchitis from injury, two; — total, 15 cases.

Of the six cases of retention of urine, five arose from stricture of the urethra, of long standing; two of the five were relieved by the catheter, and the stricture afterwards dilated with bougies; two would not admit of the passage of any instrument,
and were operated on, and one proved fatal from extravasation of urine and sloughing. The sixth case, in which no stricture existed, occurred with acute gonorrhoea and violent inflammation of the urethra, that extended to the bladder, depriving it of its expulsive power, at the same time that a copious viscid secretion obstructed the urinary passage. Besides the frequent use of the catheter, abstraction of blood by cups, and leeches over the pubes and along the perineum, together with emollient poultices, were required for its relief.

**Hydrocele.** Two of the four cases were not subjected to any treatment for their radical cure; the other two were successfully treated by injections of tincture of iodine mixed with water, in the proportions of 3iss. to ½j.

**Case IX.** — Retention of Urine from Stricture, successfully treated by cutting down to the Urethra and laying open the stricture.

John Taylor, a seaman, aged 27 years, born in England; was received, Nov. 22d, from Medical Ward No. 7, with retention of urine, from which he had suffered for three days; partial relief only having been afforded him in this time by the use of warm baths, enemata, muriated tincture of iron, &c. The stricture from which it proceeds is of six years standing, was caused by gonorrhoea, and had already once before caused retention, three years before. The abdomen was dull on percussion as high as the umbilicus, but without tenderness. Patient, though free from constitutional disturbance, suffered much from thirst, which he had to refrain from allaying. The stricture was situated behind the scrotum, and all attempts to pass an instrument through it had been ineffectual. Before the occurrence of retention, he required a long time to evacuate the bladder, the urine flowing in large drops rather than in a stream. After a long continued effort to introduce flexible as well as metallic instruments, a laxative enema was ordered, after which leeches were applied to the perineum, and the patient put into a hot bath on their falling off.

Some relief was obtained during the operation of the enema. At 7, P. M. directed him to take a two-grain pill of opium, at intervals of one hour and a half, and sit in the hip bath for an hour.

Nov. 23d. Patient has passed urine in small quantities through the night; amounting to six or eight ounces, mixed in with thick yellowish viscid matter; has had no sleep. At 4, P. M. Has experienced no essential relief, though he has taken 18 grains of opium, the only sensible effect of which has been to allay irritability. The same viscid matter is discharged, with a few drops of urine, at each effort. It was thought unsafe to allow the bladder to continue any longer in its excessively distended state, and an operation was therefore resorted to for his permanent relief.
Operation.—The patient being placed as in the operation for lithotomy, a steel sound (about No. 5) was passed down to the stricture and pressed against it; a longitudinal incision of about two inches in length was then made over the urethra, and the point of the instrument laid bare in the middle of the wound; the canal was then dilated with a narrow knife beyond the opening, and the sound advanced into the bladder. On withdrawing it, a female catheter was introduced in its place through the wound, and the bladder emptied to the great comfort of the patient. The catheter was secured by a T bandage, and a sound left in the anterior portion of the urethra to dilate it.

The day after the operation, the female catheter was withdrawn, and an attempt made to pass one along the whole course of the urethra, but without success; great difficulty was experienced in replacing the former instrument, and it was not accomplished till after the bottom of the wound was rendered more accessible by a transverse incision across its middle.

On the fifth day, a male catheter was introduced, and secured to a T bandage.

The size of the instrument was gradually increased till the largest could be passed, and this was kept in constantly till the external wound had healed, during which time he was confined to his bed.

At the time of his discharge, the wound had been healed up for three or four weeks, and the use of a catheter discontinued, excepting for a short time, morning and evening, he passed his urine in a full stream, and with facility. He suffered considerably during the treatment from chordee the remains of an acute gonorrhœa contracted in September last, and there is still a slight discharge from the urethra. He was recommended to continue the use of an instrument, and discharged February 1st, 1841.

Case X. — Callous Stricture and Fistula of the Urethra, relieved by an Operation.

John Collins, a seaman aged 51 years, born in New-York, was admitted October 10th, with stricture of the urethra of five years standing, proceeding from gonorrhœa, of which he has had repeated attacks. For the last four years, he has had great difficulty in passing his urine, and had suffered twice from complete retention. He has been subjected to various methods of treatment, and his general health is much impaired; his countenance is pale and languid; his complexion sallow, and his strength reduced. The stricture is anterior to the scrotum at its junction with the penis, and is surrounded by an indurated callous mass that lies partly imbedded in the scrotum. About half an inch to the right of the raphe is a fistulous opening, from which pus escapes as well as urine, when he makes wafer. The remaining portion of the scrotum as well as the perineum are in a healthy condition. The prepuce hangs in a pendulous thickened mass below the frenum, and by its weight constricts the penis behind the corona on its dorsum, where the skin is folded into a transverse furrow, the denuded glans being curved upwards and backwards. This condition is the result of inflammation with paraphymosis that occurred a year ago. An instrument has never been passed, though frequent attempts have been made. He passes
his urine in small quantities at a time, and with great difficulty, and is obliged to get up often at night.

Operation. — Oct. 24th. As in the preceding case, a staff was passed down to the stricture, and a free incision made through the indurated tissues, laying open the stricture and exposing the healthy canal in front and behind it. The fistula was also dilated, and a large sized catheter introduced and secured to the T bandage that confined the dressings over the wound. The subsequent progress with some unimportant exceptions, was favourable. He continued to wear constantly the largest sized catheter, and the wound gradually contracted to the diameter of a split pea with rounded callous edges and induration of the neighbouring tissues, though to a much less extent than before the operation. The bladder could be evacuated with facility, without an instrument, the urine flowing through the wound. A disposition to contract existed in the newly cicatrized tissues that made it necessary to continue the use of a bougie to keep them dilated. His general health improved very much. The condition of the parts forbid any operation with a view to closing the opening in the urethra for the present. The patient was therefore recommended to return home in the country, and persevere in the daily use of a bougie. He was discharged January 8th, 1841.

Case XI.—Retention of Urine, proving fatal from Extravasation and sloughing.

James Bulkley, aged 38 years, a seaman, native of Connecticut, of intemperate habits, was admitted August 14th, with extravasation of urine. The particulars of his case were as follows:—For three months past, he had been at home without employment, and after drinking to excess the last two weeks, he was confined to his bed with vomiting and purging; four days previous to his admission, he was unable to pass his urine, suffering at the same time from severe pain in the lower part of his abdomen and frequent desire to make water, which only flowed in drops. After attempting to relieve him with poultices and flaxseed tea, his wife became alarmed at the swelling and redness that appeared about the genital organs, and called in a physician the day before his reception, who drew off a large quantity of urine, and apprising her of his dangerous condition, advised sending him to the hospital. For several years he had passed his urine in a small stream, which he attributed to previous gonorrhoea. The expression of his countenance, when admitted, was bad. Respiration hurried and laboured, and his pulse frequent and small; the tongue dry and coated with a yellowish brown fur. The abdomen below the umbilicus was swollen, very tense and tender to the touch. The swelling obviously depended on thickening and infiltration of the subcutaneous tissues as well as distension of the bladder, which from percussion appeared to extend to within a hand's breadth of the umbilicus. The scrotum and penis as well as the pubes participate in the swelling, and are of a deep red and shining appearance. The tension and hardness are most marked on the pubes and scrotum. The prepuce is infiltrated, transparent, and hides the glans. Erysipelatous redness extends upwards over the flanks to-
wards the back. The perineum, though somewhat swollen, is soft and not painful. Attempts to introduce a silver catheter were unsuccessful, but a small gum elastic bougie without a wire, passed into the bladder easily. The urine at first flowed in drops, but afterwards more freely, till more than a pint was discharged with evident relief to the patient. A deep incision five inches in length was then made on the left side over the pubes to the scrotum, another upon the same side of the scrotum, from where it joins the thigh down to the raphe at its inferior part. These incisions opened into an extensive deposit of urine that had undermined the integuments around the root of the penis, and along the left side of the urethra as far back as the rectum. This being discovered, the incision of the scrotum was continued backward along the perineum to within an inch of the sphincter. Considerable urine flowed from the incisions, and about six or eight ounces of blood. Three or four ligatures were required, and cloths wet in iced water applied for some time, after which emollient poultices were substituted, and an anodyne draught directed with a liberal allowance of wine whey through the night.

No improvement followed. Sloughing progressed, and the urine escaped from the wound. His bowels continued worse, and the pulse over 100. Stimulants and anodynes were given freely, and yeast poultices applied to the sloughing parts. He died August 18th.

Post-mortem Examination.—The incisions about the pubes were of a foul appearance, and discharged an offensive dark sanies. Pus was infiltrated into the sub-cutaneous cellular and adipose tissues, extending upwards to within a hand's-breadth of the umbilicus, and along Poupart's ligament nearly to its outer extremity; it was most abundant near the pubes, where the tissues were of a dark olive colour, and in a sloughing condition. The intestines were healthy in appearance, and distended with flatus; there was no effusion in the cavity of the peritoneum. The bladder was empty and contracted. The membranous portion of the urethra was destroyed; but, anterior to it, the canal was entire, though the skin covering it was undermined from within an inch and a half of the meatus to the root of the penis. A large cavity was found in the right ischio-rectal fossa that communicated with the urinary deposits of the left side by a passage opposite to the membranous portion of the urethra. On the left side of the prostate gland was a small cavity communicating with the general one, and with the urethra, by a distinct opening in its prostatic portion on the same side. The walls of these cavities, with which the urine had been in contact, were of a dark greenish and purple colour, softened and sloughy. The mucous coat of the bladder, at its fundus, appeared to be gone, and the exposed muscular fibres stood out in relief, and were very much developed. The tissues of the bladder, generally, were much thickened. The caecum, and about two feet of the adjoining ileum, as well as the descending colon, were examined, and presented nothing worthy of notice.

Ulcers.—Of the throat, two; scrotum, one; foot, one; leg, 22; — total, 26.

Ulcers of the leg, it will be seen, formed a large majority of
this class of disease; they occurred in various conditions, requiring appropriate constitutional as well as local treatment.

The warm bath, cathartics, and rest, with the limb in an elevated position, with poultices to the sore, generally constituted the preliminary treatment; after which, stimulating ointments, such as Unguent Basilic, Ung. Bals. Peru, (composed of Bals. Peru 3 i with Ung. Basilic 3 j.) &c. were applied. Adhesive straps accelerated the healing process where the form of the ulcer favoured the approximation of its edges, and nitrate of silver, in substance, was often used to stimulate the granulations. In all cases, the limb was bandaged from the toes to the knee.

Wounds. — Of the finger, two; wrist, three; foot, one; thigh, one; scalp, seven; chest, one; lip, one; throat, two; intestine: one; — total, 19.

Two of the seven cases of wounds of the scalp were followed by erysipelas of a mild character. The wounds of the throat were inflicted, in both cases, in attempting suicide. The injury was slight in one case; in the other a transverse opening was made into the larynx, between the thyroid and cricoid cartilages, large enough to admit the end of the forefinger, without, however, involving any vessel of considerable size. Sutures and adhesive straps confined the edges in contact, and union by the first intension speedily followed.

Case XII.—Wound of the small Intestine, successfully treated by Sutures.

M. Sullivan, aged 26 years, a labourer, a native of Ireland, was admitted Aug. 17th, at four o'clock in the morning, with a stab in the abdomen, received an hour before in a quarrel. Several knuckles of small intestine had already protruded, and his efforts to vomit were forcing out additional portions; there was also a wound of the intestine itself, three-fourths of an inch long, extending obliquely in a transverse direction, that bled freely, but was so closed by the everted mucus membrane pushing out between the edges of its peritoneal coat as to confine the air contained in the bowel and prevent it from collapsing. The protruded parts were deep red and of natural warmth. Patient was exceedingly restless, and tossing in bed with a pale and anxious countenance; his pulse was weak and small; thirst constant, and craving cold water, of which he had already taken a large quantity, though vomiting was excited by each draught. Four sutures with fine silk were introduced into the wound of the intestine including all its tunics, and the ends cut off short. Reduction
was then attempted, but was impracticable till the wound of the abdominal par- rieties was dilated to the extent of half an inch at its upper angle with a probe- pointed bistoury introduced upon the fore finger of the left hand, after which it was easily effected. The external wound, which was situated to the left of the median line, midway between the umbilicus and pubes, and an inch and a half long, was closed with two sutures and adhesive straps, and over it a compress was secured by a broad bandage round the body. During the dressing he vomited several times, and soon after began to feel chilly. In four or five hours reaction came on; his pulse was 88; full and strong with continued rest- lessness and thirst, but no vomiting; moderate pressure on the abdomen gave pain. Ten ounces of blood were drawn from the arm, while he was supported in the sitting posture, and was followed by faintness and vomiting; after which fifty drops of laudanum were given, and iced water allowed in small quantities. At evening he was found to have been easy, and slept at intervals since the venesection. Thirst had abated, and the pulse, though rising, had not increased in frequency. Four dozen leeches were ordered to the abdomen, to be followed by large poultices of flaxseed meal frequently renewed through the night; after the leeches, tinct. opii. gutt. L.

Aug. 18th. Patient has passed a comfortable night with some sleep, his countenance is calm; respiration natural and easy; abdomen supple and not swollen; some pain is experienced from pressure on the right side of the um- bilicus; pulse is 84 and full, but easily compressed; temperature natural; al- lowed only barley water. At evening he continued easy and free from pain, but the pulse had increased in force and tension, though not more frequent. Venesection to twenty ounces was repeated, and excited sickness and vomiting; after which tinct. opii. gutt. L were given, and the poultices continued.

19th. Patient has passed a good night, and is still inclined to sleep; he is free from pain, pulse is 108, soft and decidedly reduced in action; temperature natural; complained of weakness through the day, and vomited once without provocation. The abdomen became tympanitic and a little swollen, but without increased tenderness. He made several fruitless attempts at stool; at evening ordered a large blister to the abdomen, and an emollient enema, after which tinct. opii. gutt. xxx. It would be tedious to continue the daily history of this case; it is sufficient to state that after the 23d of August, when a second application of leeches was made over the right iliac region, the patient's convalescence was established; his bowels moving spontaneously, or by the aid of enemata, and tenderness disappearing from the abdomen, &c. The external wound healed kindly, in part by the first intention. In about five weeks he be- gan to sit up; but was retarded afterwards by an inflammatory attack of his chest and effusion into the cavity of the peritoneum with slight prickling pains in the lower part of the abdomen that yielded to appropriate treatment; at the time of his discharge, a slight degree of effusion still remained, though he had gained flesh and strength; when erect, a prominence of the abdomen below the umbili- cus was observable with distinct fluctuation. The cicatrix left by the wound is pushed forward, and a circular opening with defined edges is felt in the par- letes under the skin, for which he was advised to keep a pad and bandage ap- plied. Discharged October 28th, 1840.
Inverted Toe Nail. — The commonly received name conveys an erroneous idea of the condition of the parts in this affection. In no case that has fallen under my observation, has the disease depended on a vitiated direction in the growth of the nail itself; but were this the case, there is no reason why it should not be met with in the fingers or the other toes, and not be exclusively confined to the great toes. Its commencement and progress are as follows:—

The corner of the nail having been pared away too close at the outer or inner edge, the tender skin adhering to its under surface is exposed, and in the act of walking, especially with tight shoes, is pressed upwards against the nail and inflamed; if the patient continues to go about, ulceration follows with fungous granulations and exquisite sensibility of the part. Temporary relief is obtained by paring away still further the edge of the nail, and thus removing it from contact with the fungus. Soon however, a continuance of pressure causes the newly exposed surface to inflame and ulcerate, and the neighbouring soft parts become red, swollen, and indurated. The outer edge of the foot only can be applied to the ground, and walking is very painful. In very aggravated cases the nail is undermined by suppuration towards its middle. This distressing condition may continue for weeks and months, with varying degrees of intensity. The most effectual and speedy remedy is the removal of the nail, and when properly performed, the operation is less painful than is generally supposed. It is not necessary to remove the entire nail; the result is equally favourable where one half only is removed, and the pain of the operation is proportionally diminished. Both methods were tried in the two cases treated in the hospital, and the one in which half of the nail was removed, recovered most rapidly. This result has since been confirmed in another instance, in which I have operated in this way in private practice. The mode of operation is as follows:—

The nail having been previously softened by immersing it for an hour in warm water, the surgeon places the foot upon his knee as he sits in front of the patient in a favourable light. The fold of skin serving as a matrix to the nail, and overlapping the external surface at its edges, is detached with the point of a cataract needle or a narrow bistoury, care being taken to penetrate
deep at the posterior corners, which, instead of being rounded, are angular. The surface of the nail is then pared away in the middle, and a narrow blade of scissors thrust under it as far back as the root, when it is split up. The incised edge is next seized along its whole length, with flat pliers, and half of the nail removed by cautiously raising it with a rotating motion of the instrument. It is important that the portion of nail be brought away entire, and this is effected by seizing it well with the pliers as far back as the posterior edge, which is the part most liable to be left behind. Jeweller’s pliers are best adapted to this purpose, having narrow flat blades, one of which should be ground down thin. After the operation the foot, is to be kept elevated, with a poultice to the toe for three days; when simple dressings are to be substituted, and one or two applications of nitrate of silver made to the fungous ulcer. In a week, the patient can begin to walk about in a mocasin, and in a fortnight to wear a loose shoe, at which time the parts have healed, and the new nail shows itself.

Inflammations. — Of the ear, 1; hand 3; leg, 1; total, 5 cases.

Diseases of the Eye. — Inflammation of cornea, 1; granular lids, 2; conjunctivitis 1; total, 4 cases.

Abscess. — Over the knee joint, one case. None of the above cases possessed sufficient interest to require special notice.

Burns. — Three cases; two of which occurred on board the steamboat Swiftsure, from the bursting of a boiler, and were admitted a week after the accident; one of them was slight, and recovered rapidly, the other was very extensive and of long duration. The face, neck, shoulders, breast, upper extremities throughout, and the lower in patches, were involved. Suppuration succeeded vesication in many parts, and for a time the constitutional symptoms were of a low type with delirium, &c. Anodynes and stimulants with supporting regimen constituted the general treatment. Turner’s cerate, with the occasional application of nitrate of silver in substance, constituted the dressings.

Case XIII. — Extensive Burn of the Arm, followed by Gangrene and Hemorrhage, requiring Amputation at the Shoulder Joint.

John Maloney, aged 37, a labourer, native of Ireland, of robust constitution,
and accustomed to a free use of ardent spirits, was admitted on Saturday, Novem-
ber 21st, late in the evening; with alarming hemorrhage from the right arm
at the elbow, that had been controlled by a tight bandage round the limb above.
The patient, in attempting to light his pipe, the Monday evening previous, while
intoxicated, set fire to the sleeve of his shirt (he had on two at the time,) and
burnt his arm from the wrist nearly to the shoulder. The hemorrhage first oc-
curred at 5 o'clock in the afternoon, and was promptly controlled by the physician
attending him, though not till he had lost a large quantity of blood. On remov-
ing the coverings, the limb was found in the following condition:—From the
wrist to above the elbow, the skin was black and of horny hardness, except on
the inside, over the termination of the brachial artery, where it was soft as well
as the tissues beneath, allowing the finger to be buried deep in their substance.
From this point the hemorrhage had taken place, the process of separation having
involved the artery. The hand, though it had escaped being burnt, was desti-
tute of vitality, of a dirty olive colour, cold, and with the cuticle raised and
loose. At the insertion of the deltoid muscle, a distinct line of demarcation had
formed with inflammatory redness; between this and the blacked surface below,
the burn was less severe and involved only the cutis, which was beginning to
suppurate. Above the elbow there was considerable swelling, particularly in
the axilla, where alone the pulsation of the artery could be perceived, not how-
ever, without making firm pressure that caused much pain. Patient was weak,
with a frequent and feeble pulse, though his countenance was good, and not
expressive of exhaustion. A cylindrical roll of bandage was secured over the
artery in the axilla to prevent a recurrence of hemorrhage, and the limb envel-
oped in simple coverings. Gruel prepared with brandy was given freely
through the night, which he passed comfortably, though without sleep. Be-
tween 10 and 11 o'clock the following morning, hemorrhage occurred with con-
siderable violence, but was promptly arrested by increasing the pressure above
with a tourniquet.

At a consultation of the Surgeons, held at half past one, P. M, amputation
at the shoulder joint was decided on and performed as follows:—

Operation.—The patient being supported in a sitting posture, and the arm
held at right angles to the trunk, a flap was formed from the deltoid muscle
with a long, narrow, single edged knife, introduced an inch behind and below the
acromion, and brought out under the coracoid process; after which the incision
was continued close to the bone, to within two finger’s breadth of the insertion
of the muscle. The flap being turned up, a little further dissection exposed the
capsular ligament, which after bringing the arm down to the trunk, was laid
open with a large scalpel, and the tendon of the biceps as well as of the scapu-
lar muscles divided. The head of the bone being thus freed from its connec-
tions, the long knife was passed on the inside of it, and the inner flap formed by
a second incision at the insertion of the latissimus dorsi and pectoralis major
muscles. Some embarrassment arose in getting to the inside of the bone, from
the contractions of these muscles drawing it inwards; it was overcome, however,
by holding the arm off from the side, at the same time that it was kept parallel
with it, and forced upwards. At the instant of completing the last incision one
of my colleagues, who stood ready for the purpose, seized the axillary artery and applied a ligature to it. During the operation, hemorrhage was controlled by the senior walker making pressure on the subclavian artery above the clavicle with the thumb of the left hand applied over the vessel, and supported by the fingers of the right. Ten or twelve ligatures were required for the inner flap, but none for the outer. The patient lost only about six ounces of blood, and bore the operation very well. An inch of the tendon of the biceps muscle remaining in the wound was cut off close to the edge of the glenoid cavity. The dressing was deferred for three hours, during which cloths wet in cold water were kept to the wound. After applying ligatures to two small vessels that cozed freely, the edges were brought together, and admitted of accurate coaptation. Sutures were introduced at intervals of an inch and a half, supported by long adhesive straps between them, and over these a compress and six tailed bandage were applied. The patient was then transported to his ward, and directed to continue his brandy gruel. Late in the evening he was delirious at intervals, and started up in bed, talking incoherently; his pulse was more frequent and weaker, and his skin bathed in warm perspiration. Ordered a draught of tinct. opii 5 j.; Aqua M. pip. 3 ss. to be repeated in three hours. A sound sleep of several hours was procured after the second draught at noon; the following day, his pulse was 130, and weak, and his skin perspiring freely, though he said he felt well. Some oozing had taken place through the dressings. Having had no evacuation from the bowels for more than 48 hours, he was ordered an enema. Beef-tea, and brandy gruel to be given freely.

At evening he was more comfortable, having taken freely of his nourishment; his pulse was reduced to 100, with a dry and soft skin.

His progress after this was favourable; his pulse diminishing in frequency and increasing in strength, under the use of a carefully regulated, nourishing diet. The first dressing took place on the fourth day, when the sutures were taken out, and the adhesive straps renewed. The succeeding suppuration was moderate; but little adhesion by the first intention took place between the edges of the skin; the muscles, however, remained in contact, and were kept so by the adhesive plasters. The last ligature, that of the axillary artery, came away on the eighteenth day, and in four weeks the patient walked about the ward. At the time of his discharge his strength was re-established, and the wound healed, except a narrow sinus that secreted a small quantity of matter, and was daily contracting. Discharged Feb. 2d, 1841.

Erysipelas. Of the face, 3; erysipelas of the leg, 2. Total 5 cases.

Only one of these, case of erysipelas phlegmonodes of the leg, claims particular notice. It occurred in a debilitated constitution, and was followed by diffuse inflammation, with suppuration of the tendinous sheaths, principally those of the peronii
muscles, that extended to the sole of the foot above the plantar fascia, proving fatal by the protracted irritation and discharge.

_Glandular swelling._ — Under the angle of the jaw, that was discussed by the persevering use of hydriodate of potass, internally as well as externally, the part being kept constantly covered with the soap plaster.

_Epistaxis._ — Two cases. Both required the tampon.

_Deformities._ — One case of varus of both feet, in a young man of about twenty-five years of age, well formed in every other respect, who has three cousins, sons of three maternal uncles, born with the same deformity. The treatment of this case though very successful thus far, cannot yet be considered complete; a full report of it will therefore be deferred for a future occasion. The other two cases of deformity, though unsuccessful in their results, may not however be the less instructive.

_Case XIV._ — _Anchylosis of the knee-joint, from inflammation of the leg._

_Peter Stamp_, aged 34, a seaman, native of Hamburg, admitted October 25th, 1840, with anchylosis of the right knee, of five years standing, that proceeded from extensive and violent inflammation of the whole limb, with which he was confined nine months, before being able to walk with crutches. During this time large abscesses formed on the posterior and inner surface of the thigh above the ham, and the leg became contracted so that the heel touched the thigh. Patient succeeded himself in gradually extending it to the present position, in which it has remained since. The knee is bent at an obtuse angle and when the foot is placed to the ground, it rests upon the toes only, with the heel elevated five inches. The knee is flattened on its anterior surface, and the patella firmly imbedded between the condyles and head of the tibia. The soft parts covering the joint are supple and healthy. The subcutaneous tissues in the ham are thickened so that it is difficult to distinguish the tendons. There are no inequalities of the bony surface: the joint is incapable of any motion, and the thigh and leg are somewhat wasted and flaccid. On the posterior and inner surface of the thigh, at the junction of its middle and lower third, are two cicatrices where openings were made for the discharge of matter. Patient suffers no pain, except after walking a great deal. The absence of any bony inequalities about the joint was regarded as evidence of the anchylosis not being osseous. For the purpose of straightening the limb, a machine was prepared similar to the one represented by Dr. Detmold in his paper, in the third number of this Journal; but before employing it, the tendons in the ham were divided, (Nov. 7th) and in this operation the fibular nerve was inadvertently cut across, but without the least unpleasant consequences. The
second day after the operation, the machine was put on and perseveringly used till about three weeks before his discharge, but without success, the joint remaining in the same position as before.

Discharged by request, Jan. 25, 1841.

Case XV.—Deformity of the hand, from a burn in childhood.

John Flaherty, aged 28, a labourer, native of Ireland, was admitted, Nov. 13th, 1840, with a deformity of the right hand, proceeding from a burn at the age of two years, by a hot smoothing iron falling upon it. The index and middle fingers were drawn far back upon the dorsum of the hand, while their second and third phalanges were closely flexed on the first. A distinct bridle of cicatrix proceeded from the first phalanx of each of these fingers near its inferior extremity, to the back of the hand, where they converged together and thence extended high up on the wrist. The index finger was further distorted by the extension of the bridle of cicatrix along the outer edge of the 2d and 3rd phalanges to the nail, by which it was rotated on its axis outwards at its metacarpo-phalangeal articulation, so that the dorsum of the first phalanx looked inwards towards its fellow, and the nail towards the thumb. This forced extension of the first phalanges gave a marked prominence in the palm of the hand to the heads of the metacarpal bones, especially to that supporting the index finger. The joints of these fingers were all movable, and the patient retained considerable power over them, within certain limits. The cicatrix, which was thick, moved freely on the subjacent surface, and was drawn down and put upon the stretch, by attempts to bring the fingers into their natural position. The surrounding skin on the back of the hand and wrist was very supple and yielding. Before undertaking an operation to relieve this deformity, it was necessary to improve the patient's general health, which had suffered from intermittent fever. This required till the 2nd of December, when it was performed as follows.

Operation. The cicatrix being gathered up into a longitudinal fold, was transfixxed with a straight bistoury, near the joints, and both thicknesses of skin incised at the same time as high up as the wrist, forming a tongue-shaped flap of two fingers breadth, and four inches in length, that was dissected up still farther at its base below. This allowed the fingers to be brought down so as to make an obtuse angle with the metacarpus, beyond which the resistance of the extensor tendons prevented further flexion. These being divided, the fingers yielded still farther, the index more than the middle finger; still, however, there was some obstacle to complete reduction, arising probably from the lateral ligaments, or perhaps the tendons of the interossei muscles. This new position of the fingers drew the flap nearly two inches below its former attachments, where its edges were secured in contact with the opposite edges of the wound by sutures at short distances apart. The opposite edges of the wound, at its upper angle, beyond the extremity of the flap, were approximated in the same way after they were dissected up nearly an inch. The second and third phalanges were not affected by the improved position of the first; they did
not admit of any greater degree of extension after, than before the operation. It was not thought advisable to attempt their extension at this time, but it was reserved for a future operation. Adhesive straps were applied between the sutures, and the hand secured to a splint extending from the elbow to the ends of the fingers, and adapted in such a manner as to preserve the fingers in their new position. In the subsequent progress of the case, about two-thirds of the flap sloughed away; an accident not entirely unexpected, from the known fact of the feeble vitality of cicatrisé tissues, rendering them more liable, when transplanted, to this accident than sound ones. By the beginning of February the sore was firmly cicatrisé. The first phalanges had been kept in their straight position, and viewed on their dorsal surface, appeared to be on the same plane with the metacarpus; on the palmar surface, however, the prominence of the metacarpal bones still existed, showing that the phalanges rode upon the dorsal surface of their extremities. The lateral deformity of the second and third phalanges of the index finger seemed to forbid any further attempt to improve its position.

Feb. 14th. I divided the flexor tendons of the middle finger in the middle of the first phalanx; which allowed the second and third phalanges to be somewhat extended, but to a less degree than was anticipated; a splint was adjusted to the finger and hand to increase the extension. The wound healed kindly, and some progress was made in straightening this finger. The very doubtful prospect of ever rendering these fingers useful, deterred me from any further operation. Taking therefore into consideration the patient's condition in life, and the embarrassment he experienced in using his fingers in their present condition, as well as the deformity, I advised him to submit to their removal, which was performed the 22nd Feb., by a transverse incision in front and behind, that circumscribed both fingers at their roots. After being disarticulated, the head of the metacarpal bone supporting the index finger, was cut off with the bone forceps. No ligature was required.

The articular surfaces of the metacarpal bones existed more on their dorsal side than at the extremity. The resistance to the extension of the phalanges seemed to depend on a contracted condition of all the tissues of the palmar surface about the joints, rather than an one in particular. The wound left after the division of the flexor tendons, eight days before, had entirely healed in the skin and tissues external to the sheath: in this however, there was no appearance of reparative process; its edges were gaping open. Lymph was deposited around the ends of the tendons that remained in the sheath, the others had retracted above the division made in removing the finger. There was also a slight extravasation external to the sheath.

But one case more remains to be noticed, which was omitted in its proper place.

Case XVI. — Hemorrhage from the urethra.

Frederick Hauson, aged 25, a seaman, native of Sweden, was admitted Dec.
with hemorrhage from the urethra, that occurred the afternoon previous during coition, at the moment of organism, and while indulging for the first time, after an abstinence of five months. Neither his general temperament nor the development of the genital organs were indicative of strong venereal appetite. He had at the time a slight discharge from the urethra. The hemorrhage at the commencement, flowed in a jet, and continued with some abatement for three hours without ceasing, since which it has recurred at intervals. His countenance and lips are pale, pulse feeble and accelerated. Anterior to the scrotum, at an inch and a half from the extremity of the penis, there is a circumscribed swelling, slightly indurated and tender, of the size of a ten cent piece embracing the urethra. Ice was applied over the pubes, and checked the hemorrhage for about three hours, when it returned and continued at intervals through the night.

The following morning a clot of blood had formed upon the glans penis, sending a worm-like prolongation into the urethra. On withdrawing this, the patient was directed to make water, which he did without pain or difficulty. The first portions of urine were tinged red, after which it flowed clear, showing the urethra and not the bladder to be the source of the hemorrhage. A compress was secured over the swelling by means of two or three turns of a narrow bandage, but not so tight as to interrupt the flow of urine. This served to check the hemorrhage effectually, and he was discharged cured, January 8th, 1841.

Statistical Report of the Cases under Treatment in the Medical Department of the New-York Hospital, from Dec. 1st, 1840, to Feb. 28th, 1841, inclusive, to which are appended some Select Cases. By E. T. Richardson, M. D., Resident Physician.

There were remaining, Dec. 1st, 1840, 71 patients.
Number admitted from that date to Feb. 28th, inclusive, 185 "
Total under treatment, 256 "
Of these there were discharged,
Cured, 137
Relieved, 14
By request, 5
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H9ospital Reports.
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Of each of the following a single case, viz: — Scorbutus, Hypochondriasis, Nephritis, Splenitis, Peritonitis, Poisoning, Mania, Vertigo, Abscesses, Epistaxis, Purpura Hemorrhagica, Cephalalgia, Hemoptysis, Syphilis, Ileus, Gastritis, Chlorosis, Hysteria, Icterus, Disease of Heart, Constipation, Tumour Uteri, Cachexia, Dyspepsia.

Case I. — Variola, complicated with purpura hemorrhagica.

JAMES HILL, seaman, aged 23 years, native of Norway, was admitted Jan. 8th, 1841. Has been ashore about one month, and has occasionally indulged too freely in drinking. Four days ago, was attacked with very severe pain in the back, loss of appetite, nausea and vomiting, his eyes became slightly inflamed and watery. These symptoms have continued with fever.

On admission, intelligence perfectly good: his face, neck, and whole body is of a purplish hue, most marked on the face and neck. Over the body and limbs are thickly scattered superficial spots of a livid colour, about the size of pigeon-shot, distinct and persistent on pressure. On the chest are spots about the size of a sixpence, more diffused, of a bluish colour and apparently deeper seated than the small ones, not disappearing on pressure. This appearance was not noticed by the patient before to-day. His face is swollen and covered
with a vesicular eruption in the commencing stage; a few of these are also observable on the chest,—extravasation of blood beneath the conjunctiva of both eyes and very abundant flow of tears.

Tongue and all the mucous membrane of the mouth and fauces thickly coated with a white fur. He swallows easily—coughs some, complains very much of thirst—nausea and loathing of food. Skin hot—pulse 120, full but compressible—abdomen hard, not tender on pressure—bowels constipated. Great restlessness and frequent sighing—suffers very much with pain in his back.

Treatment. R pulv. rhei, calc. magnes. ää 3 iss. aq. menth 3 iv. mix. cap. 3 j. 2nd q. h. and mist. efferv. occasionally.

Evening. At about six o'clock he had a free evacuation from his bowels, natural in appearance, after having taken three doses of the mixture; at this time there was no other material change in his condition.

About one hour after, he had another evacuation, which consisted in part of dark blood; was very restless—heat and dryness of skin continue with insatiable thirst.

Soon after this time he became very violent—rushed from the bed crying out for water, saying that "he was burning up inside." He drank with avidity whatever fluids came in his way.

The purple spots became larger, and in some places were converted into small blisters filled with sanious fluid;—some of these ruptured and bled freely.

The heat of his body was at this time very great, and the congestion of the vessels of the skin increased. In this condition he survived about half an hour. A few minutes before death he became covered with a profuse perspiration. His intelligence continued unimpaired till a few minutes before he died.

Autopsy, 16 hours after death.

The whole surface of the body and limbs was of a purplie colour, darkest on the face and neck. The deep-seated spots were larger and more distinct than during life, and in several places the cuticle was raised by the effusion of sanious fluid.

Extravasation of dark coloured blood in the muscular and cellular tissues. All the internal solid organs were very much engorged with dark blood. The parenchyma of the lungs was not softened.

The heart was large, flabby, and softened. Its cavities, as well as the great vessels were filled with blood, mostly fluid, and of the same dark colour.

The internal surface of the stomach was mottled with ecchymotic spots varying in size. Mucous membrane softened.

The oesophagus to its termination was coated with a thick white fur, similar to that on the tongue.

In the colon were found numerous ecchymotic spots, some of which were very large. Its contents were tinged with blood.

The small intestines presented none of these spots. The patches of Peyer and the solitary glands of Brunner were quite prominent.

Brain.—Vessels on the surface very turgid; sanious effusion under the
arachnoid membrane over the whole surface of the brain, substance of the brain softened and very much congested.

J. Macdonald, M. D., Attending Physician.

Case II. — Purpura. (?)

Timothy Woodbury, native of Massachusetts, aged 36 years, seaman, was admitted March 4th, at 2 o'clock, P. M. He is reported to be a man of regular habits. On the afternoon of the 1st instant, he was taken with a chill, followed by fever and pain in his head and back. On the following morning he took an emetic, and during the day he took several doses of sol. sulph. quinine.

Yesterday, P. M. had another chill, and in the evening became delirious.

Condition on admission. Great prostration of strength; nervous agitation and restlessness; countenance wild; mind wandering, but when questioned answers correctly; pupils natural. Pulse 130, quick, and soft. Tongue purplish. Abdomen tumid, not painful on pressure. Respiration hurried and oppressed. Left knee very much swollen, painful, and of a dark red colour. Right wrist and forearm swollen and discoloured. Absorbents on the anterior surface of forearm inflamed. The swelling of the knee came on yesterday, and that of the arm this morning, without any assignable cause. They have the appearance as if they had been severely contused.

His body and limbs are covered with circumscribed purplish spots about the size of a sixpence, apparently deep-seated, persistent on pressure.

Evening. His delirium has become violent, so that he is with difficulty kept in bed. His bowels have moved once since he came in; stool rather light coloured.

He refuses to take medicine or food.

5th. Died this morning about 5 o'clock.

Autopsy 7 hours after death.

The whole posterior surface of the body and limbs of a deep livid colour. The spots on the anterior surface appear about the same as during life.

Brain. Vessels on the surface engorged with dark blood. Slight effusion under the arachnoid. The substance of the brain, on being cut, presented the red points very numerous.

Thorax. All the cavities of the heart, as well as the great vessels, filled with very dark blood, mostly fluid. The muscular substance of the heart of a dark colour, and quite friable.

Lungs. Engorged with the same dark coloured blood; parenchyma softened.

The external surface of the lungs presented numerous ecchymotic spots. The costal surface of pleura presented the same appearance.

Stomach on its internal surface had numerous ecchymotic spots. Intestines congested.

J. B. Beck, M. D.
Attending Physician.
Case III. — Delirium Tremens. Pleuritis, &c.

DAVID EVANS, labourer, native of New-Jersey, aged 23 years, was admitted Dec. 28th, 1840. He is evidently a very intemperate man, and has recently been on a frolic for several days. Has been sick four or five days.

Condition on admission. Delirious, with great nervous agitation and trem-our; wildness of countenance. Skin hot, pulse frequent, quick, and soft. Tongue furred white, with edges red. Respiration hurried and oppressed; suppressed cough; complains of pain and sense of oppression in the precordial region; some tenderness on pressure. Bowels not open.

Treatment. Enem. stim. Calomel and pulv. Dover ää. gr. x, Mix. Infus. sem. lini; pint porter; cold applications to the head.

29th. Has slept none during the night; has been annoyed by spectral illu-sions, &c. This morning the delirium continues, and is more violent than yester-day. The other symptoms not at all improved.

Has taken Pulv. Rhei c. 3 iss. this morning, which has operated freely.

Died about 11 o'clock A. M.

Autopsy 20 hours after death.

Head. Vessels on the surface of the brain very much engorged with blood, Arachnoid thickened and opaque, with deposition of lymph beneath it. Upon the superior surface of the posterior extremity of the left hemisphere of the brain, was an effusion beneath the arachnoid of about a drachm of blood. At the base of the brain the thickening of the arachnoid and deposition of lymph was much greater than elsewhere. Substance of the brain congested; no soft-enning or effusion into the ventricles.

Thorax. Serous effusion into both cavities of the pleura; more abundant in the left; depositions of lymph on the surfaces of the pleura. On the right side, old adhesions. The right lung was very much congested; the left moderately. Mucous lining of the bronchi in both lungs inflamed.

Abdomen. Liver hypertrophied; of a buff colour, very friable. Spleen softened to a pulp. Stomach presented on its inner surface several highly inject-ed patches. In the ileum the glands of Peyer were remarkably distinct, as well as the solitary glands of Brunner. These were most distinct towards the extremity of the ileum;

From the anterior part of the right kidney, the proper capsule came off with great facility, exposing numerous spots of a dark venous colour, and others of yellow granular appearance, very distinct. On cutting it open, the cortical portion presented the same appearance. The other kidney was normal.

J. M. SMITH, M. D.
Attending Physician.

Case IV. — Delirium Tremens, — Paralysis of both Arms.

JOHN MASSINGHAM, born in England, aged 47 years, by occupation a copper-plate printer, was admitted on the 15th January, 1841, with symptoms of delirium
tremens. He is an habitual drinker, and has recently been very intemperate — has been ill for ten or twelve days.

Condition on admission: countenance haggard and sallow; conjunctiva yellow; great prostration and tremour; partial loss of power over his arms, so that he is scarcely able to raise his hands to his mouth. Pulse intermitting and feeble; tongue coated in the centre; red at the edges and tip; trembles when protruded; loss of appetite and occasional vomiting; bowels regular; complains of pain in the epigastrium; pupils natural.

Treatment. — Inf. serpent, virgin. and valerian. 18th. He was delirious last night, and this morning his mind is still wandering. He is unable to walk or even sit up in bed; cannot raise his hands to his mouth, or extend the fingers; tremour continues; pulse very feeble, and still intermitting. Give him porter and continue the infusion; also pills of camphor gr. iij, opium gr. ½, repeated once in three hours at night, and apply cold to his head.

19th. Delirious and muttering through the night; seeing objects on the ceiling, &c.; has taken brandy since last evening; is very prostrate this morning; delirium continues; bowels free; continue the brandy and porter, with beef-tea, and arrowroot, and give instead of the pills, B Mist. camph. ⅓ iv, sol. sulph, morph. 3 i. mix. Cap. coch. mag. 2 da. q. h.

20th. Slept nearly all night; mind still wandering; countenance vacant; pulse feeble, but regular; tongue dry and brownish. A stimulating enema was administered this morning, which induced a free evacuation of scybalous feces. Continue treatment.

21st. Slept eight hours last night; has less delirium this morning, and more power in his limbs; tongue moist and clean; no intermission or irregularity of the pulse; his bowels were moved freely again last night, stool similar to that in the morning. Continue treatment, except Mist. Camph., &c. which may be repeated according to circumstances.

23th. He has continued to improve since last report; has slept more or less every night. Is still delirious occasionally. His strength has improved, but he is still unable to use his arms; appetite good; bowels regular.

Continue treatment, diminishing the quantity of brandy.

29th. Sitting up; all symptoms improved except the paralysis of his arms; is restless at night, but not delirious. His intellect, however, is not perfectly clear; appetite good; bowels regular. Treatment; generous diet; wine; inf. serpent. and valerian; camphor mixture with morphone occasionally at night.

Feb. 1st. Is unable to rise from his seat, but when assisted to get up, can walk about. Paralysis of both arms continues; intelligence yet imperfect, though somewhat improved; has no pain in his head, and appears to be in all respects well, excepting the paralysis.

Continue treatment, and apply a blister to the back of his neck.

10th. About the same as at last report. Treatment; strychnine one-twelfth of a grain ter. in die.

13th. Intelligence not so good; strength failing; pulse more feeble; tongue dry and brown in the centre; skin moist; temperature natural; bowels regular. A slough has appeared over the sacrum about an inch and a half in diameter. Paralysis not improved.
Continue treatment with increase of stimulants.

14th. Very prostrate; countenance pale and sunken; pupils contracted; pulse almost imperceptible, very frequent; skin cool and moist; stop the strychnine; reapply blister to his neck, and give him brandy freely.

15th. Some reaction in the circulation; is unable to articulate; tongue dry and brown; sordes on the teeth; an appearance on his body resembling petechiae; abdomen tumid; bowels not open.

Treatment; enema, and continue stimulants.

17th. Died about 8 o'clock, A. M.

Autopsy, 24 hours after death.

Head. — The upper surface of both hemispheres of the brain was covered by a thick layer of coagulable lymph; slight effusion of serum beneath the arachnoid membrane. At the base, the same appearances were presented, but in a less degree.

The vessels of the brain were turgid with blood. There was was an effusion of serum distending the lateral ventricles; the lining membrane of these was opaque, and its vessels injected with blood. The substance of the brain was not materially softened.

The thoracic and abdominal viscera presented nothing worthy of remark.

James Macdonald, M. D., Attending Physician.

Case V. — Ulceration of the Intestines and Perforation.

James Threlfell of New-York, seaman, aged 43 years, was admitted December 17th, 1840.

The following is the history which he gives of his illness: "About three weeks since he took cold, and has been ill ever since. He had nearly recovered at one time, when being again exposed, he relapsed. His symptoms have been pain in his limbs; nausea; loss of appetite; thirst, and slight cough. His bowels have been regular." Condition on admission: emaciation; prostration of strength; countenance pale. He appears like one who has been prostrated by fever; complains of pains all over; tongue smooth, a little coated in the centre; pulse frequent, quick and feeble; no pain or tenderness of the abdomen; bowels regular; slight cough.

ř. Pulv. Dover gr. x. at night. Diet; arrowroot and gruel.

19th. Very restless at night; fever in the morning; tongue dry and coated; bowels not open.


20th. Bowels moved freely; he is failing in strength; febrile excitement continues through the day, but greatest at night, but is not very considerable at any time. He appears to have no local difficulty; tongue still dry; pulse feeble.

Treatment; wine-whey and arrow root.

22d. Increased excitement; skin hot; pulse 102, feeble; tongue still slightly coated and dry; abdomen rather tumid, but soft and slightly tender on pressure; bowels not open; tremour of the hands.
Ol. Ricini 3 ss.; wine-whey continued.

25th. Prostration and tremour increased; abdomen more tumid; tenderness also increased; bowels not open during the last twenty-four hours; skin hot, moist at times; pulse frequent, small and irritable.

R calomel, gr. iiij. to be repeated in the evening; warm fomentations to abdomen. Continue wine-whey.

27th. His abdomen has become hard, and exceedingly sensitive to pressure; slight motion gives him severe pain; countenance anxious; pulse frequent and thready.

Continue the stimulants, and repeat the warm applications.

28th. Abdominal symptoms increased in severity; bowels not open:

29th. Says he is quite free from pain, but is evidently in a moribund condition.

Died at 3 o'clock, P. M.

Autopsy twenty-one hours after death. — Considerable emaciation; abdomen tumid and tympanitic.

Chest. — The lungs and heart were found perfectly healthy.

Abdomen. — The intestines were very much distended with gas; peritoneum highly injected; abundant effusion of lymph, gluing the folds of small intestines together. About a pint of thick brownish fluid was removed from the abdominal cavity. On examination of the intestines an opening was discovered through the coats of the ileum about one inch from its juncture with the cecum. The opening was about six lines in diameter—its edges sloughy.

There were numerous ulcerations of the oral patches in the ileum, from mere abrasions, to deep sloughy ulcers, an inch or more in diameter. Several of these were so deep as to expose the muscular coat, and some even the peritoneum. They were of increasing size and depth from the commencement to the termination of the ileum. In the colon, the ulcerations were less in size, and almost perfectly circular, presenting the same general characters as those in the ileum. They were found only in the ascending colon:

The mesenteric glands were enlarged—some of them on being cut open presented an inflamed appearance; others contained pus. The other organs presented nothing remarkable.

J. M. SMITH, M. D., Attending Physician.

Case VI.—Peritonitis, the result of perforation of the ileum.

RIDER S. DOANE, a native of Massachusetts, aged 28 years, by occupation a seaman, was admitted into the New-York Hospital, December 14th, 1840, at two o'clock P. M., with intense pain in his abdomen, which was swollen, hard, and very tender to pressure. He was constantly vomiting dark green fluid, which came up without any effort. His extremities cold; countenance somewhat sunken and livid—pulse very feeble and frequent. It was like a mere oscillation of the artery, and the slightest pressure was sufficient to arrest the flow of blood; respiration hurried and oppressed; tongue nearly clean. His intelligence in the main was good; voice clear and distinct.
History. He was taken the night before last, at about midnight, with intense pain in his abdomen. He retired at evening after a hard day's work apparently in perfect health. He has been during the past season employed on board a vessel, trading between this port and Boston, and has not been ill. Has not been more than ordinarily exposed to inclement weather of late, and knows of no cause to which the present attack may be attributed. Yesterday morning a physician was called, who bled him and administered medicines. The vomiting commenced to-day, after having taken several doses of cathartic medicines. He has had no evacuation from the bowels since the attack.

Diagnosis. Peritonitis, resulting from intussusception, incarceration, or perforation of the intestine.

Treatment. Cap. calomel, gr. v. 2nd q. h. H. enema communis statim,—catapl. emol. abdomen.; to be frequently repeated; ice to allay thirst.

P. M., 9 o'clock. He is more prostrate—pulse scarcely perceptible. Says he feels less pain—vomiting continues. His mind wanders, though he answers questions correctly and intelligently, excepting such as relate to the lapse of time since he took sick.

Continue calomel as before and add to each dose, opium gr. i.

15th. Died this morning at about 3 o'clock.

Autopsy 10 hours after death.

Great vascular injection of the whole peritoneal surface, with abundant deposition of lymph—about a pint of brownish fluid, composed in part of faecal matter was found in the peritoneal cavity. On examining the intestines, the ileum was found to be perforated about twelve inches from its juncture with the cæcum. On the inner surface an ulcer about three-fourths of an inch in diameter, corresponded with the opening.

The oval patches were distinctly enlarged, for about three feet from the cæcum, and the last two were ulcerated, each having four or five deep ulcers, with elevated edges.

The mucous membrane of the intestines was not softened.

Stomach normal, as well as the other organs.

J. M. SMITH, M. D., Attending Physician.

Note.—I have since writing the above learned the following additional facts from the Captain of the vessel in which Doane sailed, viz: that he has been constantly, during the last twelve months, trading between this port and Boston; has been regular in his habits, and has enjoyed uninterrupted health till about six weeks ago, when he had a slight diarrhea. He however took no medicine, and continued to attend to his work as usual.

Thymic Asthma.—We have lately been invited to assist at the post-mortem of a striking case of this disease. It occurred in the family of Dr. S. P. White of this city, who has favoured us with its history. The child while in apparent good health, died in a sudden paroxysm of strangulation. These paroxysms it will be observed, occurred with more or less frequency and severity
from the 6th month after birth. The child also had had a slight but habitual cough ever since it was born.

S. P. W. aged sixteen months. Soon after birth, before the child was dressed, he had a cough, which was repeated occasionally, during the rest of his life. It was noticed less, perhaps, during the last few months. In April last, when five and a half months old, he appeared rather delicate and feeble. He appeared to increase in length, but remained stationary in flesh.

When eight months old he was attacked with spasms at midnight. His mother was awoke with a noise resembling a hiccup. When taken up, he appeared like a child partly insensible. There was laboured respiration, and stiffness of the extremities, with lividity of the lips and nose, and the eyes were fixed. The paroxysm passed off in about two minutes, and left him with a twitching of the extremities, which lasted about five minutes. These paroxysms returned twice with the interval of a week. The last one was the least severe.

When nine months old, while travelling, he appeared to have taken cold; and at Pittsfield, Mass., they supposed his symptoms to be those of pneumonia. His attending physician, Dr. Root, administered powders composed of calomel and ipecac, and applied a blister plaster to the chest. This treatment had a favourable effect, and he was soon relieved.

From that time, until he was fourteen and a half months old, he appeared well and grew rapidly, notwithstanding he never had teeth. He was not able to walk without assistance, which was attributed to a weakness of the limbs.

When fourteen and half months old, he was attacked with convulsions attended with spasms of the muscles of the face and eyes, frothing of the mouth, and sickness of the stomach. The next day there were symptoms of bronchitis, and a slight catching of the breath, of an asthmatic character, which had troubled him also from the sixth to the tenth month of his age. This catching of the breath appeared to be relieved by the treatment at Pittsfield. The two following days he had a return of convulsions which were not so severe as the first.

These convulsions were followed by cough and frequent respiration, which were relieved by calomel and ipecac, an enema, and a blister plaster to the chest.

From that time until the week before his death, he appeared perfectly well, except that a few days before his death the catching of the breath returned.

Five days previous, he appeared to have lost his breath entirely, and became very dark coloured in the face. When the breathing returned he evinced distress by crying.

Four days previous, he had a convolution, preceded by the catching of the breath. At the time of his death this "catching of the breath" appeared, while amusing himself with his playthings, and he expired in three minutes.

Post-mortem examination was conducted by Dr. A. C. Post, about seven hours after death. Body well formed and developed. On raising the sternum,
the thymus gland was brought into view, appearing at first, rather under the natural size at birth, being about one and a half inches in length. But on more careful examination, this was found to be but a kind of appendix to, or prolongation of, the true body of the gland, which was situated higher up upon the anterior portion of the trachea: it was two and a half inches long and one and a half broad, and about half an inch at its thickest part. The right cornu was natural, but the left extended upwards by a worm-like process, quite to the angle of the jaw, and terminated in a bulb as large as the end of the little finger. It lay directly upon the track of the great vessels passing down the neck. The vena innominata also lay enclosed between the body of the gland and the lower prolongation, or lobe;—but the par vagum and the phrenic nerves were not implicated by the tumour. The whole length of the gland when removed from its attachments was six inches. There was no enlargement of the lymphatic glands of the neck. The heart was generally enlarged. Both sides, especially the auricles, as also the great vessels, were considerably distended by very dark and fluid blood. The mucous glands about the pharynx and root of the tongue were enlarged.

The larynx, trachea, bronchi and lungs were perfectly healthy; no hypostatic congestion.

In addition to the above case*, we will introduce one of enlarged thymus gland, which has lately occurred to Dr. W. C. Roberts of this city, to whom belongs the credit of having first called the attention of the profession to this disease in this country. In this case, no peculiar symptoms marked the existence of an enlarged thymus. The boy was attacked with scarlatina, which unexpectedly proved fatal, with symptoms of oppressed respiration.

A sixth case of enlargement of the thymus gland, occurring in a child nineteen months old, and terminating fatally in nine days.

Isaiah Harris, aged 19 months, a light mulatto, was attacked on Thursday, the 18th Feb., with fever. When I saw him a day or two afterwards, he had a hot skin, a loaded tongue, a frequent pulse, quick breathing, and green stools, he was rather hoarse, and had a short, stifled, harsh cough. From his excessive peevishness it was impossible to auscultate the chest. On the cheeks were clusters of reddish papule, and all over the body a fine granular eruption without redness, and resembling the whitish points seen upon the skin in scarlatina. In a day or two, a gland on each side of the neck swelled and became painful. In this condition he continued always wakeful and peevish,

* See also Scientific Intelligence for another case, received too late for insertion here.

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with slight fever, but nursing freely until the day before his death. On the
morning of that day he had less fever, and his look was brighter; at night his
fever increased. The eruption had disappeared. He slept throughout the
night unusually well, snoring loudly, until about 3 A. M., when he became
restless. At 5 A.M. he began to breathe badly, and at 9 A. M. his breathing
was high and laborious, with mucous rattle, and he had no pulse; of this near
approach of sinking, there had appeared no evidence the evening before. The
chest sounded well on percussion. He lingered in this state until half past
four P. M. and died without convulsions.

An elder sister and brother were sick at the same time. The former had
very similar symptoms, and a similar eruption on the skin, but no cough. The
boy had a regular attack of scarlatina, with slight sore throat.

Autopsy. The body rather fat. The lungs were quite healthy, of a pale
pink colour, crepitant throughout, and no serosity flowed from the divided ex-
tremities of the bronchi on squeezing them; on the lower lobe of the left
lung was a purplish discoloration; and on incising it, a superficial degree of
congestion existed for about a line in depth. The trachea was pale, but there
was a slight degree of redness between the rings of the larger bronchi. I
neglected to observe whether this was continued along the smaller ramifica-
tions. The thymus gland was enlarged. Its two cornua ascended up on the
trachea to the distance of an inch above its bifurcation, lying in contact and
completely covering it. The whole length of the cornua to where the gland
begins to expand is an inch and a half, and the innominata artery is overlapped
by them. The gland completely overlaps the heart, reaching to within one
fourth of an inch of its apex, being two and one tenth inches at its widest part,
and its whole length, including the cornua, four inches and a half. It adheres
as usual, loosely to the pericardium. The heart is small; the walls of the
left ventricle rather thick. The thymus, as is usual, is divided by a salcus in-to
two lobes, of which the left is much the largest, being one and a quarter inches
in width, and two and a half in length; the right, three fourths of an inch broad
and two inches long. Its weight after immersion in spirit, 175 grains. The
mucous membrane of the intestines was tumid, not vascular, every where easily
removed by the nail or scalpel, and in some places partially removed by ab-
sorption. Several of Brunner's glands were in a state of considerable hyper-
trophy.

The symptoms, in this case, presented nothing attributable to
the state of the thymus gland, nor do I learn that during life, he
was subject to any attack of a spasmodic character. It is the
sixth which I have witnessed; of these, four have already been
published; the fifth will appear through another channel. Dr.
Swett informs me that he has recently assisted at another post-
mortem examination, in which enlargement of the thymus gland
co-existed with slight broncho-pneumonia, which, with the case
seen by Dr. Clements, makes eight cases of the disease met with in this city within a few years; a sufficient proof of the necessity for a more attentive examination of this interesting subject. It seems evident that children labouring under this congenital malformation, are, if they do not die suddenly, exceedingly liable to perish on the supervision of any slight degree of vascular excitation in their systems, by whatever cause induced. I would particularly remark that the patient did not die with the symptoms of cerebral disease; and that there did not exist disease enough within the chest to have caused death, unless the thymus gland be allowed to have exercised some agency.

The Treatment of Squinting by the Division of the Muscles of the Eye.
A Letter to Prof. Dieffenbach from Dr. F. A. Ammon, Physician to his Majesty the King of Saxony. Translated from the German. By A. B. Stout, M. D.

Since my former communications upon the treatment of squinting by means of myotomia ocularis, (Month. Jour. of Ophthal. and Surgery, Vol. III. p. 321—332,) I have had both frequent occasion to perform the operation, and to witness it as assistant when other surgeons in Dresden have practised it. The number of operations performed partly by myself, and which I have seen practised by Drs. Zeis, Baumgarten, and Warnatz, whom I assisted, amounts to 72. This number suffices to form an opinion of the value of the operation. I am prompted to make this publication in part by a promise given on a former occasion to augment the observations already communicated, and partly by the desire to contribute something to the treatment of the new operation by communicating the following researches, which have not yet been placed on that series. I address these to you, my dear Dieffenbach, because it is you especially we must thank for the valuable blessings of this new operation; and because I may thus publicly pay you, in the name of Ophthalmic Surgeons, whose territory you have so importantly extended by your blepharoplastical operation, a just tribute of gratitude. If some scattered facts appear in this letter which emanate from your experience and perception, I may expect from you an unprejudiced examination and judgment of it, for I know that to you the words of our immortal A. G. Richter have ever been a fundamental princi-
Ammon on Squinting. [April,

ple: — "Superbum est tuis tantum oculis, servile alienis semper videre velle."

I call the operation new, because repeated researches in the history of the section of tendons and muscles have never discovered a trace of the application of this method of treating squinting, although I have made these researches with diligence and perseverance. (Physiol. Tenontomia, Dresden, 1837, and the French translation of the same; Mém. sur la Phys. de la Tenontomie, Gand, 1818, in 8vo.) I found a single passage only in Melchior's Treatise upon Strabismus, which treats of the section of the muscles for the cure of squinting; and yet his work was published after Stromeyer's Essay on the Possibility of Curing Squinting by Myotomia. (See his Contributions upon the Op. of Orthopaedia, Hanover, 1838, p. 22.) And although Stromeyer is not mentioned by Melchior, yet his treatise is probably derived from him, or at least from one of the periodicals which published Stromeyer's idea aphorismally in the year 1838, as its author has given it.

There begins to be contention upon the priority of the performance of the operation, especially in France, and much pains is taken to award by proofs the just glory to you, who first practised the myotomia ocularis upon a living person. (Annales d'Oculistique par Cunier, Vol. III, in different places.) It is not our intention to write a history of myotomia ocularis, although we earnestly desire it, and would invite young surgeons to study with this object. But whatever an historical criticism upon this point may decide, it is nevertheless certain that you, my dear friend, gave the impulse to the operative treatment of squinting, which now affords such admirable results. We should never forget that to discover, to invent, to publish, and to utilize, are so nearly allied, that in a single fact several may be considered as one person, and that often certain sentiments and thoughts float in the air in a manner that several may claim them. (Goethe's Works, Vol. L, p. 165.) This circumstance may the more readily occur in relation to myotomia ocularis, as your idea of it preceded a long time its performance.

I.

General Description of Myotomia Ocularis.

To make the division of the muscles of the eye, employ the following instruments which are delineated in the accompanying plate.

1. Two eyelid holders and hooks. — They are those of Ware, with somewhat longer handles than Ware used. (Fig. 11, 12.)

2. A hook to draw the globe when the eye squints very much. This is shown in figures 8 and 9, and is remarkable for its short points, its
knee-like curvature. The hooks penetrate the conjunctiva to the sclerotica, and hold the eye firmly without however injuring it.

3. A larger hook for fixing the eye in the common cases of strabismus. It may be seen in fig. 7, and may have either two or three points. I prefer that with two hooklets.

4. A forceps, (fig. 10.) It differs from a common forceps in its very thin legs.

5. Some small scalpels and a scissors of medium size.

6. A grooved director. This is drawn in fig. 13 and 14, and is bent to an obtuse angle, whose bent end may be made shorter or longer.

I perform the operation in the following manner: two aids suffice if they are expert — for children, three are necessary. The patient sits as for the operation for cataract. Children should sit upon a high chair, or better, upon the laps of their parents. When the eye not to be operated upon is bandaged, an eyelid hook is introduced beneath the upper lid, so that the inner surface of its anterior part touches the inner surface of the eyelid; thus the lid lies between the curves of the hook. (fig. 1.) The aid takes the hook high up on the handle. While this is doing, the operator applies the second eyelid hook upon the same manner to the under lid. The same aid holds this in a similar manner with the left hand, if only two assistants are present, and when this is done, both eyelids are drawn widely apart. During this manipulation, which is never agreeable to the patient, as it is often painful, the eyelids are drawn widely apart, the globe is thus made prominent, somewhat projected, and the conjunctiva is firmly stretched at its reflection upon the eyelid. Care should be taken not to do this too forcibly, as the folds of the conjunctiva may impede the operation. When this is carefully accomplished, the patient is requested to turn the globe in the direction opposite to that in which it usually squints, and if he cannot succeed in consequence of the eye obstinately persisting in the squinting position, which however is rare, and is generally only found in luscitus cataractus, the operator then takes the directing hook, (fig. 8,) and fixes it, where the sclerotica and cornea unite, and conducts the globe to the opposite side, until the point where the conjunctiva is to be divided is plainly perceptible. In this position the points of the hook penetrate through the conjunctiva into the sclerotica, without however injuring the latter. This period of the operation is not without difficulty, and should be executed with circumspection. The operator now places behind the directing hook, the fixing hook in the sclerotic conjunctiva without allowing it to penetrate more deeply, and then removes the directing hook. This persistence of the squinting eye in the corner, happens only in
very high degrees of strabismus; the patient can usually look, at the request of the surgeon, to the opposite side, and I have made the remark, that not unfrequently during the preparation for the operation the patient ceases, by the influence of the will, to squint; or turns the eye very easily, when so requested, in the contrary direction. When the globe is fixed, the operator seizes the conjunctiva, with the forceps held in the left hand, not far from the point where the hook is introduced into this membrane, raises a fold of it, and divides it quickly with a bold stroke of the knife. He then enlarges the incision by several strokes of the scalpel upwards, downwards, and backwards. He then soon sees when the assistant draws the eye with the hook firmly away, the insertion of the muscle in the sclerotica. This period of the operation is not without loss of blood, and it is therefore necessary, if this be considerable, to remove the blood quickly with small sponges in order not to delay the operation. The surgeon then introduces the director, (fig. 13,) from below upwards, or from without inward, between the sclerotica and the tendon of the muscle. This is easily done, though the point of it, however, seldom emerges from the cellular substance lying between the muscle and sclerotica with ease, and the point must here be pressed through by force; or, what is preferable, the operator may cut through the cellular substance where it lies upon the point of the director. During this process, which is always painful, the muscle is more or less separated from its attachment to the sclerotica. This may be usefully increased by drawing the director somewhat back, and then by a slight but firm to and fro movement separating all the adhesions. The surgeon now draws the muscle forward from the depth, which often requires some force, and then divides it with the scissors or with the knife with which he has made the section of the conjunctiva. To accomplish this easily and without danger to the globe, lying closely in the vicinity, the director is grooved on its inner surface. In this groove the knife glides easily and harmlessly by, which it could not otherwise so quickly do, either on account of the conjunctiva being disposed to fall into folds, or the blood, and prolapsing cellular substance. But the section of the muscle by means of the scissors is preferable to that with the knife, and it is now performed either before or behind the director, as it may be desirable to divide either the tendinous insertion or the muscular substance. When the section is made before the director, then tenotomia is practised; while in the latter case myotomia is performed. I am of opinion, as to the adjustment of the muscle in the manner described, its adhesions to the sclerotica which so nearly touches it are separated, that it is quite immaterial where the section is made, though in the cases where the
squeinting is great, and when it is desirable to excite a great alteration in the vitality of the muscle, I should prefer the myotomia. So soon as the section is made, the hook is taken out and the eyelid holders are removed. It is often advisable, according as the operated eye adjusts itself, to dilate the conjunctiva upwards or downwards; and also to remove a piece of it, where it has been freely dissected off. The same is likewise applicable to the muscle.

II.

General View of Myotomia Ocularis.

The fixing of the upper eyelid produces in many persons so spasmodic a contraction of the orbicularis muscle that it becomes impossible to apply the under lid-holder. In this case, the instrument should be quickly removed and the patient be allowed to remain quiet. Often in a few minutes the spasm passes off, and the instrument may then be introduced without difficulty, when it is advisable to apply the hook to the under lid first. It is always desirable that this be done quickly, though cautiously, that the patient may experience no painful sensation. Not unfrequently the conjunctiva of the globe becomes injected with blood: the operation should be in this case continued and quickly terminated. Another inconvenience is, that after the application of the eyelid hook the circular conjunctiva at its reflection upon the palpebræ falls forward, apparently, as though the orbital fat was pressed forward. This occurs so forcibly, that the hook is sometimes displaced, or the conjunctiva prolapsed through its open portion. In these instances, which occur for the most part with children who resist the operation, it is well to postpone it for a few minutes. If it be continued, it becomes of the greatest importance not to make the incision in the prolapsing conjunctiva, but in the conjunctiva scleroticae—because the muscle to be divided may thus be more certainly attained.

The obstinate persistence of the globe in its squinting position is extremely disagreeable, and occurs especially in the severest cases of strabismus. Here the conducting hook, which may be quickly applied or removed, affords important aid; but it is very essential to choose with care the point for its insertion. This should be always in the conjunctiva scleroticae near the reflection of the conjunctiva bulbi upon the eyelid. The guiding or fixing hook, drawn in number 8, when well applied, does not tear out, and accidents previously described (Month. Jour. a. a. O. p. 325,) I have not since observed. The hook perforates only the conjunctiva, without however, causing blood to flow. The sur-
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Ammon should not forget that he is operating near the eye and not in the eye itself, and that the chief object is to attain as quickly as possible the insertion of the muscle. If the conjunctiva of the globe be divided, it is necessary to dissect it off to a greater extent in order to arrive at the origin of the muscle, the hemorrhage is greater, and more especially, the lesion of the conjunctiva is more serious; if on the other hand, the incision fall too far from the globe, the operator passes too far from the insertion of the muscle, and failing to attain it, passes into the deeply seated orbital fat. The result is prolapsus of the fatty matter, hemorrhage, delay in the operation, greater lesion of the orbit, and a total deviation from the muscle. If this should occur, it is necessary to allay the bleeding quickly, and ascertain the anatomical relations of the wound in order to learn the true direction to the insertion of the muscle. For this purpose, the protruding orbital fat and conjunctiva must be boldly and quickly removed with the scissors. It will now soon be evident, whether a new incision in the conjunctiva be required, or whether by firmly drawing it back the muscle may still be found. Experienced surgeons will not commit such an error; only the inexpert. For these I write, not for the former. Yet to this class may many practised surgeons subscribe themselves! For such who will acquire a fundamental knowledge, the best preparation for the myotomy ocularis is a previous examination of the muscles and nerves in the orbit of the human eye!

III.

Division of the Internal Rectus Muscle of the Eye; Musculus Rectus Internus, Fig. 1.

The division of the internal rectus muscle is the most frequently performed for the strabismus convergens, whose cause is an abnormal contraction of the rectus internus muscle; it surpasses in frequency all the other varieties of squinting. For its performance, besides the general rules of the operation, the following should be borne in mind. When the palpebrae and the globe are adjusted, it follows to select the proper point for dividing the conjunctival folds. To this end, the conjunctiva should be raised with the forceps close to the caruncula lachrymalis, in the middle of its diameter, and be divided by means of the knife, where it lies between the fixing hook and the forceps. This is done with more facility in the left eye than in the right, because therein the operator handles the forceps with the left, and the knife with the right hand; while in the right eye the reverse is the case. The Surgeon who is not ambidexter may
facilitate the operation upon the right eye, by placing himself to the left side of the patient, and thus with the left hand which may now manage the forceps, elevates a fold of the conjunctiva, and with the right makes the section of it from below upwards. If the correct incision be made, and the assistant draw the globe well outward, the insertion of the muscle will very soon be seen, and the director be easily introduced beneath the muscle, by pressing it from below upwards, when its point should be moved backward and forward, in order to separate as much as possible the muscle and its tedious expansion from sclerotica. The director must now be pushed between the sclerotica and the muscle, and when its point emerges from the incision made into the membrano-cellular substance, the muscle may be divided either with a curved scissors, or with the knife which is already at hand. I have for this reason, in the majority of cases, preferred the knife, though often a scissors may be more conveniently employed. When it is desired to remove a portion of the muscle, the first section should be made far backward, and then a part or the whole of the inner piece of the remaining muscular portion be excised. This advice is given because, if the first incision of the muscle be made too far forwards, it becomes impossible to seize and remove a piece of the muscle, which quickly contracts and retires deep into the orbit. The operation upon the left eye may be so quickly performed that I have accomplished it in not more than thirty seconds. That upon the right eye requires more time even, though the operator be ambidexter. To encourage the patient, I therefore prefer, in operating upon both eyes in one sitting, where no particular indication requires me to operate first upon the right eye, to perform the section of the muscle first upon the left.

IV.

Division of the External Rectus Muscle, Musculus Rectus Externus, Fig. 4.

The division of the external rectus muscle is more difficult than that of the internal, because its insertion in the sclerotica is deeper in the orbits than that of the internus rectus muscle, and because it has a broader and more tendinous expansion. This latter quality renders it more difficult to recognise the muscle, and he who undertakes the operation, should be especially careful not to neglect this anatomical circumstance. It is highly important in this operation to introduce the eyelid holder more externally, in order to dilate as widely as possible the outer corner of the eye. This being accomplished, the next step is to separate the conjunc-
tiva at its attachment to the outer ligament of the palpebræ, by delicate touches of the knife, as far as the sclerotica, when the aid will be enabled to draw the hook inserted in the conjunctiva bulbi more inwardly; holding, if the operation be on the left eye, the forceps in the right, and the knife or scissors in the left hand. By this means, the broad tendinous insertion of the external muscle becomes more perceptible, although it is difficult to distinguish it from the sclerotica. The operator now introduces the director from below upwards, under its tendinous expansion, (when he must bear in mind that its inferior portion lies deeper than that of the internal rectus muscle;) and also between it and the sclerotica; and detaches it by to and fro movements of the instrument from before backward, from the sclerotica. Before however, this is done, the point of the director must be passed beyond the upper border of the muscle between it and the sclerotica,—which may be facilitated by an incision into the membrano-cellular substance lying upon it. It now only remains to divide with the scissors or knife, the tendinous expansion. The hemorrhage is seldom of consequence, and is even less than occurs in operating upon the internal rectus muscle, though this often varies; and I have observed in dividing both external recti-muscles in one sitting, that one eye bleeds more than the other.

V.

Division of the Superior Rectus Muscle, Musculus Rectus Superior, Fig. 3.

This operation is not without difficulty in consequence of the deep insertion of the superior rectus muscle and its tendinous expansion; and because the operator must be exceedingly cautious not to wound the levator palpebræ superioris, or injure and even divide the musculus obliquus superior. It is here necessary to elevate as much as possible, the upper eyelid, until the reflection of the conjunctiva from the globe to the inner surface of the upper lid be distinctly visible. When this is done, and the under lid likewise fixed, the Surgeon places the guiding hook high in the superior portion of the conjunctiva, and directs the eye to be drawn firmly downward by the aid to whom he has entrusted the hook, so that the cornea descends as deeply as possible. The conjunctiva of the globe is now to be freely and deeply divided at the point of its reflection upon the eyelid. The opening is next to be dilated to the right and to the left. The large opening in the conjunctiva is necessary, because the superior rectus muscle is inserted into the sclerotica with a very broad tendon,
and because the tendinous expansion may thus be quickly seized with the director, and be separated from the sclerotica, which the operator can press to one side. "The difficulty of this part of the operation is increased by the strength of the cellular substance which binds the delicate tendinous expansion and insertion of the superior rectus muscle with the sclerotica. It is, however, the more easily effected, the more the director, which should be introduced obliquely into the conjunctival incision from without inward, or vice versa, is conducted upward or downward, in order to pass it, not above the insertion of the muscle, but between it and the sclerotica. The instrument may now be introduced with a certain degree of force to the opposite side of the tendinous expansion of the muscle after the membrano-cellular substance lying upon its point is divided. The tendinous expansion may be now somewhat elevated, separated by to and fro movements of the director from before backward, and finally, be divided by means of the scissors, either upon or near to the instrument.

The division of the inferior rectus muscle is performed with great difficulty, and is exceedingly rarely, perhaps never necessary. The manner of it performing it is similar to that described in section VII.

VI.

Division of the Superior Oblique Muscle of the Eye, Musculus Obliquus Superior v. Trochlearis, Fig. 2.

To discover quickly, the superior oblique muscle at its insertion in the sclerotica, adjust and divide it, the following precautions are necessary. After the eyelid holder is placed, and the lid drawn by means of it strongly upwards, the patient is directed to turn the eye as much downward as possible; the fixing hook being then inserted in the upper and inner part of the conjunctiva, and given to an assistant, the eye is drawn strongly downward and outward. On the depression of the conjunctiva at its reflection from the globe to the eyelid in the middle of the eye and near the caruncula lachrymalis, the operator raises a large fold of the conjunctiva, managing his forceps and knife with different hands, according as he operates upon the right or left eye, and divides it to the extent of half an inch. Especial caution is required in dividing the conjunctiva, not to cut the muscle at the point where it passes from the trochlea obliquely to the sclerotica, for the muscle in question passes from before backward to its insertion. When the conjunctiva is divided, and the muscle visible, the director is introduced behind it (Fig. 2) and then cut in the usual manner. The position of the superior oblique muscle renders it partic-
ularly capable of division by the subconjunctival operation. I have not yet performed myotomia ocularis upon this muscle, by either of these methods.

VII.

Division of the Inferior Oblique Muscle; Musculus Obliquus Inferior, Fig. 6.

The adjustment and section of the inferior oblique muscle is performed as follows. When the palpebræ are fixed, the patient is requested to direct the eye as much as possible upward; the conjunctiva of the globe is seized by means of the hook, deeply as its passage upon the eyelid; the hook being turned upward, a second aid draws the eye upward, and the orbit is then opened by a long incision in the conjunctiva, continued deeply into the subjacent cellular tissue. The adipose substance of the orbit protrudes, but if the operator be prompt, he will be able, before this occurs, to recognise the muscle and introduce the director behind it. This may be best executed by holding and directing the convex side of the instrument backward, the concave forward. Should the moveable adipose tissue impede the operation, or remain protruding, as large a portion as possible may be excised with the scissors. With this muscle, which likewise requires to be drawn forward with some force, the myotomia is generally performed, seldom tenotomia; for by the traction the muscle undergoes, its body and not its tendon forms the spot where the incision takes place. He who would divide the inferior rectus muscle must necessarily previously make the section of the inferior oblique, before he can arrive at the inferior rectus muscle. This operation would, however, in consequence of its very deep posterior insertion, be very difficult. But the surgeon of Myotomia should endeavour, however great the difficulty, to attain this muscle, as otherwise no remedy appears for a strabismus inferior, in which the rectus inferior is concerned.

VIII.

What do the preceding Operations teach us upon the State of the Conjunctiva and Muscles in Squinting?

Having attentively remarked the contraction of the conjunctiva bulbi, which in persons who suffer converging strabismus is for the most part col-
lected near the nose, I have often observed a marked paleness, and frequently a dryness of this membrane, as well also as a diminished secretion of mucus, and have verified in dividing it an abnormal density and thickness in its structure. This consists either in a true thickening of the conjunctiva as a membrane, so that the incised surfaces appear thicker; or display distinct lamina lying closely in contact. I have also often noticed numerous adhesions of this membrane, after its division, passing from the sclerotica to the inner wall of the orbit; I must therefore consider this as a certain and frequently occurring pathological fact. In the remaining varieties of strabismus, as for example the strabismus externus, I have not been able to verify, the same fact in the other parts of the conjunctiva.

As regards the pathological condition of the muscles in strabismus, it may be remarked that in high degrees of the squinting inward the insertion of the muscle is often deeper than usual. I have also verified the same in external strabismus. In the majority of cases, however, the muscle has its normal insertion. In relation to the muscular substance itself, this has at times appeared to me thick, injected with blood, more disposed to bleed after its division, and more difficult to cut than a healthy normal muscle. In such cases the muscle was rather round than broad. It has sometimes appeared unusually tendinous, and was then either very thin and degenerated, or seemingly soft and thick; its proper muscularity being hereby almost entirely lost, a crackling noise was perceptible during its division with the knife. Very often, however, I have been unable to discover any trace of an abnormal state in the divided muscle, either in its colour, its consistence, or its length.

IX.

Effect of the Operation upon the Position, Movement, and Functions of the Eye.

The operation in question produces a variety of effects, both upon the eye and upon the patient, of which the following may be noticed. After the myotomy occularis in which the conjunctival covering of the eye is divided, and the muscle cut and separated from the sclerotica, (these performing also the double offices of ligaments which originate in the superficial membrane and in the orbital muscles,) the eye in the majority of cases projects far forward; the eyelids appear more arched, and are more widely dilated. Especially remarkable is the projection of the globe when the rectus internus muscle is divided, far less so when the external muscle is
operated upon. In the first case, it is particularly the internal portion of the sclerotica which so boldly projects, and this becomes still more evident when the patient is requested to turn the eye outward. That portion of the membrane which was previously covered by the insertion of the muscle, then comes prominently into view. Where the sclerotica is deprived of its conjunctiva, it appears very white, which is commonly the more marked in consequence of the blood diffused around it. This also contributes to render the sclerotic protuberance still more marked. When the operation is performed upon one eye only, this alteration, this partial projection of the eye, produces a striking influence upon the whole physiognomy; but still greater is the effect, if the myotomia be performed at the same time upon both sides. This effect occurs in different degrees in proportion as the conjunctiva is more or less detached, or as the muscle is more or less cut, or divided more superiority or inferiorly.

The effects of the division of the muscle upon the position of the eye are very various. The following I have observed either immediately or soon after the operation. 1st, the eye resumes its natural position; or 2nd, it remains more or less squinting, or in the same position it had before the operation; or 3dly, it squints in the opposite direction, as for example an internal becomes an external strabismus; 4th, the squint transfers itself to the other eye which previously squinted slightly, or not at all.

The movements of the eye after the operation are entirely unaffected, or even appear more free than previously. The movement of the eye to the side of the divided muscle only, is at times somewhat impeded, though for the most part practicable. It is only as an exception that this motion is entirely arrested. The influence is sometimes remarkable which the myotomia exercised upon the nyctagus bulbi, which I have occasionally seen after the section of the external and internal muscles entirely disappear.

Upon the eye itself, I have commonly remarked nothing extraordinary after the operation. I have occasionally seen the pupil contract. As regards the sense of vision, I have observed the following facts after the operation.

1. Double vision occurs, which disappears after a longer or shorter space of time.
2. Many persons see more clearly and distinctly with the operated eye.
3. The vision is sometimes weaker, but soon however, recovers.

When I have operated upon both eyes at one sitting, I have observed,
1. That the patients seldom see double.
2. That they see sometimes more clearly and sharply, and sometimes more obscurely and indistinctly. Both deviations cease sooner or later.

3. In one case where I divided both the external muscles, the objects appeared to the patient during eight days very small, one half smaller than usual. This disagreeable inconvenience ceased after two weeks.

4. A permanently prejudicial effect I have never observed.

X.

The Traumatic Results of the Operation.

After the performance of the operation, the following circumstances may be noticed. A severe hemorrhage very seldom occurs, a few moments suffice to terminate the bleeding in the majority of cases, which the patient supposes to be only an increased flow of tears. He now complains of an aversion for the light, and I therefore always allow him to sit with the back turned to the light. Burning heat or acute pain seldom follow. Tumefaction of the eyelids does not occur. Sometimes a serous or sanguinolent infiltration forms in the conjunctiva in the situation where it was divided. I have but once seen this, in a case of luscitus of the severest kind, where the traumatic lesion was very severe, progress to a state of chemosis. The occurrence of ecchymosis conjunctivæ is remarkable one or several days after the operation, and not seldom, it is true, in the points of the conjunctiva which have been scarcely wounded by the hook. I have witnessed such ecchymoses originate in the lower lid under the folds of the conjunctiva, the border of the lid thereby appearing circumscribed with blood. Such ecchymosis occurs oftener at a later period, when a traumatic conjunctivitis has preceded. Suppuration in the wound I have never observed, but the adhesive secretion commences in the borders of the incision very soon after the operation. In a few hours I have seen the edges of the incised conjunctiva united. In such cases the healing process proceeds rapidly, and in a few weeks no other trace of the wound is perceptible than a fold, not dissimilar to a semicircular membrane lying near the caruncula lachrymalis. It happens otherwise when the conjunctiva has been widely divided, or a portion of it been removed; when the globe projects much forward after the operation, and when the borders of the incision do not approximate, but gape so widely that the sclerotica enters the open wound. Then occurs suppuration of the conjunctival wound of the exposed sclerotica, and of the divided muscle still adherent to this membrane. In relation to the excrescences of the conjunctival wound, they assume the ordinary form of
granulations, and do not differ from those of other wounds, as I have ascertained by microscopic observation. They create more or less suppuration which fills the inner corner of the eye. From its superior surface a muco-purulent humour flows, which is sometimes only a superabundance of the adhesive secretion. I have noticed that these granulations sometimes attach themselves firmly to the inner surface of the under lid, and there unite themselves organically by an adhesive enudation, when the conjunctiva palpebralis is in a state of irritation. This observation is important, as it affords a proof of the similarity of the diseased growths in the system to the mucous membranes. The base of these conjunctival excrescences is seldom broad, generally elongated, and sometimes pendulous. If examined with the lens, vessels are perceptible upon their surface, sometimes large, and sometimes delicate, and which lose themselves in the granular mass.

The sclerotica which has been deprived of the conjunctiva, also very soon gives origin to excrescences which are covered with a tissue similar to the conjunctiva. The same process takes place in the remaining portion of the muscles.

XI.

After Treatment.

The treatment subsequent to Myotomia is two-fold, therapeutic and orthopædic.

The therapeutic treatment consists in curbing the existing inflammation, or the effusion of blood in the conjunctiva, and preventing their advancing to a high degree. This is best accomplished by directing the patient, who should remain in a darkened room, to apply constantly either cold, or ice-water to the eye. These therapeutic and prophylactic means are also aided by saline purgatives, of which the preferable are the Saidschützer and Pühner bitter waters (similar to Seidlitz water.) — If the ecchymosis conjunctiva still persist, a few drops of the tinct. arnicæ upon the cold compresses may be applied, and this treatment be continued for a longer time. When a high degree of inflammation supervenes, venæsection, and an internal antiphlogistic treatment proportionate to the degree of inflammation, and the nature of the organ, are demanded. Should the suppuration of the conjunctiva still obstinately require the attention of the surgeon after the first eight or ten days, then employ diluted lead water, or the cautious application of nit. arg. fus, or sulph. cupri. The first is often useful and advisable, but I rather dis-
suade from the local application of nit. arg. and sulph. cupri. If the recently allayed inflammation become again highly excited, or even persists for a long time, I deem it the most advisable to remove with the scissors the granulations which form upon the conjunctiva. For this purpose they may be elevated with the forceps and be cut away at their base. When they are small or pendulous, the conjunctiva cicatrizies in a few days. If their base be broad, they reform anew, and it is often necessary to remove them again with the scissors several times, at intervals of ten days. At times after the removal of the granulations, a severe hemorrhage, or a new traumatic reaction follows; for which the cold applications are the most efficient. Among the granulations of the conjunctiva an excrescence is often conspicuous proceeding from the remaining end of the muscular rectus internus adherent to the sclerotica. This growth, which it is usually difficult to draw forward, may also be cut away with the scissors. But this remnant of muscle which is covered with granulations, very hard, and closely attached to the sclerotica, gives rise to a free hemorrhage; the granulations are reproduced, and even a second operation may prove unsuccessful. In these cases, I leave the cicatrization to itself, which generally takes place after a few weeks.

By the orthopaedic treatment, I understand the management of the gradually increasing influence of the will upon the now freely moving operated eye. With this view I bandage the unoperated eye, whenever the position of the eye after the operation does not become entirely natural, or shows a disposition to return to its former squinting situation, as it is known that a squinting eye resumes its direct situation by covering the other. This adjustment of the eye by this means is very important, as a natural arrangement of the sections of the divided muscle is thus obtained, and the approximation to the former squinting which during the patient's sleep always returns, is thus opposed as far as possible. It is evident that this treatment is only applicable when one eye has been subjected to operation: and requires modification when the operation is performed simultaneously upon both eyes. Of the utility of this treatment, to which I have invited attention in the Vereinszeitung für Medecin, June and July, 1840, I have frequently been convinced. It should however, not be pressed too far, as thus only a disadvantage to the strabismus results. The subject appears to me of great importance, and I therefore recommend it to the careful and radical examination of my colleagues. Without a continued orthopaedic treatment a relapse often occurs, and the more easily the less attention the patient gives his eye. On the other hand the exercise of the eye induces a just movement, and a slight degree of strabismus which may have existed in the other eye.
previously to the operation, or may have been produced after the operation, is entirely or mostly obviated, precluding the necessity of myotomy upon the other eye.

XII.

What change occurs in the divided Muscle?

Various are the sequelæ after the division of the tendon or of the muscle, or the excision of a portion of them. When the tendon of the orbital muscle is divided, and, as always occurs, its organic attachment to the sclerotica separated by the movements of the director, the muscle contracts, its point of insertion retires posteriorly, and then becomes attached, in proportion as the eye advances more or less, by the adhesive secretion. But if the muscular tissue itself be divided, or a portion to be removed, a contraction of the posterior portion ensues, and a space in the place of the incision is formed, which, according to circumstances, is greater or smaller. This space becomes filled with blood, issuing partly from the ends of the incised muscle, and in part from the conjunctiva. This blood soon penetrates, surrounds the ends of the muscle and fills like a pledget the wound. The external ends of the divided muscle contract and their surface becomes smaller. Then commences a secretion of adhesive lymph in form of small drops, which quickly becomes organized and occupies the space between the divided muscle previously filled with coagulated blood. After its appearance the cicatrization advances rapidly. A firm mass is then perceptible in the place of union which seems to form a patch between the ends of the divided muscle. This may be recognised by the superior surface of the muscle, being then strongly contracted and appearing smaller. Its colour is generally deep red. This uniting process of the divided muscle which I have often observed in the muscles of animals, Dr. Baumgarten has seen in the rectus internus muscle, which he had divided fourteen days previously, and again incised to promote a more rapid cicatrization and contraction. The muscle displayed at the cicatrized point a depression as described. The muscle appeared as though it had been for some time surrounded with a ligature. Although in this case the adhesive secretion existed in the united muscle, yet it was not secreted to a sufficient extent. But the cicatrization of the divided muscle takes place differently when the adhesive secretion is diffused in the parts adjacent to the lesion and deposition of blood, and when it occupies not only the surface of the wound, but the parts in the vicinity. Not only then
are the divided ends of the muscle united together, but likewise with the sclerotica or adipose matter and the secretion penetrates through the opened conjunctiva. This extensive adhesive process forms a thick conglomerate of coagulated blood and adhesive tissue which here and there extends into filaments. This I have observed in an eye subjected fourteen days previously to operation, but upon which, as the desired result was not obtained, the Myotomia was repeated behind the cicatrized point, though it extended apparently deeply. I was enabled to examine the described fact more nearly with the lens during the operation itself after the director was introduced behind the point of cicatization by Dr. Bauungarten who performed the operation. The cicatrice formed a thick excrescence, or mass, which in many cases may account for the relapse of the strabismus. I remarked the same pathological circumstance in another case, when I operated in the presence of Privy Counsellor Heunemann, of Schwerin. In this field of observation much obscurity yet remains, and yet the physiological analysis of it is the Car-do rei. I shall lose no opportunity to gain information upon it, and will publish what I may learn.

XIII.

Do Tenontomia and Myotomia Ocularis offer a rational remedy to the varying nature of Strabismus.

He who considers the effect of the division of the tendon or muscle for the cure of strabismus simply mechanical, and the opinion prevails that by the shortening of the muscle which thus draws the eye to one side, the only cause of squinting is obviated, will readily reply to this question, or will esteem it unnecessary. Quite otherwise, however, will the fact appear, if it be not forgotten that the favourite opinion of a constant contraction of the muscle does not at all define the manifold nature of squinting; it being only in the smallest number of cases that a permanent muscular contraction exists. These cases are limited to that state which the ancients named Luscutus, and considered apart from the strabismus. Herein is found a true shortening of the muscle in consequence of a retarded development, and thereby deeper insertion in the sclerotica (Luscutas Congenita;) or the muscle is positively changed in its character, that is to say, altered, thickened, and shortened either by metastolie (after Exanthemata) or by traumatic inflammation. In this instance the globe remains constantly fixed as it has grown. But
quite different is the condition of the muscles in the usual cases of strabismus, whatever may be the form.

In this variety of disease of the eye, it is manifest no organic change is found, but simply a diseased contraction of the one or the other orbital muscle, but which is liable to change, and passes from one muscle to the other, and from one to the other eye; but which however remains in the corresponding pairs of muscles. The contraction generally, also disappears when the sound eye is closed, and when the current of innervation is concentrated by influence of the patient's will in the muscles of the eye. The cause in this instance lies deeper than in a simple idopathic contraction of the muscle. It is highly probable that it must be sought in a diseased function of the nerves, and in those of them which preside over the motions of the orbital muscles. This important function we know is performed by three pairs of cerebral nerves, a proportion for the six small muscles of each eye truly remarkable, and which should render us, a priori, observant of the important part which these nerves play in the movements of the eyes. In them exists a disposition to pathological conditions, for those organs whose vitality in nervous influence stands high, always approach more to neuropathological states than those having a lower and poorer nervous organization. This may also explain the frequent occurrence of squinting, which is so easily produced, and which likewise attaches itself to other maladies. How then can Myotomia Ocularis aid these cases? And yet its utility is undoubted, and it is especially, after our experience, in these cases of spasmodic squinting that its advantage is manifest. In what manner, the following article may more fully elucidate.

XIV.

Further consideration of the modus operandi of Tenontomia and Myotomia Ocularis.

Is the beneficial effect of Myotomia Ocularis produced by the division of the conjunctiva, of the tendon and muscle, or by the division of the accompanying branches of the motor nerves of the eye?

The section of the Conjunctiva Oculi has a powerful influence upon the free movements of the affected eye, the more particularly when a free division of it is made in the inner corner of the orbit. In a case, that of an excessively timid and badly educated girl, where I desired to make the section of the inner rectus muscle of the left eye, it was impossible for me to complete the operation, as neither kindness nor fear could
bring the patient to obedience. When I had completed the division of the conjunctiva, I was obliged to desist from the operation. It was remarkable that this incomplete operation had so good a result that the eye assumed a very direct position. I directed the unoperated eye to be bandaged, and treated the half operated one with cold applications. At first an excellent result was promised, but after fourteen days, when the conjunctival wound was healed, the eye resumed its former abnormal position. This case is a certain proof that the section of the conjunctiva alone does not suffice to cure strabismus. The division of the muscle, or that of its tendon, is the essential intention of the operation, inasmuch as thereby the bands which fetter the eye are separated, and also some of the branches either of the oculi-motor, the pathetic, or the abductor nerve are divided. These are known to be the motor nerves of the orbital muscles. Of these, the oculi-motor nerve (the 3d cerebral pair,) divides itself into two branches, the superior of which is distributed in the levator palpe. sup. and the rectus superior muscles, while the inferior, dividing again, goes to the inner surface of the rectus internus — rectus inferior and obliquus inferior. The Nervus Patheticus (the 4th cerebral pair,) a very delicate nerve, goes exclusively to the obliquus superior, and the Nervus abducens (the 6th cerebral pair,) is distributed on the inner surface of the musculus rectus internus. I deem the Neurotomy, which always accompanies Myotomia Ocularis, extremely important; and also grant that Myotomia or Tenontomia Ocularis accomplishes an essential remedial agency by its mechanical influence; for by the separation of the muscle or tendon from the sclerotica, a particular obstacle to the normal position of the eye is removed. It is also my opinion that an important effect of the operation consists in the new impulse given to the vitality of the muscles, in the widest sense of the word. It is not only the mechanical action of the operation, but also its physiological effect, which appears to me of primary importance. I call here to mind my own words uttered several years ago, "Tenontomia tendines morbose contracti prolongantur, et nova vita eaque normali imbuuntur," (De Physiologia Tenontomiae, Dresden, 1837, p. 22,) the justice of which, I can attest by oft repeated experience, in the domain of Tenontomia. The explanation of the physiological phenomena is, that the division of the muscle or tendon produces an augmented contraction in the divided portion between which the effusion of blood occurs. This contraction causes an enlargement of the vessels of the muscles, now required in consequence of the resulting traumatic irritation and its consequent congestion, and the increased change of tissue is not without its influence in preserving the new vital organization in the muscle when reunited by
Ammon on Squinting. [April,
cicatization. An altered nervous influence is likewise established, as an improvement in the current of innervation is produced in combination with the organic improvement, in the divided branches of the motor nerves.

XV.

Upon the management of the Eye some time after the operation, and the necessity which requires it.

The treatment of the eye, sometime subsequent to the operation, is directed to the condition of the conjunctival cicatrix, and to the position of the eye. The point of the conjunctiva where the operation was performed unites apparently with facility, and scarcely any cicatrix is perceptible after the division of the rectus externus muscle; and very seldom any adhesion to the palpebrae. It is otherwise when the operation takes place near the caruncula lachrymalis, and differs according to the position the operated eye assumes. When this latter is very advantageous, a marked depression is formed in the inner corner of the eye between the caruncula lachrymalis and the inner surface of the sclerotica, in consequence of the connection of the conjunctiva, which in the normal state is uninterrupted, being now divided. An obvious isolation of the eye from the caruncula lachrymalis exists. Sometimes in this situation instead of a depression, a crescentic prominence is observed, which sometimes is a pale red, and at other times a deep red colour, and resembles the excrescence of the conjunctiva which often remains after a catarrhal inflammation. I have occasionally remarked transverse folds of a newly formed membrane pass from the sclerotica to the caruncula lachrymalis. I have however, only noticed this when the eye had resumed its former abnormal situation; or when either no, or a very trifling advantage, had been the result of the operation. I am however of opinion that this cicatrizatation is not the cause of the new oblique direction of the eye, but that it accompanies the stronger attachment of the organ to the orbital walls. As regards the position of the eye some time after the operation, it may become again oblique after having maintained for three, six, or eight weeks a normal position, and resume its former degree of squinting, or may present an approximation to it. This happens chiefly with those persons who neglect themselves, and lay aside the orthopaedic treatment of the eye (see Section xii.) As yet I have never seen it in a high degree where I have simultaneously operated on both eyes, though I have known often a complete relapse to occur where the
operation was limited to one eye. Here the repetition of the operation is indicated, and may be performed so early as the third week. A remarkable fact is the metastasis of the strabismus some time after the operation, to the unoperated eye, in cases where the affection existed only in one eye. It is here evident that the squinting is a necessity whose cause lies deeper than a simple contraction of the muscle, (see Section xiv.) In this event, it appears to be a rule that the strabismus assumes that form in the unoperated eye which is originally presented; for example, if strabismus internus previously existed, the metastatic affection becomes also strabismus internus: and the same if the first operation was performed for an external strabismus. In these cases it becomes necessary to operate upon the second eye. I have however sometimes observed that a determined attention of the patient to the position of his eye gradually removed every trace of the affection. When only one eye has been subjected to operation, it usually remains more projecting than the other: and this is most generally the case when the rectus internus has been divided. This unequal projection of the globe of the eye gives a somewhat singular appearance to the physiognomy of the patient. If both eyes are operated upon, this dissimilarity is not perceptible, but the deep depression may be seen near the caruncula lachrymalis, separating it from the sclerotica, and the globe retains a separation from the inner corner of the eye which gives to the eyes themselves a peculiar expression.

XVI.

Rules for the repetition of the Myotomia Ocularis.

The repetition of the operation of Myotomia Ocularis should be performed in accordance with the rules already given, (Section 1.) Very sharp scalpels and scissors are herein requisite as the cicatrices of the conjunctiva are more difficult to divide than the natural membrane. As the hemorrhage is also severe, an aid should be in readiness to allay it with small sponges, that the operation may not be impeded. A free incision in the conjunctiva is required in consequence of the extensive adhesive conglomerate which lies beneath it in the situation of the previous incision in the tendon or muscle, and which prevents or impedes the introduction of the director. This must be firmly pressed back in order to find the point where the muscle is free, and where an instrument may be passed between it and the sclerotica. This is usually only practicable far backward, and consequently in repeating the operation it is necessary to divide the muscular tissue itself. The effect of the
repeated operation is often very favourable to the position of the eye. I have never observed a greater traumatic reaction after the repetition, than after the first performance of Myotomia Ocularis. The after treatment is the same. Physiologically interesting and important is the examination by the lens of the adhesive formation which the united muscle presents. As this lies upon the director and may be easily observed, no surgeon should neglect to institute ample researches in such cases.

XVII.

Should Myotomia Ocularis be performed on both eyes simultaneously, or the second operation be deferred to a later period?

My own experience leads me to the following answer to this question. In cases where a manifest strabismus convergens duplex exists, or where a strabismus convergens is subject to metastasis, viz: when the squinting passes from one eye to the other, I advise the performance of the operation upon both eyes at the same time. The character of a strabismus depending upon an affection of the oculi-motor nerves is thus quickly and entirely removed; and the metastasis which so readily occurs in such cases where the operation is confined to one eye, is effectually prevented. The orthopaedic treatment is here of less importance as the operation itself remedies the diseased muscular action as well as that of the motor nerves. It is however by no means to be entirely neglected. Prophylactic means against inflammation is however all that is usually required. A satisfactory success has attended my experience of the simultaneous division of both internal and of both external recti muscles, and especially is it of incontestable utility that both corresponding muscles of both eyes be divided, when a peculiar tremulous movement called nyotagmus, accompanies either the higher or lesser degree of squinting. Not only is the actual state of the eye thus improved, but the patient also is sensible of the greater stability of the eyes. Truly remarkable in these cases is the diversity of objects which the patient perceives: the sight experiences a vast variety of changes. I have never yet divided at the same time the internal rectus muscle of one eye and the external rectus of the other, in a case which might occur in an external strabismus of one eye and an internal of the other, as I have never yet observed the circumstance.
Results of the operations of Myotonia Ocularis performed and witnessed by the author.

The sum of operations performed by myself, and by Drs. Zeis, Baumgarten and Warnatz of Dresden, amounts at the present time to seventy two, (see Introduction.) Of these, forty-five have had an entirely happy result; thirteen only a partial success; and fourteen have failed. In the given forty-five cases, three required a repetition of the operation. Had the operation been repeated in the thirteen less favourable cases, undoubtedly some would have succeeded. The fourteen cases of failure consisted for the most part of the highest degrees of strabismus, or luscitus; or the persons from being either very old or very young, possessed a feeble influence over their will. Severe chemosis has occurred but once, and that was quickly allayed. No operation has given rise to severe results or produced injury to the patient, with the exception of two cases of the strabismus externus. The operation was performed upon the inner rectus of the right eye twenty times — of the left eye forty-three times — upon the external rectus of the right eye, six times — of the left, three times. Six times were the inner recti muscles of both eyes divided at the same time: and once the external recti.

Upon the application of the sub-cutaneous and sub-conjunctival Myotomy to the operation of strabismus.

Who would not desire to apply the effectual results of the division of the muscles and tendons to the operation of strabismus! Anatomically, this mode of operation is certainly applicable, especially the sub-cutaneous, to the external recti and obliquus inferior; and the sub conjunctival to the superior oblique. I have already (Month. Journ. of Medicine, Surgery and Ophthal. Vol. III. p. 220,) spoken of the variety of operation, represented by fig. 5 in the accompanying plate, when the director is introduced beneath the muscle through a cutaneous incision in the external part of the orbital circumference. As regards the subconjunctival division of the superior obliquus musc. at its attachment to the sclerotica, it would not be difficult, after elevating the eyelid and drawing aside the globe by means of the hook inserted in the upper
part of the sclerotal conjunctiva, to divide the tendon of the muscle from within outward, by means of a small curved sickle-shaped knife, introduced beneath the conjunctiva, one or two lines from the insertion of the muscle into the scleroteca. This sub-conjunctival division is without danger to the eye, as with ordinary precaution, the scleroteca cannot be wounded, as the knife is directed beneath and near it. Injury to the levator palpebræ superior, is with the proper adjustment of the palpebrae, not to be feared. The only disagreeable event which can occur, is the simultaneous division of the conjunctiva with the Myotomia or Tenontomia of the Trochlearis muscle. Nor are there any anatomical reasons for rejecting the sub-cutaneous and sub-conjunctival operation. But the reasons which appear to oppose it, are that a normal anatomical position of the muscles cannot always be relied upon, and the operator thus incurs the risk of failing, and being ultimately obliged to recur to the more sure and tried mode of operating. Experience however can be the only lawgiver.

XX.

What utility does Myotomia Ocularis promise beyond its application to strabismus in the treatment of maladies of the eye?

Besides the utility of Myotomia Ocularis in the treatment and removal of strabismus, does the operation present other advantages? No doubt exists that by the division of the muscle of the eye, the organ becomes more free and unconstrained in its position, as the separation of the muscle from the sclerotic insertion removes all the posterior tension. It therefore appears to me probable, that in all those cases where the posterior region of the eye is in a state of engorgement, inflammation and consequent tension, circumstances which so easily injure the vision, the section of the muscle may be resorted to as a rational experimental remedy. We comprehend herein the rheumatic affection of the neurilema of the orbital portion of the optic nerve; chronic inflammation of the scleroteca, which so easily passes into an atrophia bulbi quadrati; acute inflammation of the choroid membrane; and all congestions of this organ—also sanguineous congestion of the central artery, and in a word, all the pathological conditions of the posterior chamber of the eye, in which acute or chronic congestion, and acute or chronic inflammation exist in the delicate structures of the eye immediately concerned in the function of vision. By the division of the conjunctiva and muscles, the bands which surround and interlace the globe are liberated, and the circulation of the blood in these tissues is rendered more
easy and rapid. It is thus that effusions of blood, and that disposition to degeneration and opacity in the fine tissues of the eye which so readily deteriorate the power of vision may be prevented. I am of opinion that the application of Myotomia to these cases offers a more rational remedy than their treatment according to the dogmas of the so called rational therapeutics. We may hope for utility likewise from Myotomia in many other affections of the orbital muscles. Its benefits in nyotagmus bulbi have been already verified. And also in other maladies resulting from an affection of the orbital muscles does it present itself as a remedial agent, as the permanent oblique vision of one eye (see Hu-eck, Deviations of the Eye, Dorpat, 183S, p. 34,) whose cause must be regarded as either a relaxation of the obliquus superior muscle, or a contraction of the obliquus inferior.

Final reflections and wishes.

I earnestly desire that this publication, the result of unprejudiced and oft repeated observations, may contribute to render still more perfect, through the means of clinical researches, the operation for strabismus. Ophthalmology has undoubtedly been enriched by the acquisition of Myotomia Ocularis. Not only does it afford a radical cure, or a manifest improvement for squinting, that affection so disfiguring to the human face and incident to it alone, (as in animals squinting never occurs,) but it also presents a means of penetrating the protean nature of strabismus. And this is the more necessary, for, as in all things, our knowledge here also is imperfect. For months had a close and continued study of strabismus occupied my attention, but the more I observed the malady, the nearer I endeavored to approach it, the more did it elude my penetration into its character. For this reason have I written you, my highly honoured friend, this letter at some length upon the important point of the indications for Myotomia Ocularis. Certainly the time cannot be far off, when our now imperfect knowledge of strabismus will find its Dieffenbach. To win such a crown, merits well the efforts of surgeons who interest themselves in ophthalmology and orthopaedia. Unite to these researches, prompted by the love of truth, the publication of your own experience in this operation: for thus the certainty and utility of science cannot fail to be enhanced.
REVIEWS

AND

BIBLIOGRAPHIC NOTICES.


"In considering the diseases of children," says Dr. Stewart, "that view of the subject which is the most natural, and consequently most in accordance with sound philosophy, is that which is in closest connection with the successive development of the various functions; for upon the unimpaired discharge of the functions of every organ, the healthy condition of the system, especially in a growing state, absolutely depends."

And in accordance with this principle:

"The division of the subject adopted in this work, is that founded on the functions of the human frame, as the most natural; and the one which is most practically applicable, is that proposed by Galen, and which, until the time of Bichat, was the division generally adopted. Bichat arranged the functions into those which relate to the preservation of the individual, and those which relate to the preservation of the species. The former were again subdivided into several minor divisions. Such an arrangement of the functions is inapplicable to the subject here undertaken; but that proposed in former days is here adopted—a division which is in fact the foundation of the various suggestions of physiologists made in later times. The diseases of children have therefore been arranged under the three divisions of the functions of the human body, which are the most natural in the order of their development, and which, on this account, may become the sources of disease. 1st. The vital functions, or those which are essential to life, and without which animals cannot exist: as the circulation and respiration. 2d. The natural functions, those which are instrumental in repairing the several losses which the body sustains: as digestion, chylification, and secretion, which may be suspended for a time without destruction of life. 3d. The animal functions; those by the agency of which we hold communication with the surrounding world: as the motor and nervous systems."
Passing by some interesting preliminary observations, as well as the general description of the physiological peculiarities of the respiratory system in children, and a summary of the signs of disease from this system, we will enter upon an examination of some of the more important diseases as described and treated by Dr. Stewart.

Bronchitis, or inflammation of the lining membrane of the bronchi. The following is Dr. S.'s description of the common form of this disease in children:

"On the first appearance of the disease there is a chilliness of the surface of the body, which is soon followed by a quick pulse and hot skin. Cough is usually present from the commencement, at first slight, increasing gradually in hoarseness, and as the disease advances, accompanied with pain, which in young children may be known by a violent cry. The cough, at the commencement, is unattended with any secretion of mucus; but shortly after the invasion of the disease a free secretion of mucosity takes place, which increases in quantity until the complete transmission of air to the air-vesicles is prevented, and all the distressing symptoms of suffocation present themselves; the countenance becomes anxious, and the prolabilia livid; all of which are aggravated on placing the child in a recumbent position. The coughing is often attended with strangling, and paroxysms of threatening suffocation, until relief is obtained by vomiting. These symptoms are, towards the termination of the disease, sometimes attended with convulsions or stupor. The disorder of the respiration accompanies the other symptoms in their march, and as the latter increase in intensity, becomes more oppressed and difficult.

"Percussion yields a clear sound in every part of the chest at first, but different portions become dull towards the termination of the disease. Auscultatory examination discovers the existence of the mucous ronchus, and it may even be heard without applying the ear to the chest, or without the intervention of the stethoscope. The use of this instrument in severe cases can scarcely be dispensed with, if we are desirous of making a prognosis of the disease; and if we discover its peculiar characteristic, the mucous ronchus pervading the whole of the chest, and the inflammation occupying the bronchiae of both lobes, great danger may be feared if much constitutional derangement also exist. If, on the other hand, it is discovered to be partial, our prognosis may, in general, with ordinary constitutional vigour on the part of the child, be favourable, although the paroxysms of coughing and difficulty of respiration may be severe and exhausting."

The above extract we believe to contain, for the most part, an accurate history of the symptoms of ordinary bronchitis; on one or two points, however, in relation to the physical signs, we wish to offer a remark. Our author observes, that "percussion at first yields a clear sound at every part of the chest, but different portions become dull towards the termination of the disease." This we believe to be an error — percus-
sion remaining perfectly clear during the whole progress of the disease, even in the severest cases. If dulness occurs towards the close, it is from the superintervention of a new disease, as pneumonia, or pleurisy.

Again, while our author is perfectly correct in stating that an universal bronchus accompanies the more aggravated cases of bronchitis, and that its existence in portions only of the lung is favourable to the prognosis, he has omitted to state (although in another section, while pointing out the diagnosis of pneumonia from bronchitis he has not omitted the point in question) that the mucous rattle in bronchitis is always double, or heard on both sides. The true history of the mucous rattle in bronchitis appears to us to be this: In mild cases, it is not heard at all; and in the cases where it does exist, it is always heard over the posterior and inferior portions of both lungs, and extending from this point it may occupy the whole chest in severe cases. But even here it will be found most intense posteriorly and inferiorly, and as the disease yields it disappears in the same direction. It may be well to add, also, that it is commonly, perhaps always, preceded by the dry rhonchi, the sibilant and sonorous. Dr. Stewart describes other forms of bronchitis. In one form, the disease progresses in a very insidious manner, "until at length the breathing attracts attention from its peculiar wheezing character, almost imperceptibly changing to dyspnæa, and attended with drowsiness. This respiration occurs for the most part in paroxysms. . . . The pulse is extremely quick, while the skin is cool and moist."

This form when far advanced is commonly fatal. Another form is the epidemic catarrh or catarrhal fever — this Dr. S. regards as a "secondary affection, connected with great derangement of the chylopectic viscera." The last variety is the congestive catarrhal fever of Dr. Parrish: the symptoms being those usually observed in all congestive fevers. Of this form we have never seen any examples.

"Morbid Anatomy and Pathology.—Autopsical examinations show the bronchial mucous membrane in a state of increased vascularity, as appears from the injection of the capillary vessels with blood; it is often thickened, but seldom softened. On account of the obstructions in the bronchiæ, the lungs do not collapse on opening the thorax. A thin but tenacious fluid fills the entire substance of the lungs. Mucus, more or less thick, is usually found in the ramifications of the bronchie, sometimes mixed with purulent matter, similar to what is occasionally discharged from the mouth in very severe cases of the disease, that have been quickly fatal. In other instances some degree of hepatization has been found in the lungs, particularly at its lower posterior portion: apparently the first progress of the disease towards pneumonia. Tubercles have at times been found at the root of the bronchiae, and in the lungs."
We have almost constantly noticed in our examination of cases where bronchitis existed, that the parts in the immediate neighbourhood of the bifurcation of the trachea presented the principal traces of inflammatory action, the redness gradually subsiding above and below this point—a somewhat singular fact, when we remember that the physical signs locate the disease in the smaller ramifications of the bronchi, at the inferior portion of the lungs, and which can only be explained by the supposition that the redness has disappeared after death from the more delicate portion of the membrane. According to our observation also, the mucous membrane is seldom or never thickened in this disease, unless in some cases of a very chronic form. Indeed the true seat of the disease, if we can judge by the seat of the injection, is in the sub-mucous cellular tissue, the mucous membrane itself retaining completely its natural texture and transparency.

In the treatment of bronchitis, Dr. Stewart recommends the course we believe, usually adopted by the best practitioners among us. At the onset, the syrup of ipecac, frequently repeated to induce vomiting, with a pediluvium, &c., is advisable. But if the disease assumes a more acute and formidable character; bleeding, both general and local, must be resorted to according to circumstances, to be followed by a blister and by nauseating remedies, as ipecac or tartar emetic. Our author notices, and very justly, some of the objections to the use of tartar emetic in the case of young children. There are perhaps but few cases where this remedy is necessary, and many cases where it does decided injury by the irritation it produces. Combined with an opiate, this objection might be avoided, but this is substituting an evil equally great in the treatment of such cases.

We do not notice that our author alludes to the warm bath in the treatment of acute bronchitis, and yet we believe it to be a remedy of great value. In cases where depletion is necessary, (and this in young children can be far better effected by leeches than by V. S., even where the latter is practicable,) we are accustomed to apply leeches in sufficient number to produce a general and local impression, placing the child at the same time in the warm bath. In this way the most prompt and powerful impression is made on the disease. This mode of substituting local for general depletion is more common in Europe where leeches are cheap, than in this country.

After the fever has subsided, the best treatment consists in the use of the stimulating expectorants, as squills, polygala senega. Our author recommends the sanguinaria canadensis. We know that this remedy is often highly praised by some of our practitioners, but after a considera-
ble and careful trial of it, we are obliged to confess that we have not found it of much advantage.

In the other forms of bronchitis above alluded to, the treatment must be regulated according to the circumstances of the case; thus in the congestive form, the powers of the system must be roused by external stimulants, and then blood be drawn according to the condition of the child.

Dr. Stewart closes his remarks on the treatment of bronchitis by some very judicious observations on the preventive treatment, to which we particularly refer our readers.

Pneumonia. — In his chapter on pneumonia, or inflammation of the air cells, Dr. Stewart has given a clear and most satisfactory history of the disease. It is surprising how little has been written on this most important and interesting subject. Of late years, however, it has awakened a proper attention, and its frequent occurrence has enabled us to establish nearly all the important facts in its pathology and treatment. Dr. Stewart recognises distinctly two important facts in this disease, viz. the difference resulting from age, that is before and after six years, and the equally striking difference between the acute and chronic form, occurring during the first six years. We are only able to present our readers with the diagnosis between this disease and pleurisy and bronchitis, and the morbid anatomy of its different forms.

"Pneumonia may be distinguished from pleurisy by the following physical signs: The same dulness is observed on percussion; and although in both, extending widely with great rapidity, yet in the latter disease it is unattended with the excessive disturbance of the system noticed in the rapid extension of pulmonary inflammation. While in both the dulness exists, in pleurisy there is nothing of the subcrepitant or mucous ronchus. The distinction between pneumonia and bronchitis is not difficult, if the symptoms already detailed are borne in mind. When the mucous or subcrepitant ronchus is heard in the latter disease, it is uniformly on both sides. This is the only auscultary sign that may cause these diseases to be confounded. When it is heard at the lower portion of one lung, it is to be regarded as the commencement of pneumonia."

In the above remarks, and in other portions of the chapter, we find no allusion to the true crepitant rattle as a diagnostic sign of the pneumonia of children. Dr. Gerhard states that it does not exist in children under six years, and in the chronic form of the disease which he has so well described, it probably does not: but in the acute form, it does not unfrequently exist, and is then equally important as a diagnos-
tic sign of the first stage of the disease as in the pneumonia of adults.

"Morbid Anatomy and Pathology. — One of the most remarkable distinctions between the inflammation of the lungs in adults and children, and which has already been alluded to, when speaking of the symptoms, is the affection of separate lobules, instead of a continuous inflammation of the entire pulmonary tissue, which characterizes the disease in the former. This is the form which the insidious invasion of the disease assumes, and which renders its detection often difficult, and without the aid of auscultation, in many cases impossible; for on dissection, small, distinct, indurated portions will be found in the midst of lobules free from disease, or very slightly inflamed, while the patient, during life, presented but few distinctly marked symptoms of pulmonary affection. The inflammation of the lobules is what characterizes the diseases of the lungs in infancy and early childhood, as it is never found after the age of five or six years. Young children, however, may be also affected with an inflammation of the lobes of the lungs in the same manner as adults are affected, but never, after the age above mentioned, has it been found to partake of the lobular form. While, therefore, autopsical examinations show that the partial, lobular, latent pneumonia ought to be regarded as a peculiarity of the disease in young children, they still have at times, the true pneumonia of adult age, inflammation affecting the entire lobe: the former being, in a great number of cases, a chronic affection, and such as we might expect to meet with in debilitated subjects, and among those that are treated in public hospitals; the latter occurring in those that are of a robust habit of body, attacked either during health, or while labouring under the influence of some acute disease.

The first stage of lobular pneumonia or induration, exhibits the cut surface of the lung of a marbled appearance of a grayish rose or red colour. These red spots are circumscribed to a greater or less degree, and are easily torn; they float in water, and crepitate when pressed.

The second stage is that which is usually met with on dissection. The exterior of the lung is generally found quite soft, and of a gray colour, inclining to a rosy tint; prominent circumscribed spots have also been seen, of a firm consistency, and of a violet colour. These spots are usually circular, but occasionally vary from that form, and present an oval appearance from above downward; they are observed mostly in the posterior part of the lung, but have occasionally been found in other parts of the organ. The incised surface appears mottled with spots of a grayish rose colour, to a deep violet. The dark spots noticed on the external surface of the lungs penetrate the substance, and are unquestionably the result of inflammatory action; and all the alterations of structure observed in different parts of the lungs, are from the same cause, differing in no respect from similar disordered action affecting the same tissue in adults.

The third stage is that of suppuration. This condition, according to MM. Rilliet and Barthez, may easily be overlooked, as the colour of the lungs have returned to their natural state; but some of the lobules will be found more prominent than the others, and on being cut and pressed, pus will be found to
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ooze from the surface. Abscesses have also been discovered in this form of pneumonia; and cavities, from the size of a hemp seed to that of a pea, and in some instances communicating with the bronchiae.

These lobular inflammations may increase to a great number, until the entire lung is affected, producing a complete alteration in the appearance of the lung, and which has been denominated by the authors just mentioned, lobular pneumonia generalized.

Other alterations have been found in the lungs of young children, presenting when cut, a number of granulations of the size of a millet seed, of a yellow-lish colour, containing a fluid of a purulent nature, which can be squeezed out when cut. Again it has been found shrunken, of a violet colour, with white lines marking the divisions of the lobules. The cut surfaces of the lung appear smooth and red, resembling muscle in their structure, and without cre-pitus on pressure. The violet colour shows that it differs from the hepatization of adults, while it bears a resemblance to the condition described by M. Louis, under the name of carminification, and has been so denominated by those who have investigated the pathology of children.

All writers agree as to the frequency of double pneumonia in children, a cir-cumstance of very rare occurrence in adults; but like the disease in the latter, when it is confined to one lung, it is most usually the right lobe that is affected.

The complication of pleurisy with pneumonia is very frequent in adults, but pleuro-pneumonia is very rare in young children. In one hundred and twenty-three cases which came under the notice of M. Valleix, pleurisy occurred only in twenty instances; a fact which was before noticed by Dr. Gerhard in the paper already referred to.

In young children, all their affections are more or less complicated with evi-dent derangements of the chylopoetic viscera; and in the disease before us, lesions of the intestinal canal exist, principally of a chronic inflammatory na-ture, as appears from the condition of the mucous membrane.

Such is the amount of our knowledge on the subject of the pathology of pneumonia of young children; important, inasmuch as the frequently insidi-ous progress of the disease,—so slow and imperceptible as to have received the name of latent,—might often put us off our guard until the affection has made a fatal progression. When the invasion is sudden and well-marked, it will matter but little whether the disease be strictly lobular or lobar; but as it is proved that the former affection is a peculiarity of young children, and that pathological anatomy has demonstrated the existence of serious and fa-tal lesions formerly unsuspected, it will be our duty to ascertain, by the means which modern science has placed in our hands, the existence or non-existence of such a form of disease in protracted cases of infantile affec-tions, and by the timely discovery, to apply the appropriate remedies for its removal.

As to the pathology of lobar inflammation, it differs in no respect from that of adult age. This, as was before remarked, may occur in children at every age, although some have been of opinion that it never appears until after the
age of six years; and M. Berton asserts, that is not until the age of fifteen years that pneumonia assumes all the pathological characters peculiar to the disease in adults.

Among the effects of inflammatory action in the lungs, is the infiltration of serosity in their tissue, forming a real œdema of the lungs. This condition is generally attended with very laborious respiration; but in some cases extensive œdematous effusions have been found, without this condition having been manifested during life. Mr. Gardien mentions that it will be found without the presence of any antecedent lesion, and after symptoms which threaten immediate suffocation. But this generally is not the case, for it usually complicated with bronchitis, pleurisy, and pneumonia, and is evidently the result of extensive inflammation in the various tissues and membranes of the lungs."

The treatment of the acute form of pneumonia is founded upon rational indications. We have a severe and rapidly progressing inflammation of a most vital organ, and this should be met at the onset by free depletion. Dr. Stewart recommends V. S., but we think the application of leeches in sufficient numbers to the part affected to produce a decided impression of the system, aided by the warm bath, the most effectual mode of checking the progress of the disease. These measures must of course be combined with purgatives, antimonials, &c. After the acute symptoms have subsided, Dr. S. thinks blisters are decidedly beneficial, and if the secretion becomes excessive, he recommends emetics.

In the treatment of the chronic form, we hardly think that Dr. Stewart, while he has taken correct views of the general nature of the disease, has stated the most prominent therapeutic indications with sufficient distinctness. "The treatment of pneumonia," he says, "is based upon the same principle which should direct us in the management of the acute form of the disease; all our efforts being directed to diminishing the quantity of blood passing through the lungs."

It appears to us, however, that a careful examination of the lungs in those who have died in this form, will satisfy the observer that an active form of congestion at least is not present, if indeed the lungs contain an unnatural quantity of blood at all. The diseased pulmonary tissue is remarkably dry and firm, and of bluish rather than redish tint; the bronchi are pale, thus conveying the idea of obstruction rather than of any thing else. The remarkable slowness with which the disease passes through its different stages, rarely, perhaps never, terminating in suppuration—the accompanying constitutional symptoms indicating a diminished vital energy, all point of a disease quite distinct in its indications of treatment from the acute form. We doubt very much whether depletion is ever
necessary in this form, or if at all, it should be resorted to with great caution. A contrary, or stimulating course, seems to us the true one and if carefully adopted is the successful treatment. The Coxes hive syrup, omitting the antimony, the warm bath, small doses of calomel at night, blisters, &c. to the chest, with a simple but nutritious diet, and such attention to the complications as each case may require, are means we have found most useful.

Pleurisy, as Dr. Stewart justly remarks, is a disease of greater frequency in young children than is commonly supposed, and like pneumonia, it has received but little attention from practical writers on the diseases of children. Like the disease in adults, it presents two distinct forms, the acute and chronic, and is characterized by the same morbid appearances after death. Its diagnosis, according to some writers, is by no means easy. It may be distinguished from pneumonia, by the universal and marked flatness of the side affected, and by egophony. In some cases, at least, the bronchial respiration is equally distinct and superficial in the two diseases, but in pleurisy it is more extended in proportion to the constitutional symptoms. A superficial bronchial respiration, in place of no respiration, is sometimes also noticed in the pleurisy of adults, and is not easily accounted for.

The treatment of this affection is of course antiphlogistic. After the acute symptoms have subsided the effusion remaining, Dr. Stewart recommends the use of diuretics to promote its absorption. We know of no well established facts which prove the value of these remedies. An effusion which is the consequence of inflammation, must be viewed, we think, in a different light from that which is the result of obstruction, and in removing which diuretics certainly exert great power. Of this, however, we are well assured, that when the inflammation has been removed by proper means, the effusion is commonly absorbed by the simple efforts of nature.

In treating of Croup, Dr. Stewart adopts the usual division of inflammatory and spasmodic croup, a distinction founded no doubt in fact, although many cases of the spasmodic form are secondary in their nature, or dependent on some antecedent affection.

The inflammatory croup is by far the most important form, and according to our author, constitutes the disease in the greatest number of instances. Indeed, according to Guersent, the most experienced writer we have ever read on the subject, a slight inflammation is the most common cause of even spasmodic croup, although very different in its character and progress from that which constitutes the more severe form of the disease.
Inflammatory croup is divided by Dr. Stewart, into three stages, which he regards as of great importance in their influence on the treatment. In the first stage, the disease is purely local—the respiration is loud, sometimes resembling the clucking of a fowl or the crowing of a young cock; the cough is frequent, dry, hoarse, and ringing—there are frequently intervals of relief.

In the second stage the suffocation increases, and general febrile symptoms ensue; there is no longer marked remission of the symptoms. This we believe to be the case in true croup; yet Dr. Stewart goes on to state:

"The symptoms are more intense, after renewed attacks of the disease, to which a child is very liable when once affected with it, as it often returns for several successive nights; and if not met by appropriate remedies, the violence of the disease increases, and as it approaches the third stage, or stage of effusion, the cough sometimes excites a retching, when a glairy mucus will be discharged by the efforts to vomit. A momentary relief is then experienced, but the pulse still shows the continuance of febrile action, while the voice remains hoarse.

The application of the stethoscope may be useful in ascertaining the progress of the disease; and during the interval in the stridulous breathing produced by vomiting, the loud mucous ronchus may be distinctly heard. The sibilant ronchus will also be distinguished as the disease advances, while percussion gives a dull sound in every part of the chest.

It may be questioned, we think, whether the true croup, or that attended by the formation of false membranes, possesses this marked intermittent character, although, without doubt, the symptoms are somewhat ameliorated by the approach of day, to return with increased violence as night returns; but this is equally true in all acute inflammations in children—at all events, this peculiarity would seem to belong rather of the spasmodic form. And again, according to our author, "the sibilant ronchus will be distinguished as the disease advances, while percussion gives a dull sound in every part of the chest." While we do not doubt that the above symptoms may occur in this stage of croup, yet they do not properly belong to the disease, the former being a sign of bronchitis, the latter of pneumonia, oedema pulmonum, or pleurisy, all which may exist as complications.

The third stage, is that characterized by effusion into the trachea bronchi, and on the surface of the lung; all the general and local symptoms becoming aggravated, and death commonly soon ensues.

The morbid anatomy of croup is fully explained by Dr. Stewart, and
we have only alluded to the subject, to express our opinion that the anatomical characteristic of the disease is the formation of false membranes in the larynx and trachea. It is a specific inflammation entirely distinct from laryngitis or bronchitis. A want of precision on this point often leads to erroneous opinions. Thus we hear practitioners talk of treating and curing croup by various remedies; and yet when questioned closely, they can give no satisfactory evidence that the case was really croup. Dr. S. states on the authority of respectable names, that extensive inflammation has been found in the air passages on post-mortem examination, without any appearance of an adventitious membrane. We would only remark, that this may happen, and yet the case be one of real croup. We remember a case where the patient expectorated during the disease portions of membrane several inches in length, and yet on post-mortem examination but little appearance of this membrane could be detected, and that apparently of a very recent formation.

The successful treatment of croup depends in a great measure upon the case being seen early. In the first stage, Dr. Stewart recommends an emetic, "the disease having been promptly arrested in its progress by this remedy." Tartar emetic is generally the best, combined with ipecac, unless the child be very young, or of a feeble constitution; then the hive syrup, or a preparation of a similar character, is to be preferred; if the second stage appears, with febrile symptoms, blood must be drawn freely and repeatedly, according to the circumstances of the case, although our author does not approve of the extent to which some practitioners carry the use of this remedy. He thinks bleeding from the jugular vein is seldom necessary, besides being attended with inconvenience, and that leeching is not often of much importance, if free general depletion has been resorted to. After bleeding, an emético-cathartic is of decided advantage. Calomel, Dr. S. thinks, exerts a salutary influence in this stage of the disease, but we are inclined to think that he undervalues its powers. It is a little remarkable that the best French practitioners, who are so little given to the use of mercury in inflammatory affections, place great dependence on calomel in croup, regarding it as exerting an alterative influence in changing the specific character of the inflammation. The warm bath, 92°, 98°, blisters to the trachea and larynx are also highly recommended as auxiliaries in the treatment of this disease. After the acute symptoms have subsided, the secretory functions of the mucous membrane should be preserved by the use of expectorants, as the hive syrup, and the circulation equalized by attention to warmth, pediluvia, rubefacients, &c.

In the third stage, when false membranes have formed, the principal
object is to effect their removal, and this may be best attempted by the use of emetics, especially those of a stimulating character, of which the polygala senega is probably the best. Dr. Francis of this city, says our author, has been successful in several almost hopeless cases, by the use of the sulphates of zinc and copper as emetics. We would also continue the free use of calomel in this stage, both because, if the specific character of the inflammation continues, new false membranes will be secreted, so that the relief will only be temporary, and because this remedy is thought to promote the free secretion of mucus, which might assist in detaching the false membrane, and in its expectoration. Dr. Stewart also discusses the value of tracheotomy in this disease, and judging by the published results, it can hardly be regarded as of much value. But it should be remembered that this remedy is usually deferred until the last moment, when every thing else has failed, and that this may account in part, at least, for its want of success. We know that towards the close of the disease pneumonia frequently, or congestion of the pulmonary tissue almost always, is found to exist, and that patients, even when the obstruction to the respiration is removed, not unfrequently die of exhaustion.

In connection with croup, Dr. Stewart treats briefly of the same form of inflammation as it affects the fauces and often extending to the larynx and trachea, thus producing a secondary yet a true croup. The best marked descriptions of this form of disease are derived from epidemics in which it occurred, especially that given by Bretonneau of Tours, whose work is full of valuable cases and dissections of the disease. It may be well to observe, however, that high authority places the primary seat of true croup in the fauces, from which it extends to the larynx. Thus we find, in the Essay of M. Guersen, than whom no writer on this subject is more to be valued for his practical experience and judicious observation, the following opinions. "The most frequent complication of croup is the plastic angina of the pharynx. It is almost constantly found in the epidemic croup, and I have already mentioned that in five cases in six of the sporadic form that I have attended, I have observed patches of coagulable lymph on the pharynx and the tonsils. I will add here some important considerations upon this kind of complication in children at the breast. The majority of the cases belong to this complication. I have never seen a case of simple croup in children between the ages of one and two years; but the false membrane which lines the pharynx extends sometimes to the esophagus and gives rise of the vomiting of patches of lymph which come from this organ, and not as is commonly supposed from the larynx. Sometimes this false membrane
extends to the larynx.” This statement, which if true under all circumstances, must prove of high practical value in the diagnosis of croup, is however denied by Mr. Cheyne, a much esteemed English writer on the subject, and we believe is not commonly admitted.

Under the title of “spasmodic croup” Dr. Stewart appears to us to have classed several affections differing in their nature, and if accurately examined, in their symptoms. Indeed the term spasmodic appears to us objectionable, as the constriction of the glottis is but a symptom arising from various causes. There is an affection, which constitutes probably the largest proportion of cases that are called croup, which appears to consist of a slight inflammation of the larynx, and in which spasm of the glottis is a prominent symptom. It is this affection which Dr. S. appears to us to have described, in part at least, in his semeiology of spasmodic croup. It attacks children suddenly in the night, in successive paroxysms, the first being the most intense: these gradually subside towards morning, or almost like magic by the operation of an emetic, to return perhaps again, although with less violence the succeeding night, the child remaining free from fever and with a moderate degree of hoarseness during the interval.

The disease commonly known as thymic asthma is also described as spasmodic croup: yet it recognises a distinct cause from the affection just described, as well as distinct symptoms. It is a disease recognising as its cause an enlarged thymus pressing upon the trachea and great vessels, and attended by irregular and often distant paroxysms of strangulation, which finally prove suddenly fatal. It does not, so far as we have observed it, present the symptoms of pneumonia; but if pneumonia exists as a complication, this latter disease is more rapidly fatal and with less organic change in the lung than the simple pneumonia.

In treating of Whooping Cough, Dr. Stewart, after presenting fully to the reader the different theories that have prevailed in relation to this disease, offers the following opinion of its nature:

“Without adopting any of these conflicting views, it is enough for all practical purposes, to keep in mind, that at the commencement of the disease it is inflammatory: increased vascular action for the most part existing, in some instances perhaps in a very slight degree; but that it is essentially the nature of the disease in its first stage, is evident from the fact of the presence of the symptoms pointing out this condition of parts, if the local affection be increased even but a little.

“While it is in the first stage an inflammatory disease, or perhaps a complication of inflammation with some inexplicable action of the nervous system, which modifies the simple bronchitis, it is, unquestionably, in the last, one purely spasmodic, as is abundantly evident from the success in adopting such reme-
dies in its treatment, which are known to exercise a controlling influence over the morbid sensibility and actions of the nervous system."

The general correctness of this opinion, few we presume, will pretend to dispute. The disease, so far as it is capable of being localized, appears to be a specific inflammation. For ourselves, we can see no reason by which its inflammatory element may not be considered as extending to the second stage, although its spasmodic character is then the most prominent feature. In this stage, the great and constant secretion of mucus, which is the exciting cause of the paroxysm, would seem to indicate the existence of a permanent irritation at least of the bronchial membrane, and the sibilant or mucous ronchi heard over the posterior portions of the chest would tend to confirm this opinion.

In the treatment of this disease, Dr. S. recommends mild and antiphlogistic remedies in the first stage, and when this is relieved, anti-spasmodics and sedatives are indicated, although in many instances of simple whooping cough there is but little interference needed. We believe fully in the truth of this latter statement. We believe that as a general rule, the less that is done the better, beyond a proper protection from exposure, and a careful regulation of the diet. The great principle of treatment is the preventive, and the great danger is from—first, pneumonia; second, congestion, or inflammation of the brain. If the child becomes feverish and loses its appetite and liveliness, if the respiration becomes permanently accelerated and oppressed, if the characteristic whoop ceases or diminishes, then inflammation of the lungs is setting in; if drowsiness ensue, with flushing and heat about the head and face, with or without febrile symptoms, then the brain is becoming affected, and the most prompt and energetic treatment is required. Our author states these different complications with great distinctness, and alludes to others less important, which we have not room to enumerate.

Circulatory System.—Dr. Stewart, as in the former part of his work on the Respiratory System, has placed before his readers a concise and clear account of the peculiarities of the circulatory system, and the general signs of disease from this system. In this division of his subject he has classed but two diseases; one, a distinct and well recognised disease of the circulation—cyanosis; the other, a general affection, about the nature of which much obscurity certainly exists—remittent fever.

The affection known as cyanosis, or blue skin, has been commonly supposed to depend upon a mixture of the venous with the arterial blood, either through the unclosed foramen ovale, or from some malformation
of the heart. Dr. Stewart, however, entertains different, and we think more correct views of the subject.

"The causes of this affection necessarily include the morbid anatomy and pathology, for it arises from a congenital malformation, or persistence of the natural fetal openings of the heart, or of some dilated or thickened state of the right cavities. * * *

"Anatomical examination, however, has established the fact, that the right cavities of the heart are always found altered in size, whether there exist an opening between the two sides of the organ or not; and the livid colour of the lips is an invariable sign of lesions in the right side of the heart."

Indeed, it is a remarkable fact in the history of these cases, how uniformly the right cavities of the heart are found dilated, thus giving evidence of obstruction to the circulation through the right side of the heart. In many cases the direct cause of this obstruction is evident, either in congenital smallness of the pulmonary artery or in valvular disease; but in many other cases the cause is not so direct and apparent, and is only recognised by its effects, viz. dilatation of the right cavities with or without hypertrophy. This obstruction to the circulation we have reason to think may be owing simply to want of power in the right side of the heart to expel its contents; and when this is the case, the stasis of the blood may be but temporary, and yield to time. Thus we have seen a case in an infant soon after birth, in which the blueness occurred in paroxysms, and always when the child was asleep. The extremities became cold, the heart nearly ceased to beat, the respiration ceased, until after a time the child would revive with a scream, and the action of the heart return with great violence, the blueness at the same time rapidly disappearing. The mother had ascertained that raising the child from the cradle and trotting it on her knee was the most effectual way to cut short the paroxysm. Three months afterwards, these paroxysms of blueness had entirely disappeared and without treatment.

It is doubtful, however, whether the blueskin in sufficient intensity to constitute cyanosis, ever occurs without its appearance being aided by the mixture of the venous and arterial blood by a communication of the two sides of the heart. And there are some facts in connection with this which are worth explaining. Thus, why is it, if this mixture of the two kinds of blood is the great cause of the blueness, as is generally supposed, that this symptom frequently does not occur until many years after birth, the communication between the two sides of the heart being congenital? The explanation is this. The most frequent point of communication is by the foramen ovale, and the auricles at birth being pos-
sessed of equal contractile power, and contracting at the same time, the pressure of the blood against the foramen ovale will be equal on both sides, consequently, no mixture of their contents will ensue, the blood being forced onward in the natural channels. But an obstruction to the passage of the blood through the right side of the heart existing, the muscular power of the auricle is gradually increased in the effort to overcome this obstruction, the balance of power between the auricles is lost, and the right contracting with the greater force, drives the venous blood through the foramen ovale. Thus a gradual, but constant admixture of venous and arterial blood is produced, which is liable to be increased by whatever increases the action of the heart. And in the same manner the other forms of communication from malformation may be supposed to operate.

But on the other hand, the free mixture of the venous with the arterial blood alone, is not able to produce the blueness of cyanosis. Thus in cases where the aorta arises from both ventricles, and where of course this mixture of the blood must be free, especially where the orifice of the pulmonary artery is small and contracted, the symptoms of blueskin may not occur for years after birth. Indeed the study of the recorded cases of this disease must convince us that two elements, obstruction and mixture of the two kinds of blood, must commonly unite to produce the disease in its most marked form.

We have attempted a more full account of the mechanism of cyanosis, because we are not aware that the subject is generally understood in this light. Our author appears to us to have comprehended the true nature of these cases.

*Infantile Remittent Fever* is classed by our author among the diseases of the circulatory system, but we think without sufficient reason. This disease has been described under different names and referred to different causes, while as yet very little as to its true nature has been satisfactorily ascertained. According to Dr. Stewart, "dissections have furnished but little light on the morbid condition of the system in remittent fever; for in a fatal termination, the transition to the brain is the ordinary course of the disease, and effusion of serum into the ventricles will be all that will be found remaining of the disease, which at its commencement indicated but little more than derangement of the primae viæ." Again —

"From an examination of the opinions of the various authors, compared with some amount of experience in the disease, remittent fever appears in general to be a symptomatic disorder, from derangement of the stomach and intestines, or of the appendig viscera; or from an irritative action, at first excited in
the mucous membrane of these parts. It has been observed, that almost all fe-
vers, connected with gastric derangement, assume a remittent character.—
This disposition, added to the irritable constitution of young children, gives their
febrile affection this peculiar type. When there exists any severe local inflam-
mation, the fever is less likely to assume this character, from which it is evident
that it is one more of irritation than inflammation."

We are disposed to regard this disease as of miasmatic origin, and as
identical with the common continued fever of adults, allowance being
made for a difference of age. That the disease in children should as-
sume a more remittent character, is perfectly in accordance with what
we know of all febrile diseases; that no constant organic lesion is found
on dissection, is what might be expected, since the disease is not very
frequently fatal, and when so, because it has spent its violence upon the
most susceptible organs, as the brain in many instances.

The proper treatment of this disease consists, according to our author,
in the free purging with calomel, &c. and afterwards, in the continued
use of the same in combination with antimony. If severe local congestion
ensue with high febrile excitement, bloodletting general or local,
must be resorted to. The sulphate of potash with rhubarb, Dr. S. thinks
a good remedy to regulate the bowels in this disease. Where great de-
bility exists, and the disease is protracted, tonics, &c. may be required.

In the second great division of his subject, "the Natural Functions,"
Dr. Stewart describes first, the diseases of the digestive system. After
a full, yet concise and well written account of the peculiarities of this
system in children, he proceeds to the consideration of individual diseas-
es, some of which we will notice.

Stomatitis.—The mucous membrane of the mouth is very liable to become
inflamed in young children. It may be simply an erythematic form, without
being followed by any result; or may terminate in exudation of concrete mucus,
ulceration, or gangrene.

The first mentioned termination of stomatitis is an altered secretion of the
part, having the appearance, most commonly, and always at the commencement,
of white spots, resembling a small white flower, known in France by the name
of muguet. Ulceration may occur in any part of the buccal mucous membrane.
When it appears on the mucous follicles, it is the second stage of aphthæ. Gan-
grene may be the termination of all the others, or may be a distinct variety,
commencing usually with an oedema of the part, and sanguineous congestion of
the cellular tissue.

The causes of this disease are various. It may arise from a state of
congestion of the mucous membrane peculiar to the young infant at birth, from local irritation, and especially from a deranged condition of the alimentary canal. It prevails also extensively in places where many children are crowded together.

In the simple form of this disease, the inflammation appears to be of an erythematic character, although when severe, it may be attended by ulcerations — sometimes, an exudation resembling lymph takes place on the inflamed surface, constituting what is called by the French, muguet. At other times the muciparous follicles are inflamed, constituting aphtha, which are apt to terminate in ulceration. These different forms are apt to be attended with more or less fever, and particularly by symptoms of irritation or even inflammation of the mucous membrane of the primae viæ.

But the most fatal of this affection of the mouth is the disease known as cancrum oris.

“The best written treatise on this disease is that of M. Baron, who has watched, with great carefulness, the commencement and progress of this affection.

He has shown that there are two well-marked stages of the disease. It first appears in the form of an œdema of the cheek, a circumscribed, smooth tumefaction of the skin, in-the centre of which appears a small hard body, on which there is sometimes a small red spot. In the second stage this small central spot soon ulcerates, and forms, on the internal surface of the cheek, a small eschar; this ulcer spreads, and all the soft parts become successively disorganized; the periosteum separates from the bone, leaving it exposed, while the remains of the gums and sides of the mouth, with bloody exudations, exhaling a foetid odour, flow out with the saliva. These are its distinguishing symptoms. The others, such as sinking, vomiting, restlessness, pain, diarrhea, are common to all forms of stomatitis, when pursuing its uninterrupted course to a fatal termination.”

The treatment of the simpler forms of the disease consists in emollient applications locally; or if much inflammation be present, leeches to the angle of the jaw, and means calculated to relieve irritation or inflammation of the primæ viæ, if either exist. In the more advanced stage, when ulceration has ensued, local stimulants are indicated, and of these Dr. Stewart thinks sulphate of copper the best. In the gangrenous form of the disease which is attended with great prostration, tonics, especially quinine, internally, and local stimulants, as a strong solution of sulphate of copper, are the proper remedies.

Under the head of morbid dentition, our author gives a full account of the various phenomena attending the process of teething when performed with difficulty. These exhibit themselves for the most part, as general or
local irritations, or even inflammation. The following is Dr. Stewart's account of the morbid anatomy of this affection.

"In those children who have died from the effects of teething, manifested especially by great tumefaction of the gums, the post-mortem examination reveals a violet coloured swelling, with fluctuation. On opening the tumor, dark coloured fluid blood is found in the alveoli. The teeth are generally discovered loose and floating in the midst of the effused blood, which formed the tumour, and fall out with the blood that flows. These effusions in the alveoli become less frequent in proportion as the child advances in age, and as the tooth by its size fills the alveolar cavity. Other pathological appearances occur in other organs, according to the nature and seat of the complication."

Dr. Stewart in treating of cynanche maligna offers the following opinion of its nature.

"The peculiar product of the inflammation, the pseudo-membranous formation which is pur red out on the surface of the inflamed mucous membrane, has of late received much attention in France; and the description of it, principally by Bretonneau, has probably been taken from the milder form of the affection; for the term he applies to it, diphtheritis, (Διφθερία, membrana,) signifies an inflammation, attended with an exudation of a membranous substance, which is represented as its only peculiarity, but which, in strictness, cannot always be so regarded. In some instances the pellicle may be peeled off, leaving the mucous membrane beneath red, and free from any ulceration; but in the greatest number of instances, it is found covered with an ash-coloured slough, or studded with patches of gangrene, corresponding with the malignant sore throat of earlier writers. This affection, known also by the names of angine coenneuse, angina pseudo-membranacea, etc., ought to be considered identical with cynanche maligna."

In the above quotation, our author appears to us to have confounded two distinct diseases, viz: an inflammation attended with the effusion of lymph, and an inflammation terminating in gangrene. We are indebted to Mr. Bretonneau of Tours for the distinction between the plastic and the gangrenous angina. According to this author, the former of these affections has frequently been mistaken for the latter. The patches of false membrane being sometimes dyed with the sanious discharge resemble sufficiently gangrenous eschars, while the odour of the breath, which, however, is fetid without being gangrenous, has assisted in confirming the same error. Mr. Guersent, whose experience has been so immense in the diseases of children, has never met with but two cases of the true gangrenous angina; in one there was also gangrene of the lungs, and in the other severe gastro-enteritis.
"Diarrhoea.—This disease, in some form or other, is extremely frequent among children, both as a functional disorder of the intestinal tube or its appendages, and as a symptom of organic affections. The former class is what we shall at present notice.

"Several varieties of diarrhoea are considered by authors; but as some of them are clearly symptoms of indigestion—as that form in which the food is passed unchanged, known by the name of lienteric diarrhoea, and that attendant on weaning—those only, which, from the nature of the evacuated matters, evidently arise from the deranged functions of the intestines or parts connected with them, and not from gastric indigestion, will be considered as belonging to this class of diseases.

"The nature of the evacuations in diarrhoea are very varying, even in individual instances, both at the same period and during the course of the disease; yet the prevailing characters which they exhibit, has caused a classification to be made by practical writers—an arrangement well founded, and of great use as points of general reference, even in the most complicated cases.

"There appear to be three varieties of diarrhoea: feculent, serous and bilious, as the predominating nature of the alvine evacuations indicates. All these may, however, pass into each other, and what at first would appear to possess the distinctive characters of one form, may, by a transfer of irritation, ultimately become of another character; and in all the forms there is more or less mixture of bilious matter, rendering close examination of the alvine discharges necessary to detect the nature of the affection. This inspection of the fecal matter was the subject of much attention in former times; and Hippocrates appears to have been greatly in the habit of close attention to this subject; and physicians of the present day would do well to imitate this practice of the father of medicine. These varieties are placed in the order of their simplicity; and the first or the simple form, very naturally first attracts our notice."

Dr. Stewart remarks in another part of this section, while treating of the pathology of chronic diarrhoea, which is the common termination of all the above forms when neglected —

"Diarrhoea, in its first stage, can scarcely be any thing more than an excessive irritation of the tender mucous surface of the intestines. As it advances, all the symptoms show that this state of irritability has become a permanent affection; the next step, that it has passed to an inflammatory action; still going onward to its fatal termination, the symptoms manifest a disorganization and destruction of tissue, which, it will be presently seen, is what is found, on a post-mortem investigation, to be the actual state of the affected part,—the remains or consequences of a condition previously existing, but materially different in its nature from the original affection. Without, therefore, regarding the anatomy of the part as giving us the exact state during life, it is still highly valuable in enabling us to form a judgment of the progress of the affection, and thus directing us in the application of such remedies as the chain of symptoms during life, with the corroboration revealed by fatal cases, suggest."
1841.] Diseases of Children. 425

"This inflammation is found to exist more particularly in the large intestines; but the small intestines not unfrequently participate in it, especially where life has been long protracted, and the colon exhibits evidences of disorganization. Ulceration is frequently met with to a considerable extent, the ulcers having elevated margins, surrounded with livid-coloured patches. Sometimes, in the place of ulcers, there are found a number of tubercles, forming small elevations on the mucous membrane. It is not unusual, also, to find fungoid elevations on different parts of the mucous surface of the intestines; these, together with the thickening of the mucous membrane, very materially diminish the calibre of the intestines."

Introsusceptions are also not unfrequently found in cases where diarrhoea proves fatal; also a diseased and congested state of the liver.

The above quotations will explain sufficiently the reasons of our author for adopting the classification of diarrhoea which he has presented in his work. It is simply a classification founded on a prominent symptom, and one which is not without its use, so long as the true pathology of the disease escapes our observation.

Without being able to enter fully into this subject, we cannot omit Dr. Stewart's experiments on the green discharges so frequent in the diarrhoea of children. In treating of bilious diarrhoea he remarks—

"Although there may be but little bile in the evacuations, yet, if much acid be present, they are always green; all acids decomposing bile, and producing a green precipitate. This effect of acids on the bile has been denied by some, but the question is put at rest by direct experiment. The following is one which I made, to ascertain the truth of the generally received opinions on this subject.

"I procured a small quantity of human bile; it was of a brownish yellow, and of a viscid consistence, like thick gelatinous mucus. A portion of this was largely diluted with pure water, until it exhibited the yellow appearance of ordinary bile. To this was added a drop of muriatic acid; the whole became immediately of a turbid green. The coloured part afterwards was precipitated, leaving the fluid transparent and colourless. The same experiment was tried with sulphuric acid, with a similar result; the colour, however, was not so well marked as that produced by muriatic acid. Acetic acid coagulated the bile, and produced a turbid yellow, inclining to green. Similar results followed an admixture of the inspissated bile with these acids. In the latter, which was exposed to the action of the atmosphere, in proportion to the decomposition which ensued, a change occurred in the colour, which passed to a blue, and afterwards red. In the others, which remained tightly corked in small phials, no alteration appeared for several weeks."

All green discharges must not, however, as we think, be regarded as dependent on the operation of the above cause. Discharges may probably become green during the progress of inflammatory action in the intestines, without any admixture of bile.
The most important and fatal of all the abdominal diseases in children is that known as *cholera infantum*. It is a disease supposed by most observers to be peculiar to this country, and to fix its principal seat in the three great cities of the middle states, New-York, Philadelphia, and Baltimore. It is to our own physicians, then, that we must look for the description of this disease. The standard works on the diseases of children which have as yet been published in this country, devote much space to this important subject, yet in our opinion their account of it is most unsatisfactory, leaving the student in almost complete ignorance of the true pathology of the disease, and giving him principles of treatment, which if sometimes correct are always empirical, and therefore very uncertain in their application. Dr. Stewart has happily overcome this difficulty by presenting us with a more clear idea of the true nature and pathology of this disease than preceding systematic writers, and we can refer to this section and that on pneumonia, as among the best portions of his work. The causes of this disease have been much investigated, and a proper understanding of their nature must, as will at once be seen, exert a most powerful influence upon the proper treatment, especially the preventive treatment. What these causes are, cannot be better stated than in the author's own words:

"It is a remarkable fact in the history of this disease, that three circumstances are necessary to its production. The state of the system occurring during dentition, a high atmospheric temperature, and an impure state of the air; no one of these alone is in general sufficient to form it; nor do any two of them appear to be the agents of its formation. It never appears in the pure air of the country; nor does it prevail in cities at any other season than the summer; nor does it attack children, except during the period of dentition; scarcely ever occurring after the teeth have all appeared. To this last rule there have been a few exceptions; and the disease is then always attributable to some error in diet, by which the development of the follicular apparatus takes place prematurely, placing the child in the same pathological condition as that which occurs during the time of dentition, from a natural, though at times an excessive development of the mucous follicles of the intestines; a state which we have already seen to be the morbid condition of the bowels in this disease."

The pathology of this disease constitutes its most interesting feature in the present state of our knowledge.

"*Morbid Anatomy and Pathology.*—Dissections of those that have died of cholera infantum, show that the abnormal alterations are principally confined to the abdominal viscera. The brain, especially in some protracted cases, is in a state of congestion, with serum effused in the ventricles; a condition usually occurring in all protracted cases of disease in children, and therefore is not
to be regarded as peculiar to this. The thoracic viscera are always in a healthy condition.

It is a remarkable fact, that all who have recorded dissections of those who have died of cholera infantum, speak especially of the liver, as being greatly enlarged, and in a state of complete sanguineous engorgement; and not only enlarged but of a firmer texture than natural. According to the various statements recorded, it has been found so large as to occupy two fifths, one half and even two thirds, of the abdominal cavity. The intestines, also, exhibit the effects of inflammation in every portion of their track; but especially in the mucous coat of the duodenum, jejenum, and ileon. Dr. Horner has satisfactorily proved, that the morbid alteration exists particularly in the mucous follicles of all the intestines; and so marked were the cases dissected by him, of follicular inflammation, that he compared the appearance to the vesicular diseases of the skin. This, therefore, with the enlarged state of the liver, constitutes the essential characteristics of the morbid anatomy of cholera infantum."

The symptoms of this disease are well known. The first symptom is, commonly, diarrhoea without vomiting or fever; although vomiting may occur at the commencement and aggravate very much the prognosis of the case. The discharges are at first feculent, but as the disease advances they become thin and serous and variously coloured — brownish, white, yellow or green. Their colour may be acid, but commonly they have the smell of decomposing animal matters. The seat of the disease influences the character of the discharges; in some cases they are dysenteric. Vomiting ensues, often of an uncontrollable character; irregular fever sets in, the head and abdomen becoming hot, while the extremities are cold and pale; pain is also present under pressure; delirium followed by stupor may ensue; emaciation advances rapidly, and death when it takes place, usually occurs in about three weeks.

The treatment of this disease is founded on rational indications. Much may be done by preventive measures, by avoiding the well known causes which appear to produce it. These have already been enumerated; and when the disease is fully formed, much good may be gained by a careful attention to the same particulars.

In the treatment of this disease, the first indication is to relieve the congestion of the liver. Something might be gained by the abstraction of blood, if these cases were seen at their very commencement; but this being seldom the fact, our principal reliance, after having removed all irritating matters from the primæ vae by a mild cathartic, is in the use of calomel. The use of this remedy in this disease was first introduced by the late Dr. Miller of this city. He was in the habit of giving one third gr. calomel united with one sixth gr. of opium every second, fourth, or sixth hour, according to the condition of the bowels. This
remedy is to be continued until a free secretion of bile takes place. If much fever be present, blood may be abstracted locally, and ipecac given as a diaphoretic, care being taken to prevent its acting as an emetic. Dover's powder is a good substitute for ipecac, in cases where it is required. Mucilaginous drinks and the warm bath are valuable adjuvants to the treatment.

Particular symptoms sometimes require especial attention during the treatment. Thus vomiting may sometimes be checked by lime water united to milk, or by strong coffee, or by laudanum—but great care should be taken to ascertain that this symptom when urgent is not dependent on inflammation of the mucous membrane of the stomach, when leeching will be required. Where the discharges from the bowels continue frequent, some practitioners have recommended astringents and opiates. But as a general rule they should not be used freely until the biliary secretion is restored, although our author thinks in protracted cases where there is much exhaustion they may be resorted to. In protracted cases also, where the tendency to relapse is very great, light bitters and tonics are indicated with a proper regulation of the diet.

Only about one half of Dr. Stewart's volume has fallen into our hands, and of this we have endeavoured to place before our readers such selections as will give them an adequate idea of its general scope and execution. No one can doubt as to the great importance of a well executed work of the kind, presenting the author's personal experience and a judicious digest of the opinions of others. The French writers, Billard, Valleix, and others who have written professed treatises on the diseases of children, while they have enlarged to a great extent our knowledge of the pathology of these diseases, have not added much in relation to their practical treatment. While on the other hand, the English writers, and especially those in our own country, from the neglect of that pathological knowledge which is the foundation of all rational treatment, have recommended modes of practice not unfrequently both empirical and uncertain in their results. A work was wanted which should unite correct views of the nature of disease with rational modes of treatment, and this we think Dr. Stewart has accomplished in a way that will place his treatise far in advance of any preceding work that has appeared among us. That much, however, remains to be accomplished in the true understanding of this important class of diseases, no one can doubt. We have ourselves unhesitatingly expressed a different opinion from our author in many instances, but as a whole, we believe the work will be found indispensable to the practitioner who wishes to obtain the best established facts and principles in relation to a most important class of diseases.

J. A. S.

The second part of the valuable work of which the above is the title, lies before us; and we purpose, in pursuance of the promise given in the last number of this Journal, to subject it to a cursory analysis, as was done with its predecessor. It treats of the obscure subject of nervous diseases, a class often met with in practice, some almost uniformly fatal, all excessively painful, and rebellious alike to every method of treatment. None more frequently baffle the skill of the physician, and the tortured patient is driven in despair from one to another, until he becomes skeptical of the usefulness of all, and becomes a prey perhaps in self-defence, to some greedy charlatan. These considerations invest the subject with peculiar interest, and we shall endeavour to convey to our pages some of the practical hints which the volume contains, and thereby the better enable the reader to remove the stigma which is cast by these opprobria upon his art.

The first article is on the Pathology of the Nervous System, by Dr. Bennett, in which its general anatomy and physiology are also considered. The first is very brief. Under the second head it is stated that there are many reasons for supposing that mental acts originate in the gray matter of the brain, and that Foville and others, by employing a great deal of care, had been enabled to detect morbid alterations of the cortical substance, in cases of insanity, so that it is probable that in many cases recorded by authors, where no alteration was discovered, unskilful attempts to demonstrate it were made. "The quantity of blood," it is observed, "which circulates in the brain in a state of health is always exactly the same, and distributed in certain proportions between the arterial and venous vessels. But when the equilibrium is deranged, it appears evident that pressure is produced on some part of the brain; for, although the organ itself is incompressible, the numerous vessels which traverse it would, under such circumstances, be differently acted on; the calibre of some would be diminished, that of others increased; and the dilatation of the latter would necessarily induce the exercise of an unaccustomed degree of pressure on the nervous tissue with which they are in contact." Moderate pressure produces excitement and excited action, while complete pressure induces a total loss of motion, sensibility, or intelligence. The author divides all nervous disorders into four classes — the cerebral, cerebro-spinal, spinal, and neuro-spinal — according as the brain, spinal cord, or nerves appear to be either alone or conjointly
concerned in producing the essential symptoms which distinguish one from the other. All nervous symptoms, he thinks, result from pressure, with or without organic change, or by destruction of the part from disease; and the pressure here spoken of may take place without leaving behind it any appreciable lesion.

The next article is on Inflammation of the Brain, by that talented pathologist, Dr. Hope. The precursory symptoms he divides into three classes. The first he calls cerebral determination, which is attended with excitement, or exaltation of the cerebral functions; the second, active cerebral congestion; the third, passive congestion. The principal seats of the latter are the veins and sinuses, and the symptoms are those of depression of the cerebral functions, because there is here obstruction of the circulation. These states are much more common than the inflammations, palsies, and apoplexies they induce. Active, or arterial congestion, is characterized by a rather more florid tint of both the membranes and the cerebral substance, and by less considerable engorgement of the great veins and sinuses. Passive or venous congestion, on the other hand, is characterized by a darker tint of the capillaries, and a greater engorgement of the large veins and sinuses, and even of the medullary substance itself. Serous effusion is a frequent associate of congestion, and sometimes removes so completely all appearance of it as to give rise to the idea that the serous effusion is the only morbid phenomenon. Hence the erroneous term, serous apoplexy; it is merely a consequence of previous congestion. The treatment of active determination receives a careful consideration, and it is stated that if hypertrophy of the heart be the predisposing cause, active exercise should be rigidly interdicted, and that a dangerous mistake is apt to be made in this respect by those who are inattentive to diseases of that organ. Bleedings to the extent of \( \frac{3}{2} \) vj. every three, six, or eight weeks, moderately low diet, mild aperients, and the occasional use of digitalis, hyoscyamus, prussic acid and hop, must be continued with uncompromising regularity for a year or more, till the hypertrophy is cured. In obstinate and protracted cases of all kinds, a series of blisters or an issue or seton in the nape, are valuable auxiliaries. The author next speaks of congestion from debility and inanition, which comprises a much larger number of cases than is commonly supposed, and he thinks has been greatly overlooked, imperfectly understood, or too cursorily noticed. The patient is decidedly pale, and the general constitutional evidences of weakness and nervousness are present. There is in these cases, really venous congestion, the arteries being unfilled, and consequently the veins, (as upon the syphon principle the cranium must always be necessarily full,) acquire a predominant de-
gree of repletion. Of this class is the never failing headache of chlorotic females, and the hydrocephaloid disease in children, again shortly to be noticed. Very gentle depletion, combined with the use of derivatives may in some cases be necessary. When the paroxysms come on very frequently and pass speedily into epileptic fits, Dr. Hope has found a draught of Liq. Ammon. in doses of twelve minims, in 5 iij. of aq. menth. virid. with syrup incomparably the most efficient formula, given on the first warning of an attack. After clearing the alimentary canal, the practitioner may proceed at once to the use of tonics, beginning first with some mild vegetable bitter, and subsequently giving, at first in small and subsequently in full doses, the appropriate and never failing remedy, iron. The duration of a course of this medicine should be at least a month, and no preparation has appeared to Dr. Hope superior in efficacy to the well known Mist. Ferri. Comp. combined with the decoct. aloes. comp. Animal food slightly under-dressed should be given twice a day, with bracing air out of doors and moderate exercise. Chronic co-existing hemorrhages should especially be checked. The preceding subjects have been treated of by Dr. Hope in a full and masterly manner, and the few extracts we have made convey but a very faint idea of the many excellent practical suggestions which the essay contains. The author next enters on the consideration of cerebral irritation, determination, and congestion in children. In infants and children, he remarks, inflammation of the brain is generally, if not invariably ushered in by precursory symptoms. To these, the attention of the student cannot be too strongly drawn, since, though occasionally arising without obvious cause, they ordinarily constitute that familiar group, compounded of derangement of the stomach and bowels, with irritation of the brain, which he will be perpetually witnessing as concomitants of excessive and unsuitable feeding, worms, biliary derangement, &c. The symptoms of excitement, and those of depression are next detailed, either generally attended with more or less of a febrile movement, and of derangement of the alimentary canal. These may last for a day or two, or for several weeks, when the child is seized with convulsions, and other marked signs of established inflammation, either active and violent, or low and congestive. The treatment of these precursory symptoms is exceeding full. Scarifying the gums so as fairly to divide the capsules; an emetic of the Vin. Ipecac. if the stomach be overloaded; prompt evacuation of the bowels by cathartics and enemata; the simultaneous employment of the warm bath, and ice to the head, or the letting fall a thin stream of cold water on it from a height of two or three feet, may be mentioned as among the prominent measures recommended. Bleeding and leeching next follow in succession, and urgent symptoms
may thus be removed in a day or two. A course of alterative aperients, with antiphlogistic diet and regimen must follow, as long as the bowels present evidences of derangement. The hyd. c. creta. is particularly recommended as not forming an aperient compound. To calomel, as an habitual purgative, the author entertains strong objections, as it often occasions violent inflammation and occasional invagination; whereas the disease, inapropriately termed infantile remittent, is in reality, only either an active congestion, or an acute, or chronic inflammation of the mucous membrane of the alimentary canal, requiring mild alteratives and mild antiphlogistic treatment. Colicky pains in young children, are common, when pungent, irritating aromatics are given, with the mistaken view of obviating them. When violent, they require relief, and he has found no medicine answer this object more safely and effectually, than the following prescription of Dr. Hooper, R. Mag. Carb. 9j. T. Card. Co. gutt. xx. Aq. aneth. 3 iss. dose, one or two tea-spoonsful to an infant 8 months old, once or even twice a day, in violent returns of pain. When the child is well enough to go out, he advises exercise in the open air, even in cold weather, it being properly protected by flannel; but this does not apply to infants under six months old. If the cerebral symptoms do not speedily yield to these measures, the practitioner should examine whether actual inflammation be not present, a diagnosis, than which none is often more delicate in the practice of physic. Inflammation of the dura mater is next considered. It is rarely idiopathic, one of its most common forms depends on ulceration of the bones of the ear, which, penetrating the bones of the cranium, at length reaches the dura mater. Yet, in a person whom we lately examined with extensive supplicative meningitis, who had for many years been deaf, with denudation of the bones of the ears and a fetid discharge, no communication between these parts and the dura mater could on either side be detected. Purulent discharges of the nose, syphilitic, and other diseases of the cranium, and external violence, are the other causes mentioned. The slightest of the former of these causes (otitis and ozena) should be regarded with anxiety. Dr. Hope is of opinion that it is a gratuitous assumption, wholly opposed by facts, to say that the symptoms in cases of meningitis depend wholly or even principally, on the arachnoid, or that arachnitis can be distinguished from inflammation of the pia mater. He therefore treats of the inflammations conjointly under the term meningitis. He argues too, that inflammations of the membranes, must of necessity affect the contiguous cerebral substances. This is proved, not only by morbid anatomy, but by the symptoms of disturbance of the functions of the brain itself. But he thinks pure cerebritis can be distinguished from meningitis
with slight inflammation of the cerebrum beneath; co-existing, our opinion can be only conjectural. Meningitis, therefore, he treats of as distinct from cerebritis. It is acute and chronic. The varieties and symptoms of each are most minutely and ably detailed. He mentions the early occurrence of vomiting in children, as suspicious. In speaking of the second stage, we meet with the following practical observation: "The pulse, in consequence of cerebral compression, or obstructed circulation, not only becomes soft and weak, but usually falls below its natural standard, being at the same time singularly variable in frequency and liable to great accelerations by any slight exertions. This variability, even many times per minute, is not seen in other diseases, and is therefore a striking and important characteristic of inflammation of the brain. Meningitis is sometimes modified by the co-existence, not merely of superficial, but of deep and extensive cerebritis, constituting what may be termed, meningo-cerebritis. In these cases there are almost always spasmodic contractions of the extremities, with general or partial paralysis, more or less complete, with the supervision of coma at an earlier period, facts which will generally serve as a means of diagnosis. The author next describes the hydrocephalic variety, and points out the particulars in which it differs from meningitis of the superior surface of the hemispheres. The disease is chiefly seated in the base of the brain. Dr. H. does not coincide in the opinion of some, that hydrocephalic effusion is occasionally an essential or distinct disease, originating independently of cerebral inflammation in any form or degree. The duration of meningitis is uncertain—it may last from two weeks to six. The morbid appearances are most carefully described, as might be expected from so eminent a pathologist as Dr. Hope, whose splendid work on morbid anatomy, is among the most valuable works of the age. The pia mater, as has been stated, is almost always simultaneously inflamed. Chronic meningitis next receives a brief notice.

Cerebritis is next considered. The disturbance of the cerebral function in it, is characterized less by excitement than by depression. Vascular excitement is less, nay it has been wholly absent, and the pulse is slow and irregular; stupor advancing to coma, muscular spasms and universal paralytic relaxation more promptly succeed. Here again the symptoms, whether of meningo-cerebritis, or the more pure disease, are fully and admirably described. Attention is strongly drawn to the very slow pulse, so as to throw the practitioner off his guard. A very particular account of the symptoms of acute partial centritis is given. In these fearfully severe cases, the inflammation may not have affected more than a very limited portion of the cerebral substance, as an inch or two. Brief
notices follow of chronic cerebritis and intermittent inflammation of the brain. The anatomical characters of cerebritis receive most accurate consideration. Softening is "red," "yellow," and "white." The latter, when preceded by inflammatory symptoms, is a gangrene resulting from inflammation, as Abercrombie has satisfactorily demonstrated. But it is not inflammatory when it occurs in aged persons, affected with disease of the arteries at the base of the brain, a form which Rostan has particularly described. Suppuration sometimes occurs rapidly, and eventually forms abscesses, as also ulceration and induration. With regard to the comparative frequency of the several forms of cerebral inflammation, Dr. H. observes, that inflammation of the central parts of the brain, with or without effusion in the ventricles, and not unfrequently combined with meningitis at the base, or on the hemispheres, occurring principally in children, and running a protracted course of fifteen to thirty days, with two or three well marked stages, is an affection which, under the designation of hydrocephalus, is perhaps not surpassed in frequency by any other single variety of cerebral inflammation. General acute cerebritis is rare; partial is common, especially with more or less meningitis; chronic partial cerebritis is perhaps equally or even more common. Scrofula is a common predisposing cause in children. In an immense majority of cases, inflammation of the brain is a secondary disease. Of 864 cases of continued fever, 602, or five-sevenths, exhibited cerebral symptoms. It is common in scarlatina, between the 10th and 20th days after the disappearance of the eruption, and requires active antiphlogistic treatment, being usually very rapid in its progress. In measles, erysipelas of the head, especially when treated by cold applications, and in pertussis, it is a common source of danger. External injuries, as falls or blows, are common causes in children, even some weeks after the accident; the extraction of a tooth during the inflammation of the gum, dentition, suppressed natural evacuations, ischuria renalis, the premature repulsion of chronic discharges about the head in children, habitual intoxication, and insolation, are among the many exciting causes enumerated by the author. The diagnosis of the disease is carefully considered; the pathognomonic signs are first recapitulated, and next the diagnosis of the several varieties from the diseases with which they may be confounded. This part of the essay is admirable, and merits the warmest commendation, but like every other, insusceptible of any like minute analysis. The diseases with which inflammation of the brain may be confounded, are mania, continued fever, delirium tremens, apoplexy, active determination and congestion, exhaustion, and hysterical, neuralgic, rheumatic, bilious, and dyspeptic headache. The most perplexing cases
are those in which the cerebral symptoms are marked by great previous exhaustion and emaciation from tubercular disease, chronic gastro-enteritis, &c. The following case occurring to ourselves, is in proof of the assertion. A delicate girl, aged eight years, having been well all day, was attacked at night with vomiting, and during the next day rejected every thing she took. On the following morning she complained of her head, still vomited, looked heavy, answered questions unwillingly; the heart beat with excessive force, and the pulse exceeded 200 beats in the minute. She was pale, the skin cool, the pupils natural. She was leeched at noon. At 3 P. M. she looked cadaverous and the pulse was more feeble, and she instantly rejected even the smallest quantity of liquid; at nine, next day, her look was perfectly hydrencephaloid, the eyes open, red, and gummy. At the same hour next day, the condition was the same. She opened her eyes frequently very wide, and when touched, uttered a sharp cry, sighed deeply, and turned over in bed. She became comatose at 2 P. M., and died at 7 A. M. on the following morning. She had no squinting, no paralysis, no convulsions, and no muscular rigidity. There was extreme injection of the meninges, congestion of the veins, and some fluid under the arachnoid, especially about the base of the brain. The ventricles contained little or no fluid. Extensive chronic muco-enteritis existed, to which must be attributed the early and very remarkable collapse which occurred. The ill effects of the leeching were strikingly apparent. The occurrence of severe headache after scarlatina should be regarded with the utmost suspicion.

The unfavourableness of the prognosis in this disease, is well known; but in consequence of improvements in diagnosis, and the use of mercury, the mortality is now undergoing a considerable diminution. The treatment follows, and the fact that nine pages of this large volume are devoted to it, is a guarantee for its fulness. The remedies on which reliance is to be placed, are bloodletting, general and local, active purgatives, cold applications to the head, mercury and blisters. Salines, diaphoretics, refrigerants, tartar emetic, digitalis and colchicum, are merely subsidiary. The bandaging subsequent to arteriotomy is disapproved of, as heating the head injuriously. To mercury, given at the very onset of the disease, the very highest praise is given, both used internally, and in children as well as adults, by infirmitation. In adults, the gums must as speedily as possible be affected. Digitalis, according to Dr. Hope, confuses the symptoms, particularly the pulse, and he entertains on that account, the strongest objections to its use in inflammations of the brain. Blisters in the advanced stages of the disease are invaluable; the whole occiput may be enveloped in one, not only with perfect safety, but with surprising advantage.
The practitioner must bear in mind, that at the end of an attack which has been actively treated, delirium, or coma, will sometimes increase from mere exhaustion, and that if he persists in the use of evacuating measures, he will probably kill his patient outright. A small and rapid pulse, paleness and coldness, giving an appearance of exhaustion, are the distinctive features of these spurious symptoms of cerebritis; opiates, strong broth and wine are now the appropriate remedies. Similar, but less vigorous antiphlogistic measures, will suffice for chronic cerebritis, and long and unwearied perseverance are often necessary to effect a cure.

The hydroencephaloid disease next receives a brief notice. It is connected with a deficiency of blood in general in the system; it is common in infants and young children; more rarely it is seen in older ones and in adults. It is traceable always to some decided cause of rapid exhaustion. The diagnosis is from inflammation, is easily formed from this circumstance, and from the quick weak pulse, the paleness and the coldness. Opiates, if there be diarrhoea, stimulants, and appropriate nourishment, afford the means of relief. Dr. Hope’s article will furnish much valuable assistance to the practitioner in the treatment of the disease to which it is devoted.

Hydrocephalus, by Dr. Bennett, follows. It treats of the acute form alone. He carefully and minutely considers the symptoms of its three stages; those of increased sensibility, of diminished sensibility, and of palsy or convulsions. He next applies the symptoms to the three forms; the gradual or sub-acute, the rapid, or acute, and the sudden, or hyper-acute. The quantity of fluid found after death within the cranium, may be pronounced to be abnormal, when it exceeds an ounce. Dr. Bennett has often seen the hard-gray or yellowish semi-transparent granulations, described by Rufz, Gerhard, Dana, and Pict, in connection with hydrocephalus and tubercles elsewhere, and considers it probable that they are miliary tubercles, and that their presence ultimately excites inflammation and its consequences. It is difficult to distinguish hydrocephalus in its very early stage from the various acute infantile diseases, as the febrile disorders to which they are liable, typhoid and worm fever, infantile remittent, particularly the latter. The distinguishing marks are clearly and practically stated. In the last named disorder hydrocephalus frequently comes on, and often with such insidious advances, as altogether to elude observation, up to the very last moment almost of its termination. Cases have recovered even when the most unfavourable symptoms have been present; when early detected, and actively treated, a considerable number of recoveries take place. Golis had known of 41, in the course of his extensive practice. Even the occurrence of effusion is not hopeless; and
so long as the general strength is not too much exhausted, the pulse steady and the breathing natural, the most alarming symptoms should not prevent the employment of active remedies. In well marked cases and vigorous constitutions, bloodletting should be freely employed, but not to the extent of producing excessive exhaustion. Under opposite circumstances, cupping, or leeches must be substituted for general bleeding. In advanced stages of the disease, either are inadmissible. Cathartics are useful in almost all stages of the disease, and Abercrombie states that "more recoveries from head affections of the most alarming aspect take place under very strong purging, than under any other mode of treatment." Cold applications to the head, and particularly a stream of cold water directed upon it, so long as the heat of the surface continues, are very important measures. Mercury, when effusion is suspected, is beneficially employed to stimulate the absorbent vessels. Opium is proper only in cases dependent upon exhaustion and debility, uncomplicated with inflammation.

This chapter, rich in practical views of much interest, is followed by a note of Dr. Gerhard's, the American editor. In it he sets forth his own view of the pathology of hydrocephalus, viz: that it is a sub-acute inflammation of the membranes, and often of the substance of the brain, and nearly always connected with a deposit of tuberculous granulations. The same morbid action, he concludes, which causes the ordinary products of inflammation, likewise causes the deposit of the tuberculous substance. This view of the pathology of the disease is based upon the examination of about 40 cases of hydrocephalus, which terminated fatally at the Children's Hospital, at Paris. We must refer to the note, and to Dr. Gerhard's article in the American Journal of the Medical Science, 1834, for further developments and the history of this opinion.

Apoplexy, also, by Dr. Bennett, is next in order. It may be transient, or fugitive, and is then seldom fatal; sudden or primary, ingravescent, or be complicated with paralysis (Paraplexy.) The general symptoms of each are well detailed, and each individually receives a careful consideration. Five distinct states of the brain has been found after death, viz: 1st, the absence of any appreciable lesion; 2d, injection of the vessels or membranes of the brain; 3d, serous effusions; 4th, extravasation of blood; 5th, softening. The 4 last may co-exist. Each is described in succession. The 4th is by far the the most common; it occurs either within the membranes (meningeal apop,) or in the substance of the brain, (sanguineous.) Dr. Bennett has given a very valuable and exact account of this occurrence. According to him, all attempts to connect particular symptoms with lesion of certain portions of the cerebral substance have failed. He agrees
with Clutterbuck in considering the cause of apoplexy to be pressure, acting on the blood-vessels and producing interrupted circulation within the cranium. The arguments in favour of this view are ingeniously stated at length, but we cannot attempt even to analyse them. Men are more liable to it than women, and the commonest period of its occurrence is from 50 to 80. But a true case, from extravasation of blood at two and a half years has been met with. Intoxication, asphyxia, syncope, and the coma which follows epilepsy, hysteria, and the action of narcotics are the diseases which resemble it, nor is it always easy to distinguish them. It is of the utmost importance to endeavour promptly to arrest the earliest indications of premonitory symptoms. The directions for the management of the apoplectic seizure are admirable. If the pulse be full and strong, the face flushed and tumid, the respiration natural, and the eyes injected, general bloodletting is indicated, and neither age, emaciation, or the disposition to any other malady, is to be considered as contra-indicating this practice. The extent, however, must be modified according to circumstances. Bleeding from the arm, will in general answer every purpose; next in advantage are the saphena vein and temporal artery. We see nothing peculiar in the other directions, except that calomel should not be placed on the tongue when the patient cannot swallow, as it may, if he recover, give rise to alarming glossitis. If the pulse be small and weak, or irregular, the temperature of the head not increased, the countenance pallid, and there be profound torpor with stertorous breathing, not bleeding, but restoratives and gentle stimulants are needed. The means for obviating the effects of an apoplectic attack, and of preventing its return, will readily suggest themselves to the reader.

To say that the article on Insanity which follows, is from the pen of the learned Dr. Pritchard, is to guarantee its excellence. It is certainly an admirable one. Dr. P. has long made the subject his particular study, and his "Treatise on Insanity" is one of the best works in our language. In the essay before us he avoids an attempt at a definition, and as the best substitute enumerates briefly the several forms or varieties of morbid mental phenomena which are comprehended under the term insanity, or the corresponding expression, madness. The first is general, or incoherent insanity, including mania (raving madness) and dementia. To attempt any condensation of his description is impossible, nor have we space even for the graphic delineation of it by Chiaraggi, which has been much celebrated. As a specimen of the extent to which it may proceed, we may cite the fact, that this author saw a woman who had sat during twenty-four years on a stone floor, beating the ground with her chairs, without ceasing, day or night. Dementia is the fatuity
which succeeds mania, as distinguished from that which is connate, or original. It is characterized by an unceasing current of unconnected thoughts and evanescent emotions. There are four stages. 1st, That of forgetfulness or impaired memory; 2d, That in which there is a total loss of the reasoning faculty; 3d, That of incomprehension; 4th, The loss of instinct.

The second form of insanity is the moral. It was first recognized and described by Dr. P., and in his work is at length described and illustrated. It is "a morbid perversion of the feelings, affections, and active powers, without any illusion or erroneous conviction impressed upon the understanding. Among its characteristic features are a propensity to make extravagant purchases, and an irresistible propensity to drink intoxicating liquors. The 3d form is monomania. The patient is coherent and capable of conversing and reasoning on most subjects, but labours under some particular illusion or hallucination. It is a disease of civilization, and is modified in its causes and characters by the condition of society. Melancholia is one of its varieties. Esquirol has graphically described this disorder. The 4th form is the insane impulse, by which men are driven to homicide, to arson, to suicide, (of which last Dr. Pritchard treats fully and pleasingly) to steal, and to the exhibition of abnormal erotic propensities, pardonable rather than punishable. Insanity sometimes ceases speedily and entirely on the supervision of other diseases, or on sudden spontaneous evacuations. In the County Asylum at Gloucester, the proportion of recoveries (234 in 516) is nearly one half; but the prognosis in cases complicated with other cerebral diseases, is unfailingly bad; and also if protracted beyond the third year. More persons under 45 than over it, and more females than males recover.

Cases of fierce mania are often seen, in which no cerebral lesions are discoverable after death. Pathological anatomy, says Esquirol, has not yet made us acquainted with the organic cause of madness. But certain morbid changes in the brain and its envelopes are perhaps most usually met with, and likewise observed in other organs of the body. Displacement of the colon was observed by M. Esquirol in 33 out of 168 cases of melancholia.

The diagnosis of insanity is often surrounded with difficulties. Monomania is the most clearly defined of all its forms, but even here much caution is necessary to guard against deception. Mania may be distinguished from the delirium of fever, by the absence of the typhoid state, and the peculiar phenomena which attend upon delirium tremens will serve to diagnosticate it from the other. The commonest predisposing
cause is an hereditary tendency. Among moral exciting causes, reverses of fortune, grief, poverty, and disappointment in love, are by far the most common. Among the physical, vicious indulgences; among the lower orders, drunkenness; next, libertinism, and particularly masturbation, which is more apt speedily to degenerate into dementia than that produced by any other cause whatever. The state of the brain in insanity is closely allied to inflammation. Foville, Rush, and Haslam strongly recommend bleeding. Esquirol and Pinel, however, condemn it entirely; and in the Gloucester Infirmary, the practice of which is eminently successful, it is never performed. States of excitement which would induce many practitioners to prescribe copious bleedings, are treated with stimulants and full diet, and with a favourable result—apoplexy, &c. having never been known to occur. Dr. Pritchard allows of its use under suitable restrictions. In high states of maniacal excitement, nauseates, purgatives, cold drenches, or the ice-cap; and if attended with stupor, blisters are very useful. When relaxation has been induced by these means, opium may be given, and there are few disorders in which so much benefit is derived from this remedy, as insanity. The restoration of physical health, when co-incidentally disordered, often cures or relieves the disorder of the mind. The arguments for and against seclusion, are justly and humanely stated. In a majority of cases, it is on many accounts advisable, nor must the convalescent be too soon removed. Every available mode of amusement, exercise, and occupation should be adopted, for withdrawing the attention of insane persons from their morbid impressions. On the whole, this article of Dr. Pritchard's may safely be pronounced to be practical, sensible, useful, and interesting; it is necessarily a very concise summary of this extensive and very important subject. Short sections follow on Hypochondria and Puerperal Insanity. The former, though often supposed to be merely symptomatic of visceral disorders, is in reality a modification of insanity, and often passes into it. Moral emotions are its commonest cause. It has its origin in the brain, and the attention to co-existing derangements of physical functions, is highly necessary: the only effectual relief is obtained by removing the patient from the causes which have oppressed his mind and nervous system. Travelling, and horse exercise are among the best remedies. Puerperal mania occurs most frequently about the time when the secretion of milk is set up, and from that period until after the cessation of the lochia. A good many of these cases remain incurable, contrary to the opinion of Gooch, but the number of fatal cases is small. A very rapid pulse, with symptoms of great exhaustion of the nervous system, are ominous. Opium, and the mode-
rate use of stimuli, do much better than bleeding, though leeches, ice-caps, and mercurial evacuants may occasionally be indicated. We regret that a disease so interesting, and as yet so imperfectly illustrated, had not met with a more extended consideration, at hands so admirably qualified to do it justice.

The next article is a concise and practical one, on delirium tremens, by Dr. Bennett. It is well known that its most common predisposing cause is an excessive indulgence in stimulating articles of drink, but great mental exertions and venereal enjoyments and any circumstances, in short, which diminish the general strength, act as predisposing causes. It is commonest in persons of weak and depraved habits of body. It is very important to bear in mind, as influencing materially the treatment, that it has two exciting causes. The one is the too sudden abstraction, or diminution of the alcoholic, or other stimuli to which the individual has been accustomed, as when drunkards are confined to bed by illness, or injury, or are thrown into prison, &c., or it occurs in consequence of wounds, or operations (delirium traumaticum, Dupuytren.) The second is the consequences of a protracted debauch. Dr. Bennett has well described the symptoms of the first of these forms, in each of its three stages. It is in the second of these that the pathognomonic phenomena develope themselves; viz: a strange and wild aspect, excessive tremulousness of the hands and tongue, and the being haunted by spectral illusions of devils, assassins, enemies, all conspiring against his life, or the presence of dogs, rats, &c., which run over, attack, or annoy him. The third stage is that of collapse, and ends either in coma or convulsions. Characteristic also are the restlessness, the profuse sweating and the frequent pulse which varies from 120 to 160. A patient whom we saw, with a pulse of the latter degree of frequency, walked about his room all night brandishing a carving knife to defend himself against his imaginary enemies, though without attempting to harm any one about him, and being persuaded to go to bed towards morning, became collapsed, and died in a few hours. Another, after wandering about the streets for several hours of the night, talking to himself, ascending the steps of houses, examining the names upon the door plates, with a harmless but restless curiosity, and very much disposed to put the bells and knokers to their proper uses, at length, of his own accord, returned home, lay quietly down upon his bed, and in a few moments expired. The anatomical characters of the disease are by no means uniform, sometimes congestion has been found; sometimes effusion of serum in the ventricles and cavity of the arachnoid; in many cases, no morbid appearance whatever can be detected. In the case of the last of the

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two patients whom we have mentioned there existed the most intense congestion of the veins of the scalp and brain, and injection of the arterial capillaries of the meninges. It is, says Dr. Bennett, a disputed question whether delirium tremens depends on arachnitis, or cerebral congestion. In this case both existed in a very high degree. Dr. B. refers the majority of cases to congestion. What influence the action of the alcoholic poison has upon the system, he adds, is yet a matter of conjecture. In discriminating between the forms of delirium tremens, we are much assisted by a knowledge of the previous history. In the former, there is high vascular excitement of the system; in the latter, it is depressed. In the latter stages, the pathognomonic phenomena readily distinguishes the disease from phrenitis. In the earlier stages of the first form this is not easy. It is likewise difficult, without some days observation and a knowledge of the previous history, to distinguish it from some forms of mania, particularly when there is no trembling. The prognosis is generally unfavourable, but not so much so in a first or second attack, or in the young and robust as in the old and weak. In the habitual drunkard it is more so than when it occurs as the consequence of a protracted debauch in a person comparatively unaccustomed to intemperance.

Each form requires its appropriate treatment. In the one the cautious use of bleeding and the generally approved means of combating phrenitis; in the other, active aperients at an early stage, with a moderate allowance of the accustomed stimulus. In the second stage, that generally met with in practice, purgatives are to be employed even more actively, after which opium is to be given in full doses, either alone or in conjunction with camphor and ammonia. When there is much debility, the opium should be combined with a moderate quantity of wine, or the accustomed stimulus. The third stage is generally hopeless; large doses of stimulants alone offer any prospect of advantage.

In a note appended to this article by Dr. Gerhard of Philadelphia, he has given a good description of common delirium tremens as it occurs in three stages. He is of opinion that the disease must be classed amongst those purely functional disorders of the nervous system which are connected with no regular anatomical lesion. But it is in regard to the mode of treatment which he proposes, that the note possesses strong claims on the attention of the practitioner. He has for some time past not used opium at all, but has relied upon the stimulant treatment which is followed in some parts of New England. This treatment has diminished the mortality of the disease, and rendered it almost always cura-
ble. He does not confine the patient. The principle is to remove the disorder of the nervous system by a milder excitement which may gradually terminate in recovery. For this purpose the best remedy, is alcohol in some form, say the cheaper kind of brandy; of this, an ounce may be given every three or four hours, if the case be a slight one; if the tremors are more severe, or the disease is advanced to the second stage, two ounces should be given every four hours, or one ounce every two hours. This quantity generally suffices, but larger doses are occasionally necessary. Added to these means, a judicious management of the complications is necessary to ensure their favourable results. Dr. Gerhard does not of course mean to assert that other means may not be useful, or even equally successful; but for further information as to his views, we must refer the reader to the article itself, which for modesty, conscientiousness and practical usefulness, does equal honour to the head and heart of its author.

The next article is on cephalalgia, by Dr. Bennett. This is a very common and distressing disorder, and very difficult of cure. It has many varieties of seat and characters, duration, and collateral symptoms, all of which Dr. B. ably points out. Women are most often its victims. Its causes, far too numerous to mention, are carefully enumerated. As it is often symptomatic, it may be accompanied by every species of change to which the structure of the brain is liable; but on the other hand, the pain has been intense where no morbid change could be detected. Dr. B. is convinced from mature consideration, that no positive explanation can, in the present state of science be given of the mode in which the derangement of other organs influences the brain, and, vice versa, how that of the brain influences one or other organ to the exclusion of the rest. The varieties made by him, each of which receives a very brief examination are, the congestive, the inflammatory, the sympathetic, the organic, the neuralgic, the metastatic, and the intermittent. The common "sick" or "billious" headache comes under the third of these varieties. The diagnosis of each is of immense importance, and is well stated. It is particularly necessary to distinguish between the sympathetic and organic, and even more so to separate the latter from the other varieties. On the accuracy of the diagnosis, the prognosis, it is evident, will wholly depend, and likewise the treatment. The article is practical, though brief and cursory. That on epilepsy is in greater detail. It is by the same author. Premonitory symptoms occur in about half the cases that are met. Of these, we shall mention only the aura epileptica, which consists in a sensation of coldness, warmth, pain, or itching, proceeding from the toes, legs, thighs, hands, arms, uterus, abdomen, stomach, breast, face, or head. If
it commence in the extremities, it proceeds up the limb affected, towards the head, and when it arrives there, or ceases, the paroxysm begins. Generally, a scream is uttered, and the patient falls to the ground violently convulsed. Others run, hop, pirouette, before they fall; consciousness is entirely suspended. Dr. Bennett’s description of the symptoms of an epileptic seizure is the very best we have ever read. It may last for only a few moments, or for several hours; and may recur several times in the day, or once a day, week, fortnight, month, &c. Singular changes, all excellently described, occur in the features and persons of the patients who suffer frequent and long continued attacks of epilepsy, and at length, complete aberration of mind may be induced. It is most frequent in infancy and childhood, being often congenital, apt to occur about the period of puberty, more rare in adults, and seldom met with in old age. It may continue for a series of years, or may cease at puberty. A sanguine temperament is a strong predisposing cause. Great excitement or depression of the mental powers and celibacy also act as such. Injuries, organic diseases of the brain, of the bones of the head, excessive masturbation, imitation of, or witnessing a paroxysm, are among the many exciting causes. Hence it has become frequent in large schools. It is thus evidently idiopathic, or symptomatic, and may be connected with either an increased, or diminished action of the vital powers, each requiring separate modes of treatment. Congestion, and chronic diseases of the brain are met with as the anatomical characters of epilepsy. The bones of the cranium are sometimes remarkably thickened, or diseased, or spiculae of bone project from them, or form, with osseous points, or tumours, in the thickened membranes of the brain.

The pituitary gland has been found more or less altered, enlarged, containing a yellow, solid, or pulverulent matter, or a viscous fluid. It often shows traces of inflammation. Morbid changes, as concretions in the arachnoid membrane, tubercles, or induration, have been seen in the spinal chord. It is a cerebro-spinal disease, the functions both of the cerebrum and spinal marrow being necessarily deranged. The distinguishing characteristic, indeed, of the disease, is that consciousness is lost, while motion, which depends on the spinal chord, is increased. Whatever be the exciting cause, cerebral congestion plays a necessary part in the production of the disease. From hysteria, epilepsy may be distinguished, from the fact that in the former, sensibility and consciousness are but little, if at all affected; occasionally, however, they may be combined. It is often very difficult to distinguish the convulsions in children from epilepsy. Epilepsy seldom proves fatal during the attack, except from extravasation of blood, or when previous symp-
toms of organic disease within the skull have existed. It is one of the
most obstinate maladies which the physician is called upon to treat, and
by some is considered incurable. Little is generally necessary during
the fit. To prevent its recurrence, according to the state of the patient,
the variety of the disease, its causes, &c., bleeding, purging, counter-
irritants, diet, a course of James's powder, as recommended by Dr.
Cheyne, or vice versa, gentle stimulants and tonics, with appropriate
adjuvants, are among the means recommended. Upon all these points,
the reader will find the author full and explicit. The nitrate of silver
has of late been much administered, with occasional success. The fact
of its tendency to produce a permanent slate-coloured discolouration of
the skin must not be forgotten. In an individual whom we know, where
this consequence is painfully apparent, and the remedy has long and
faithfully been persevered in, the epilepsy continues. The sulphate of
zinc has some advocates. Indigo, in some hands, has been found useful
in some cases of idiopathic epilepsy. Dr. Gerhard has never seen it of
permanent benefit. Derivatives have often been found of great service.
We consider this article to be an admirable monograph, and the very best
in the volume. The artemesia vulgaris, which is not mentioned by the
author, deserves a place among the empirical remedies for epilepsy.

Passing over the rare, though curious disorder, termed catalepsy,
which receives a brief notice, we come to the far more common
and deeply interesting one, spinal irritation, by the same author.—
We regret that owing to its high practical importance, it does not receive
a more extended notice. The term has been used to express an affec-
tion usually characterized by pain in the back, either induced or increased
by pressure on the spinous processes of the vertebrae, accompanied by
neuralgic and hysterical symptoms of a nature so variable as to simulate
almost every form of disease to which the body is liable. The pain may
be confined to one spot or more, or less diffused over the spinal column,
and of it in general the patient is herself unconscious. When pres-
sure is made upon the affected spot, the patient starts as if she had
received an electric shock, writhes, becomes exceedingly uneasy, then
sick, loses consciousness in some degree, or falls into syncope. Neural-
gic pains, frequently considered as rheumatic, as in the temples, neck,
breast, usually the left, or in the substance of the breast itself, often co-
incide with it. Numbness and coldness of the hands and feet are not
unfrequently met with. The symptoms produced vary according to the
portion of the chord that is affected. We detail only those resulting
from an affection of the dorsal portion of the spine, as being most com-
monly met with. They are, palpitation of the heart, dyspnœa, dry
cough, pleurodynia, pain under the clavicles, in the shoulders and upper
extremities, sense of constriction in the thorax like a tight band, neuralgic pains in the side, &c. &c. We have for some months past had under treatment a young lady whose whole spine to the lumbar bones is excessively tender, and the affection has resisted leeching, blistering, both by cantharides and Granville’s lotion, and the often repeated abstraction of blood by cups. Her principal symptom is a very frequent, troublesome, harsh, dry cough, wholly without expectoration, or fever, and coinciding with the most perfect integrity of the lungs. Internal treatment of every kind has hitherto been of little avail. Another distressing symptom is an almost constant pain, of limited extent, just in the centre of the sternum, which she says “makes her sick.” Angina pectoris, asthma, neuralgia, hysteria, spasmodic croup, laryngitis, dysphagia, aphony, epilepsy, chorea, irritable bladder and uterus, &c., have all been connected with spinal irritation, and have disappeared on its departure; obstinate vomiting occasionally depends on this cause. We have lying before us at this moment a dozen or more prescriptions, in the choicest Latin, indited secundum artem by one of the most learned physicians in Great Britain or the world, and signed J. C., in large capitals, in which every anti-emetic that has ever been heard of, we believe, is exhibited singly or combined, to arrest the vomiting dependent on spinal irritation in the attendant on a lady of fashion from this city, then resident in London. They all failed, and she returned here after an expensive illness of four months, when the cause of her malady was at once detected by a man of much humbler pretensions. Females, and especially the young, are most predisposed to this complaint. Congestion of the spinal chord and its investing membranes, appears to be the cause of the symptoms in a majority of cases. It is remarked by the Messrs. Griffin, that there does not appear to be any complaint to which the human frame is liable, whether inflammatory or otherwise, which may not occasionally be imitated in disturbed states of the chord; and hence it is a prolific source of those complaints which are called nervous, or hysterical. One diagnostic symptom of value in all hysterical maladies, is this:—the pain and disorder of a particular organ, and out of proportion altogether to the constitutional disturbance. It may readily be mistaken for disease of the vertebral bones, as not unfrequently there is felt an apparent prominence where the tenderness is felt. The roundness of this swelling, and the conjunction of hysterical symptoms, distinguish it from the angular protuberance of spinal caries, in which the hysteria, too, does not exist. Griffin says, that the disease may last from a day to four and a half years, and that a furred tongue and quick and irritable pulse indicates an obstinate and protracted attack. “So fully,”
says Dr. B., "are we impressed with the importance of ascertaining the presence of spinal tenderness, that we consider that in all cases of neuralgia, rheumatism, and hysteria, the spine should be examined, while perhaps there is scarcely a functional disorder to which the young female is liable, which may not occasionally be found connected with spinal irritation. We have often had an opportunity of observing the manner in which numerous disorders have been traced to this source, and feel assured, if practitioners in general would pay greater attention to this complication, many of the extraordinary and anomalous cases which are at present the cause of great embarrassment in practice, might terminate in the speedy relief of the patient, and increased credit of the physician." To the spine, leeches, cups, blisters, tartar emetic ointment, or stimulating liniments, must be applied, the menstrual and digestive functions strictly attended to, air, exercise, congenial society, and all methods of distraction advised; within other respects, the ordinary treatment of neuralgia and hysteria.

Spinal meningitis, a disease which, per se, is of rare occurrence, is next treated of. The peculiar symptoms are pain in the back, convulsive contractions of the neck and posterior parts of the trunk, sometimes complete opisthotonos, and rigidity of the muscles, and at others trismus. The causes are very obscure and not always discoverable. The usual evidences of inflammation are found after death, throughout the whole extent of the membranes of the spinal chord. It is almost invariably fatal.

Myelitis is inflammation of the spinal chord itself, and like its predecessor presents different characters according as it occurs in an acute, sub-acute, or chronic form, and the parts affected by it differ according to the portion of the chord in which the disease is seated; pain, convulsions, followed by paralysis, with diminution or complete loss of sensibility being its leading symptoms. Softening, suppuration, induration, atrophy, are its anatomical characters; occasionally there is great difficulty in detecting the early stage of the chronic form from rheumatism, lumbago, or sciatica, and often it is impossible, unless paralysis be present. The prognosis is unfavorable. In the chronic form both of spinal meningitis and myelitis, the actual cautery is recommended.

Hydrorachis is next considered. The congenital variety we shall pass over. When developed after birth it is generally symptomatic of spinal congestion, or meningitis, and may be associated with, or depend upon hydrocephalus. The characteristic appearance found after death is the abnormal collection of serous fluid, the presence of which is generally associated with morbid alteration of the neighboring tissues. It
may, however, be the only morbid appearance present. The amount of the effusion differs from a slight accumulation, to such a quantity as fully distends the membranes, occupying the whole of the spinal canal, pressing on the brain, or communicating with a fluid in the cavity of the cranium. It may exist in three situations: first, between the pia mater and arachnoid; second, in the arachnoid cavity, and third between the dura mater and the bones. Serum may be effused into the substance of the chord. There is no symptom diagnostic of it in an idiopathic form, unless it be that the patient can move his limbs better in bed than when standing erect. Dr. Gerhard in a note informs us that a form of this disease follows intermittent fever with pain and sudden paralysis, extending from below upwards, and that such cases, when carefully managed will in general terminate favourably. Blood is sometimes spontaneously extravasated into the spinal canal either beneath or between the membranes, or into the substance of the chord, constituting what is called spinal apoplexy. Sudden acute pain in the back, and sudden or gradual paralysis are its symptoms, which have been confounded with rheumatism. A patient of Cruveilheir's lived five years from the first attack. The papers last reviewed, also by Dr. Bennett, are all brief, but practical, and contain the sum of our present knowledge on the diseases of which they treat. Notwithstanding the length to which this article has extended, the interesting disorders, chorea, hysteria, tetanus, hydrophobia, neuralgia, paralysis, barbiers and the inflammation of the eye and ear, and amaurosis, yet remain to be noticed. These, for want of space, must be analyzed in a future number of the Journal.

W. C. R.


We wish to call the attention of our readers to some practical points of treatment contained in Mr. Streeter's essay, which to us at least, are new, and if founded in truth, of great importance.

The true causes of abortion, our author thinks, are not generally understood. Thus abortion may arise, first, from disease of the ovum itself, as from arrest of development, atrophy, inflammation, &c.; these morbid appearances are commonly found in those who abort during the first three months. Secondly, from disease of the uterus itself, acting upon the ovum. Thus apoplexy of the membranes, effusions between the reflexa and chorion, which generally dissect up the reflexa from the
chorion, and form solid and tubercular-looking coagula, belong to this class. The diseases of the interior of the uterus, which lead to non-formation or imperfection of the uterine and ovine deciduae, and after their formation, to acute, sub-acute, or chronic inflammation of its lining membrane, especially of that part where the decidua serotina is evolved, and which participates in the formation of the placenta. To inflammation of the uterus, we must look for an explanation of hypertrophied or coriaceous states of the uterine membranes; for the origin of those pseudo-membranous formations external to the chorion, and for the production of those solid and degenerated ova which are termed moles; and to a defective or morbid action of the same part, for an explanation of those imperfections of the placenta, so frequently found associated with fœtuses, emaciated to the greatest extent possible. In the same division must also be placed those cases of abortion, which arise from irritability of the muscular fibres of the uterus peeling off the placenta. In the third and last division, are classed the constitutional causes of abortion. These our author thinks have been greatly overrated. He believes that so long as the utero-ovine connection remains healthy, and the excitability of the uterus is not exalted above its natural standard, that abortion is not produced by constitutional disease, by organic disease of remote organs, or by general states of plethora or debility, although these conditions may excite a latent predisposition to disease in the uterine, as well as in other organs.

Experience proves that abortion occurring during the first three months, is almost invariably connected with, and dependent on the death of the fetus, either from disease of the embryon, or of the membranes; consequently the contents of the womb must be thrown off. In a few cases, where the ovum is not thus blighted, rest, cool drinks, &c. will arrest the symptoms; if however, the pain and hemorrhage &c. continue or return, ergot should be freely given to remove, as quickly as possible, the contents of the uterus. The results of inquiries show that when the essential symptoms set in, viz. pain and hemorrhage, the accoucheur has lost all control over the causes of the attack. Opium should very seldom be used in these cases of early abortion (three first months;) commonly, its exhibition fails to produce the effect desired, and then it leads to injurious consequences, by diminishing the contractile power of the uterus; if any hemorrhage attend, the practitioner ought never to exhibit it. When uterine pain has commenced, the use of a full opiate in preventing premature labour and miscarriage in the latter months of gestation, is fully established.

The preventive treatment of abortion is of great importance. The
practitioner should never neglect the careful inspection of the expelled ovum, for on the appearance which this presents, will depend the proper preventive treatment in subsequent attacks. In those cases which occur during the first three months, and which are, as already stated, dependent on inherent imperfection of the ovum, uncomplicated with uterine disease or hemorrhage, but little can be done by way of after treatment; the uterus being healthy, soon regains its natural condition, impregnation, with a perfect ovum retained to the full period, follows. When, however, as commonly happens after the third month, we find effusions of blood, or traces of inflammatory disease in the membranes which are derived from the uterus, or in the placenta, appropriate treatment is at once suggested; the morbid condition of the uterus must be treated on the usual principles, using such antiphlogistic, and afterwards tonic remedies as each case may require.

Examination, in some few instances, shows no appreciable disease or imperfection of the ovum or its membranes, and then the miscarriage must be referred to the morbid excitation of the uterus. This, however, is seldom the sole or immediate cause of abortion, until the utero-ovine connexion has become almost wholly placental, and this is not the case till after the fifth month of gestation has commenced. It is indeed, the most frequent cause of labour coming on prematurely after accidents, but its presence in the earlier months, predisposes more to irregular determination and congestion of blood, and consequent effusion on the membranes, than to any irregular or expulsive action of the muscular fibres of the uterus. In such cases, the most effectual means for removing this morbid susceptibility of the uterus after abortion, and the constitutional debility with which it is commonly associated, is a residence near the sea, and the use of tepid or cold salt baths; chalybeates, shower baths, quinine, iron, &c., are indicated; and where the disease is entirely local, alkalies joined with uva ursi, hyoscyamus, conium, shower douche to the loins, soothing injections to the vagina, warm baths, &c. will be of great service. If pregnancy however, occurs before the irritable state of the uterus is removed, our chief reliance must be placed on the timely and persevering use of opium.

J. A. S.


After a careful perusal of the greater portion of Dr. Ashwell's work
we cannot discover that the author has presented any new views of the pathology or treatment of uterine diseases. The work is however valuable as containing the results of the author's great personal experience, and as being written in a candid spirit.


We have seen but one part of Dr. Lee's work, but judging by that, we can assure our readers that the plates are in the finest style of art.


This first number of the New Series of Bell's Medical Library is based upon the English work of Brande, yet with so many important alterations, that the editor, in justice to himself as well as to Mr. Brande, has preferred to publish it in his own name. This valuable periodical will hereafter be published quarterly, instead of monthly, and at $5 instead of $10 per annum.


The 1st number of the New Series of this much esteemed periodical appeared in January last. In examining its improved plan, we learn with pleasure that its reputation and usefulness are likely to be still further increased by the collaboration of Prof. Beck of Albany, the distinguished medical jurist, who has become a regular contributor to its pages.
City Inspectors Report. — [We have received from Dr. Walters his report for the year 1841. It is prepared with all the care and accuracy which has distinguished the previous reports, giving in a tabular form, the diseases, sex, colour, age, and nativity of the deceased. We have only room for one of the tables, with the concluding remarks.]

Remarks. — The number of interments within the City, during the year 1840, including 606 stillborn infants, was 8474, being an increase of 521 on the interments of the year preceding. Of these, 4607 were males, and 3867 were females. Of the males, 4357 were white, and 250 were coloured persons. The increase of interments during the past year is chiefly attributable to the prevalence of eruptive fevers. The increase in these diseases alone, amounts to 450, viz. — in Smallpox, 164; Scarlet Fever, 233; Measles, 53. The whole number of deaths from smallpox, amounted to 232, of which number, 132 were among children under five years old, and 29 were among coloured persons. The great mortality from this disease among children and coloured persons, may probably be attributed to the neglect of vaccination. Of the whole number of deaths, excluding stillborn infants, 3976, or more than fifty per cent. occurred among children under five years old. The increasing mortality, during infancy and childhood, forms a striking feature in the annual reports for several years past, and appears to hold some ratio with the increase of population of this city. Thus, in 1810, it averaged 32 per cent.; in 1820, it amounted to 38 per cent.; in 1830, to 44 per cent.; and in 1840, to fifty per cent. The mortality among our foreign population is materially greater than among natives. Of 3540 deaths of persons over the age of ten years, 1817, or 51 1/2 per cent.
were foreigners, 187 were coloured persons, mostly natives, but some few of them from the West India Islands: and 1536 or 43 ½ per cent. were native whites. This great degree of mortality among foreigners, who probably do not constitute more than 20 per cent. of the whole population of the city, is truly astonishing. By the recent census of the city, the excess of white females over white males, is shown to be about 3½ per cent., whilst the tables show an excess of deaths of white males, of 740, or nearly 9 per cent. This excess of mortality in males is observable at every period of life, except between the ages of 15 and 25, and after the age of 60, at which periods the excess of mortality is on the side of the females.

The annual rate of mortality in the city, from all causes, is about one to 34 in coloured persons, and one to 40 among the whites.

The greatest number of interments occur during the months of July, August and September: the fewest, during April, May and June. The deaths from diseases of the respiratory organs, have somewhat increased during the past year, and average about one third of the whole. Of pulmonary consumption, the deaths during the year, amounted to 1296, being 19 less than for the year preceding, and between one-sixth and one-seventh of the whole. Of the deaths by consumption, 611, or about one in 9½ of all the deaths, occurred among the native white inhabitants; 136, or about one in 3½ occurred among the coloured persons; and 549, or about one in 3½ in white persons of foreign birth. The facts stated in this report and the accompanying tables, are drawn from the interments, and not from the actual number of deaths occurring in the city. Our existing laws do not furnish the means of obtaining the exact annual amount of deaths, and in order to obtain this, further legislation is necessary. Of the interments included in this report, 156 were of persons that had died elsewhere, and been brought to the city for burial. The number of persons that have died in the city and been taken elsewhere for burial cannot be ascertained, but it must in all probability, have been greater than the number of those brought from other places.


**Table**,  

*Showing the White Population of this City, of each sex, at different periods of life; and also the Mortality during the past year, of each sex, at the same periods.*

<table>
<thead>
<tr>
<th>White</th>
<th>Males</th>
<th>Deaths</th>
<th>White</th>
<th>Females</th>
<th>Deaths</th>
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<td>2,029</td>
<td>or 1 in 11</td>
<td>Under 5 Years</td>
<td>23,064</td>
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<tr>
<td>Between 5 and 10</td>
<td>15,019</td>
<td>179</td>
<td>or 1 in 83</td>
<td>Between 5 and 10</td>
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<td>25,062</td>
<td>113</td>
<td>or 1 in 221</td>
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<td>400</td>
<td>or 1 in 89</td>
<td>&quot; 20 &quot; 30</td>
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<td>400</td>
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<td>399</td>
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<td>81</td>
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<td>32</td>
<td>or 1 in 5</td>
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<td>&quot; 90 &quot; 100</td>
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<td>3</td>
<td>or 1 in 8</td>
<td>&quot; 90 &quot; 100</td>
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<td>&quot; 100 &amp; up'd.&quot;</td>
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<td>1</td>
<td>or 1 in 3</td>
<td>&quot; 100 &amp; up'd.&quot;</td>
<td>4</td>
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Total Males.... 142,794 4,020 or 1 in 35\(\frac{1}{2}\)

Of the Male population.

Total Females.... 153,679 3,377 or 1 in 45\(\frac{1}{2}\)

Of the Female population.
Annual Hospital Report of the Seamen's Fund and Retreat, for 1840.

Patients remaining December 31st, 1839, 127; Admitted during 1840, 1403; — Total, 1530. Discharged cured, 1166; Relieved, 142; By request, 41; Died, 50; — Total, 1399. Remaining December 31st, 1840, 131; Whole number admitted since the opening of the Institution, October 1st, 1831, 9559.

Jas. R. Boardman, M. D.,
Resident Physician.

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<th>DISEASES</th>
<th>Remaining Dec. 31st, 1839</th>
<th>Admitted 1840</th>
<th>Total</th>
<th>Discharged Cured</th>
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**Hudson Lunatic Asylum.** — During the year 1840, 84 patients have been admitted under the care of Drs. S. & G. H. White, the proprietors of this institution, viz: recent cases, 25; chronic do., 54; intemperate, 5.

Of 18 recent cases that were received during the year, 14 recovered; 2 improved; 2 died. Of 27 chronic cases received, 7 recovered; 10 much improved; 5 improved; 2 stationary; 3 died. Of 3 intemperate received, 1 reformed; 2 unreformed; remaining under treatment, January 1st, 1841, 36.

Since the opening of this institution, a period of 10 years and a half, 503 patients have been admitted.

We copy the above from the Boston Med. & Surg. Journal, which confirms the favourable opinion we have heard expressed of this valuable institution.

Vol. IV. No. VIII.
Summary of Recent Discoveries in the Detection of Arsenic by Orfila, Doctor Vergie, &c.

The recent advances in the toxicological history of arsenic have been so numerous and important, that it may not be uninteresting to consider what are to be received as established facts respecting it. In doing so, we shall present, besides other information, an analysis of several memoirs by Orfila,* who has far outstripped all others in the really valuable additions he has made to the science of toxicology. From the uncertainty of the results obtained in medico-legal examinations for arsenic in the matters evacuated from the body during life, or found in the intestinal canal after death, he was led to inquire whether it was not possible to extract it from the organs themselves, into which it had been conveyed by absorption. To test this reasoning, it became his duty to examine whether arsenic was ever absorbed and carried into the circulation, and he instituted a number of careful experiments upon dogs to ascertain the fact. The mode adopted for the investigation, was to insert known weights of arsenic under the skin in the cellular tissue of the inner part of the thigh, then to await the result, and if death ensued, to examine what quantity of arsenic, if any, had disappeared. The consequence was, that if for example, he thus introduced 2 grains of arsenious acid, the dog would die in from 12 to 24 hours, and there would be left at the place of deposit not more than about half a grain of the poison; showing that the other portion had been absorbed, and that small as was the quantity, being only $1\frac{1}{2}$ grs., and in one instance $1\frac{2}{5}$ grs., it had occasioned death. This certainly corroborates the assertion of Hahnemann and others, that four grains of arsenious acid are sufficient to cause death in man.

These experiments, varied in several ways, presented the same general result, and establish the certainty of the absorption of arsenic, which, by the way, is strongly supported by another circumstance also noticed, that blood drawn from the arm of a person labouring under the effects of a dose of arsenious acid, has been, and may be made to yield a portion of the mineral upon the proper application of tests; and Orfila advises, in cases of uncertainty, to bleed the patients, and test the blood drawn.

We need, therefore, be at no loss to account for the extreme rapidity with which a fatal termination has been observed to recur, even before the stomach and bowels have been affected with active inflammation, there being several deaths on record within 3, 3 $\frac{1}{2}$, 4, 5 and 6 hours after the administration of the poison. Its whole energy seems to have

* Annals d'Hygiène et de Médecine Légale; Nos. 42, 44, and 47 of the years 1839 and 1840.
been exerted upon the heart and nervous system, occasioning a total prostration of strength with frequent and finally fatal syncope, while after death in some cases, few or no lesions of the alimentary canal are observed. This is, however, very rare, for it requires, sometimes, but very few hours to produce all the evidences of intense inflammation in these organs under such circumstances, and it is much more usual to see death the consequence of the combined influence of inflammation and nervous depression, as manifested by their symptoms during life. Whether the arsenic is taken internally or by absorption from the cellular tissues, the alimentary canal exhibits the same phenomena of inflammation, provided sufficient time has elapsed before death.

Orfila proved also by an ingenious series of experiments, that the quantity of arsenic absorbed was greater when the poison was administered through the stomach, and verified the results by cutting the bodies in pieces, boiling them and subjecting the decoction to proper tests, having previously ascertained that by the same method no arsenic naturally existing in the body, can be discovered. We have here assumed the fact, that it is possible to ascertain the presence of arsenious acid in the matters evacuated from the stomach and bowels during life or found in them after death, and to extract it even from the blood and from the very organs of the body in cases of poisoning. The universal consent of medical jurists upon this point tenders any accumulation of proof unnecessary, and we will, therefore, proceed at once, to a consideration of the means to be employed to develope it from these situations.

At the outset, it may be stated, that the day when allaceous odours and doubtful precipitates formed by liquid reagents were admitted as testimony by which the guilt of an individual might be determined, has passed away, and that a jury must now see the arsenic in its metallic form, before they will allow its presence in suspected cases; and that, therefore, all the processes now employed for its detection have for their object, to present it in its metallic form. It must be added also, that it must be ascertained, before they are used, that the vessels and tests employed, are entirely free from arsenic, for without this, no reliance can be placed upon the results of the investigation.

The first step is to obtain a clear solution, entirely free from animal and vegetable substances, of the matters to be examined, whether they be the contents of the alimentary canal, or the decoctions of the organs themselves. This is essential to the proper action of the tests, where the quantity of arsenic may be very minute, and hence the least impurity might interfere materially with the results. To obtain this, the contents of the stomach, or the organs and body themselves cut into small pie-
ces, are to be boiled from 4 to 6 hours in a porcelain or glass vessel,* in distilled water kept constantly neutralized by pure potassa. The decoction is to be filtered and allowed to stand, that the fatty matter may rise to the top and be removed. This done, a stream of hydro-sulphuric acid gas is to be passed through the clear solution, which is supposed to contain the arsenite or arseniate of potassa, and will in that case precipitate a canary-yellow sulphuret of arsenic, insoluble in water, but soluble in ammonia. Having decanted off the liquor, the precipitate is to be washed and dried, then mixed with pure potassa and charcoal, and exposed to a red heat in a small glass tube, drawn out to a very small diameter at one end. The arsenic will be sublimed in a metallic state, forming a brilliant ring in the narrow part of the tube, and a sulphuret of potassium will remain behind. It was soon found that, delicate as is the test by hydro-sulphuric acid, the quantity of arsenic present was sometimes so small, and the impurities in the solution so great, that no precipitate at all, or one of a very doubtful nature, was formed. Even when a precipitate was obtained, the presence of animal or vegetable matter would in many cases prevent the formation of the brilliant ring of metallic arsenic, and thus entirely foil the observer. To remedy these objections, numerous methods were invented, and among them none has been more truly beneficial than that of Mr. Marsh, who in 1837, proposed a plan which, in doing away with the ordinary means of sublimation, and substituting a new process for that purpose, has given far greater precision to the investigations.

In this, he availed himself of a well known fact, that alloys of zinc and arsenic, when subjected to the action of diluted sulphuric acid, give rise to fumes of arseniuretted hydrogen, which deposit, when burned, metallic arsenic upon the sides of the vessel in which the combustion takes place. He proposed subjecting the suspected solution to the action of sulphuric acid and zinc, and allowing the gas to pass through a glass tube, in which it would be burned, and would deposit the metallic arsenic in a cold part beyond, or in another tube attached to this; and an apparatus bearing his name, and a little modified from the above, is now used in preference to the old method of sublimation. It consists of a glass vessel, entire, with the exception of two orifices on the top, one receiving a funnel-shaped tube, penetrating nearly to the bottom of the vessel for the introduction of liquid into the apparatus—the other, a

* M. Orfila states, that no difficulty can arise from the use of perfectly new cast iron or brass vessels, provided the liquid is kept constantly neutralized by pure potassa, so that the accidental presence or development of an acid might not cause any arsenic contained in the metal of which the vessel is formed, to be extracted from it.
small tube, entering only a short distance, and bent at right angles for the passage of the gas formed in the vessels; its external orifice should not exceed one line in diameter. Zinc or iron, water and sulphuric or hydrochloric acid are placed in the vessel where the suspected liquid is to be introduced. A disengagement of arseniuretted hydrogen immediately, or soon, takes place, if arsenic is present, and the gas passes through the bent tube, and is ignited at the orifice, where it burns with a slight flame about two lines long, and deposits upon a cold porcelain plate, held perpendicularly before and immediately in front of it, spots of metallic arsenic.

These spots are chocolate brown in colour, brilliant, do not attract moisture from the air, are not volatile in cold air, but instantly disappear on the application of heat. Pure and concentrated nitric acid dissolves them quickly, and the solution, evaporated in a porcelain capsule, leaves a slight yellowish-white residue, which is converted into a brick-red arseniate of silver by the action of pure nitrate of silver. The union of these characteristics is decisive of the nature of these spots, as it is presented by no other known substance than arsenic; and therefore, no matter how minute the quantity, provided the reagents employed are free from arsenic, there is positive certainty that the arsenic found, comes from the matters from which the solution was obtained. It is almost impossible to estimate the minute quantity of arsenic whose presence may be thus indicated. The whole quantity obtained, at the recent trial of Madame Laffarge, from the body of her husband, was estimated by M. Orfila, at about the hundredth part of a grain.

It is advisable to allow the disengagement of hydrogen gas to continue for a short time previous to the introduction of the suspected solution, in order to expel the air from the vessel, which, if it came in contact with the gas and flame, would endanger the safety of the vessel, and to ascertain that the reagents are free from arsenic. A great difficulty was experienced by Marsh and other observers, in the fact, that notwithstanding all their precautions to get rid of impurities in the solution, a sufficient quantity remained behind to cause the generation of a thick froth, which prevented the disengagement of the gas. To remedy it, Marsh advised introducing a layer of sweet oil, which had the effect of diminishing this action, and allowed the formation of the gas to proceed. There are many objections to this; among others, one, that the spots derived from the combustion of the gas may have their colour changed.* Be this as it may, Orfila thought that it was better to avoid

the necessity of its use, by getting rid, more thoroughly, of the impurities of the solution, and adopted the following process.

Having obtained a decoction of the flesh and viscera, as above directed, he evaporated it to dryness, and mixed the residue with a sufficient quantity of nitrate of potassa. The mixture was thrown into a red hot crucible, where the animal matter was burned by the nitre. The ashes were then exposed in a porcelain vessel to the action of pure and concentrated sulphuric acid and heated, so as to drive off the nitre and carbonic acid, and these treated with water and pure potassa to neutralize any excess of sulphuric acid. The solution was then filtered and poured into Marsh’s apparatus. In this, as in the new process he substituted for it, he recommends that the decoction should first be subjected to the action of hydro-sulphuric acid gas, and that the precipitate of sulphuret of arsenic resulting, should be reduced to the metallic state by charcoal, potassa and heat, or what is better, should be converted, by means of nitric and sulphuric acid, into arsenic acid, and then introduced into Marsh’s apparatus—thus giving a double chance of detecting the poison.

As the efficient agent in the destruction of the animal matter in the above process, is the nitric acid of the nitrate of potassa, M. Orfila soon determined by experiment, that the pure and concentrated acid was not only sufficient for this purpose, but that many objections to the use of nitre might be obviated by its substitution for the latter. The quantity of nitre necessary for the combustion, the possibility that it might contain arsenic, which is very rarely, if ever, found in the nitric acid of commerce, and the greater rapidity and simplicity of the operation, all pointed to nitric acid as a preferable substance. Accordingly, he directs the decoction to be gradually evaporated at a moderate heat, and the residue to be thrown in small pieces into a porcelain vessel, in which a quantity of nitric acid pure and concentrated (to 41° Baume’s areometer,) sufficient for the combustion* is previously placed and subjected to a moderate heat. A light friable charcoal is soon formed, which is to be washed with distilled water, to dissolve the arsenic acid, and the liquor being filtered, is then transferred to Marsh’s apparatus, where it soon gives evidence of the presence of arsenic, if there was any in the decoction. Even under these circumstances, the formation of thick froth is sometimes so great as to interfere with the operation; and to obviate

* M. Orfila has given a table of the proportion of acid necessary for the combustion of the different organs, which he ascertained was not the same for all of them. See Annal. d’Hyg. Pub. et de Med. Lég. p. 442. No. 44.
this, Orfila advises that the liquid should be withdrawn from the vessel and poured into a funnel-shaped glass vessel, of which the narrow orifice is stopped by the finger. The froth rises to the top, and the liquid settles and may be allowed to run off by removing the finger, until the frothy portion seeks to escape. By repeating this process, if necessary, all difficulty occasioned by the presence of froth, will be removed.

This is without question the best method that can be employed for the detection of arsenic not naturally existing in the human body. Many others, however, have been offered in its place; and among these, one by M. Devergie,* founded upon the fixedness of arsenite of zinc under high temperatures. It consists in adding the nitrate of lime to the decoction obtained, as in the preceding operations, when a double decomposition ensues, forming an arsenite of lime and nitrate of potassa. The rest of the process is much the same as in that before detailed, where the nitre burns the animal matters, except that hydrochloric acid is substituted for the sulphuric, both to drive off the nitric and carbonic acids, and in Marsh's apparatus. This is certainly more complicated than the test by nitric acid, and although the hydrochloric acid is perhaps less likely to contain arsenious acid than the sulphuric, yet it sometimes does so, and cannot or should not be used without first ascertaining its purity, as is the case with sulphuric acid also.

Another process has been recently† proposed by M. Figuier, which has for object to precipitate the animal matter from the decoction, (made by boiling the organs, &c. in alkaline water, then filtering, evaporating to dryness after having acidulated it with hydrochloric acid, then re-dissolving in warm water, and again filtering,) by means of a current of washed chlorine until the solution is troubled. The liquid is again filtered to remove the precipitate, then boiled in a porcelain vessel, and placed in Marsh's apparatus. This is modified, so as to make the arseniuretted hydrogen traverse the bent tube, which contains at one part some chloride of calcium, and a little farther, small fragments of porcelain. At this part, the tube is to be heated red hot, with certain precautions, and the arsenic will be deposited a little beyond, where the tube is drawn out, in a small brilliant circle. The tube may then be broke, and sealed hermetically for preservation.

Among the reasons given by M. Figuier for the adoption of this process, are, that it is less complicated than that by nitric acid, and that the loss of arsenic would be smaller than when the animal matter is removed by combustion with nitric acid. It would appear, however, that the repeated filtrations which he directs, would not be attended with any advantage in either of these respects, and that hence its adoption is not probable, in preference to the simple, rapid, and certain operation by the acid.

Four objections have been made to the reception of the results from these processes. First, that the re-actives employed, themselves sometimes contain arsenic. Second, that arsenic has been discovered to exist naturally in the body. Third, that when the examination of the body has been made after its disinterment, the arsenic found, may have been derived from the soil in which the body was buried. Fourth, that the arsenic found, may come from preparations used by the individual as medicines. At first blush, these might appear insurmountable, and they have in fact been raised in medico-legal investigations; indeed, the quantity of the poison found is sometimes so minute, that the minds of a jury are unwilling to decide the fate of an accused person, where the proof is apparently so slight, and when the chances of mistake are so possible. But these objections have been most triumphantly answered, and where proper precautions have been observed, can be entirely removed. We will rapidly glance over them, and endeavour to show how they may be obviated.

I. What then are the facts with respect to the re-agents employed?

We have already stated, that Orfila sees no objection to the use of cast metallic vessels for the experiments, even though the metal employed in their construction is arseniferous, provided they are perfectly new, and the liquid within them is kept neutralized by pure potassa, to prevent the action of acids; nor can any fear be felt in the employment of glass or porcelain vases. Distilled water contains no arsenic, and as yet, no nitric acid of commerce has been found with arsenic in it; even though the latter was present, it would be easily removed by rectifying the nitric acid over pure nitrate of silver.

That sulphuric acid of commerce occasionally contains arsenic, is undoubted, for independently of the fact that the sulphur from which it is made is occasionally arseniferous, the presence of the poison has been detected in the acid by actual observation, and it is therefore important to ascertain whether it can be freed from the impurity. Orfila, and other observers assert that it can be purified, and the former gives the following directions for the operation. Pour it into a vessel containing hydro-sulphuric
acid gas, and allow it to remain there twenty-four hours; then filter it through a funnel provided with an asbestos stopper, boil the liquid to drive off the gas, and finally, distil the acid in a glass vessel. Devergie* thinks that there is never arsenic enough present to render the use of hydrosulphuric acid prejudicial, and therefore simply advises that the sulphuric acid should be distilled, rejecting the first products, which will be found to contain the arsenious acid, and the last that will contain arsenic acid, if either of the two are present. These processes will purify the acid entirely.

But Devergie† advises that hydrochloric acid should be used both in the processes for purifying the decoctions of the organs, &c., and in Marsh’s apparatus, instead of sulphuric acid, as he says that the former contains less often arsenic. This may be so, but as the hydrochloric acid may also be impure, it is better to subject it also to a process of purification before using it. Distilling it, and rejecting the first products, will deprive it of any arsenic that might be present, and then it may without doubt be used indifferently with sulphuric acid.

Potassa obtained by means of alcohol, (à l’alcool) is perfectly free from arsenic. The nitrate of potassa is never arsenical, says Devergie,‡ but it is not impossible that it may be found so, in which Orfila agrees with him. It should therefore, be subjected to the following test. Decompose a portion in a porcelain vessel, at a boiling heat, by means of concentrated and purified sulphuric acid, added in small quantity until the disengagement of orange coloured nitrous acid vapours cease, and until the white vapours that arise have lost their nitrous smell; gradually cool, add some distilled water, replace on the fire and boil again to drive off all nitrous fumes, saturate with pure potassa, filter, and introduce the liquid into Marsh’s apparatus, in which purified zinc and sulphuric acid have been previously placed, and if the nitre contained arsenic, it will be manifested on the porcelain plate.|| Great care must be taken to make use of purified sulphuric acid, or otherwise arsenical spots may be obtained, which come in fact from the acid and not from the nitre.

Zinc and iron, which are the remaining tests, sometimes, nay very frequently contain arsenic; but Orfila, Devergie, &c. while they admit this, state that the quantity of metal necessary for the action of Marsh’s apparatus, is so small, that no error can arise from their use, when this very apparatus does not indicate the presence of the poison, after having been made to act for fifteen or twenty minutes before the suspected liquid is in

introduced into it. This, by the way, is a precaution that should never be omitted.

We see therefore, that the objections reposing on the impurity of the tests, may be obviated by precautions which should never be omitted.

As to the second objection, that recent experiments have shown that arsenic exists naturally in the human body, and that, therefore, this may be mistaken for poison designedly introduced there, it must be confessed that it at first sight appears to throw doubt upon the examinations for the poison. But let us examine what are the facts, and we can then better decide upon the question.

M. Couerbe, a young chemist, had obtained from certain bodies a portion of arsenic which he supposed was developed there during putrefaction, and communicated the fact to M. Orfila, who has since demonstrated that it exists naturally in bodies both recently dead and in a state of putrefaction.* This was done by boiling them in sulphuric acid, and then testing the resulting decoction. By this means, he has proved that it exists naturally in the bones, and perhaps in the muscles—but, as yet, neither he nor any other observer has detected it in any of the internal organs or in the blood, naturally existing there. He has also proved that it is impossible to obtain a single atom of arsenic from any of these sources by simply boiling them in water neutralized with an alkali, even though this were continued for six hours: and that therefore it may be positively asserted that any arsenic discovered in the body by the processes mentioned in the preceding pages, provided the tests themselves are pure, is not derived from the arsenical compound naturally contained there, but has been artificially introduced into the body. Such being the facts, it only remains for the jury to decide upon the case presented, whether there is criminality or not; but as doubts may still be raised, and as it is always better to remove all possibility of cavil, Orfila and those who have followed him in these investigations, advise that we should discard the bones and muscles from the examinations that may be made, and that we should confine our scrutiny to the blood and to the internal organs where no arsenic has ever been found naturally present.

We come now to the third objection, made in cases of juridical exhumations, that the arsenic found in the bodies, comes from the earth in which they were buried. To answer this, it is requisite that a careful examination should be made of the conditions in which the body was placed at the time of disinterment, and of the nature of the soil forming the burying ground. M. Orfila has very ably treated this subject in a me-

moir read before the Academy,† of which we will reproduce some of the conclusions, which constitute an answer to the above objection.

If the ground around the coffin, this being entire, or if that around the body, there being no coffin and the body being unopened, contains no arsenical compound soluble in boiling water, then any arsenic found in the body after this has been carefully washed, was necessarily contained in the body itself and cannot come from the earth, for it is impossible to admit that this last can have yielded to the former any portion of an insoluble arsenical compound. The same may be said, and for the same reason, when the body had been previously opened, provided it still forms a distinct whole and has been carefully freed from all the earth that may adhere to it. If, however, the body is reduced to a mere detritus, and become mingled with the surrounding earth, and if upon treating this with cold water, an arsenical solution is obtained, while earth taken from a short distance from it gives none by the same means, it may be strongly suspected that the poison comes from the body and not from the earth. But if the earth taken as above, does give an arsenical solution with cold water, no suspicion of poisoning can be entertained.

When none is yielded to either cold or boiling water, but some is obtained by the action of concentrated sulphuric acid and heat, it may be possible that poisoning has occurred, and that the arsenic has been converted into an insoluble compound, especially if the earth near by contains sulphate of lime and no arsenical compound, but in that case, no position like this could be sustained, for the arsenic thus discovered, may have been that naturally contained in the bones. It is barely possible that during the process of decomposition, the ammonia formed, might give rise to a soluble arsenite of ammonia, which might be carried off by moisture, &c.—but in such a case, if the ground under the body gave no evidence of the existence of arsenic, while in other places, this was absent, nothing of advantage could be ascertained respecting the case. For further considerations on this subject we must refer to the paper from which preceding notices are drawn.

A still more difficult objection to meet, is that derived from the fact that arsenical preparations are occasionally used as medicines, and would in this case be absorbed and give indications of their presence after death, when death resulted from other causes. The physician must then rely upon other circumstances to be able to form a correct opinion; he must study the previous history of the individual, the circum-

†Mem. sur les terraines des cimetières, An. d'h yg. &c., No. 44, 1839.
stances attending his last hours, the condition of his organs, the quantity of arsenic found in the body, &c. &c. It must be confessed, however, that this is a difficult point to elucidate, and that careful observations are yet wanting to enable us to draw positive conclusions upon the subject.

Before closing these remarks, it may be proper to advert to the fact that the repeated experience of those who have had occasion to use it, pronounces in favour of the hydrated peroxide of iron as an antidote to arsenic. Its efficacy probably arises from the fact that it forms with arsenious acid an insoluble arsenite of iron, an action which is much assisted by the presence of ammonia in small quantity: there cannot be any doubt that its tonic powers are very servicable, also, to counteract the depressing tendency of arsenic upon the system. It is always better to begin the treatment with an emetic aided by diluents, following it immediately with repeated doses of the hydrated peroxide of iron, suspended in water. The committee of the Royal Academy of Medicine at Paris, recommend that for this purpose ⁵iv. of the dry hydrated peroxide should be suspended in 24 ounces of water, and that a good glassful of the mixture should be taken every ten minutes. Nor should the patient be considered out of danger until he should have taken at least half an ounce for every grain of arsenious acid supposed to have remained in the stomach. Cases of successful treatment are reported, when it was not administered until six hours after the poison had been taken.

Statistical researches relative to the Etiology of Pulmonary and Rheumatic Diseases, illustrating the application of the Laws of Climate to the Science of Medicine—By Samuel Forry, Surgeon, U. S. A.

The object of this paper is to elucidate the laws which obtain in regard to the etiology of pulmonary and rheumatic diseases in the several systems of climate pertaining to the United States, and to demonstrate the advantages of peninsular Florida, as a winter residence for pulmonic invalids.

The term climate, in medical science, embraces not only the temperature of the atmosphere, but all those modifications of it which produce a sensible effect on our organs, such as serenity and humidity, changes of electric tension, variations of barometric pressure, the admixture of terrestrial emanations dissolved in its moisture, and its tranquillity, as respects both horizontal and vertical currents. In the present inquiry, the
temperature of the air and its hygrometrical state, agents always supposed to exert a potent influence in the causation of pulmonary and rheumatic diseases, will alone be considered. In the northern division of the United States, four systems of climate, representing two classes, may be demonstrated; the one occupying the Atlantic and the lakes, and the other, the intermediate regions and that beyond the lakes. On the sea coast of New England, the influence of the ocean modifies the range of the thermometer, and the mean temperature of the seasons. In the interior, the extreme range of temperature increases, and the seasons are violently contrasted. Near the great lakes, a climate like that of the seacoast is found; and in the region beyond the modifying influence of these inland seas, an excessive climate is again exhibited. The writer then proceeds to show by statistical tables, that in the same latitude, the mean temperature of winter was 6°.05 higher on the seacoast, than in the region beyond the lakes, that of spring 4°.13 lower, of summer 8°.71 lower, of autumn 0°.40 lower. Of the two systems of climate, the uniform and the excessive, the influence of the latter upon man, breathing a dry, pure, and cool atmosphere, more especially in elevated regions, is manifest in his being little subject to severe and malignant fevers; and although pulmonary diseases are more rife than in any other system of climate, he attains the maximum of the mean duration of human life. It being then clearly demonstrable that the same parallels of latitude in the United States, present systems of climate of diverse character, viz. first, the regions bordering on the ocean; second, those under the influence of inland seas; third, those remote from such controlling powers, it will be seen that these laws of climate maintain an intimate relation with the etiology of pulmonic diseases.

It seems to be a well established law, that the prevalence of catarrh and influenza in each system of climate, increases and decreases in proportion as the seasons are contrasted, thus maintaining an unvarying relation with the extreme range of the thermometer as connected with the seasons. Let us follow the isothermal and isocheimal lines (representing the mean temperature of winter and summer,) between given parallels of latitude, presenting alternately a mild and an excessive climate, on the coast of the Atlantic, the ratio of catarrhal diseases is low. Advancing into the interior, the line of equal summer rises, and that of winter sinks, and the ratio increases proportionally. Proceeding into the region of the lakes, the lines again converge beneath the controlling power of the waters, and the ratio of catarrh and influenza is modified accordingly. Again advancing into the interior, beyond these ocean lakes, the average rises in proportion as these lines tend to opposite directions. On
the Atlantic coast, between the Delaware and Savannah rivers, the annual ratio treated per 1000 of mean strength, is 271, while the average of the interior posts, notwithstanding the class lies somewhat farther south than the former, is 290. As most of the posts of the first class of the southern division are on the Lower Mississippi, and are much under the influence of large bodies of water, the annual ratio is as low as 218, whilst the second class, which comprises the mild, insular climate of East Florida, has an average of only 143.

It would seem then, that sudden atmospheric vicissitudes combined with moisture, do not excite a strong susceptibility to catarrhal diseases, else the sea coast and the lakes should give a higher ratio than the dry and cold atmosphere of the opposite localities. Wherever the seasons are violently contrasted, the ratio of catarrh and influenza is highest, decreasing in proportion as the difference in the mean temperature of winter and summer grows less. As the middle division is subject to the extremes of the northern and southern latitudes, so it is found to be prolific in pulmonic lesions in general. The result of eight military stations on the sea coast and inlets between the Delaware and Savannah, gives an average of catarrhal diseases higher than that on the northern coast where cold prevails, as well as that of more southern latitudes, in which a higher temperature predominates. Catarrhal affections therefore, acknowledge the relative agency of the seasons in their causation, as may be seen from the author's tables. The ratio of each quarter is as follows: First quarter 689; second quarter 295; third quarter 294; fourth quarter 618. As the peninsula of Florida affords no marked distinction of seasons, it follows, that amongst the causes which determine the prevalence of catarrhal lesions, those that are secondary in the other systems of climate, become in this the primary ones.

To a person labouring under chronic bronchitis, the advantage of a winter residence in a more southern latitude becomes apparent. If he can avoid the transition of the seasons, the meteorological condition of the atmosphere which stands first among the causes of catarrhal lesions, he will do much towards controlling his malady. Let us suppose him on the coast of New-England, in the third quarter, the ratio being as low as 36, when the sudden transition of the season brings it up to 85. The consequence will inevitably be an aggravation of that disorder to which he is pre-disposed, for the respiratory organs, even when healthy, are peculiarly susceptible at this season to abnormal action. Let us, on the contrary, suppose him gradually moving south, with the change of the season, and the fourth quarter will find him in a climate whose ratio is even lower than that of the preceding quarter in the region which he had left. On the coast of New-England the ratio of the third quarter is 36,
and that of the fourth is 85, whereas the average of the latter quarter in peninsular Florida is only 33, from the results of ten years observation. With regard to phthisis pulmonalis, it has been shewn by a late report, "on the sickness, mortality, and invaliding among the British troops stationed in every quarter of the globe," that this disease is more prevalent in southern than in northern latitudes, and that it is by no means likely that any beneficial influence can be exerted by climate itself, in pulmonary diseases. This conclusion is confirmed by the statistics of the United States army; but in relation to the relative influence of the seasons, the general opinions in regard to change of climate in pulmonary affections, maintained since the time of Hippocrates, will be triumphantly established. Major Tulloch, in his able reports above referred to, has in some measure, set the world right in regard to a theoretical error, but has unfortunately led it at the same time into a practical one. His deductions are vitiated by the radical error of basing them on the annual results, without reference to the influence of the seasons; and it were easy to show that his inferences are in many instances unwarranted, as he has fallen into the error, not only of taking the mean of the averages given by the stations under his command, but into that of comparing the lowest average in one command, with the highest in another.

With regard to the relative agency of the seasons in the production of pleurisy and pneumonia, it is found that, as in catarrhal diseases, the first and fourth quarters present the highest, and the third the lowest range; 1st quarter 138, 2d do. 84, 3d do. 58, 4th do. 86. It appears also, from another statistical table, that the average of pneumonia and pleurisy is much lower in the cold and variable climate of our northern and eastern states, than in the middle and south-western regions of the United States; at the south-western posts, the annual ratio being 92, whilst on the New-England coast, it is only 41. It would seem to be a law, that in proportion as the high temperature of summer makes an impression upon the system, do the lungs become susceptible to the morbid agency of the opposite seasons. It is in the middle districts of the United States, that pneumonia, pleuritis, and phthisis, are most prevalent, the peninsula of Florida having a lower average than any other region; the ratio of deaths is also greater. In endeavouring to account for this result, much may perhaps be due to the circumstance that the subjects are generally from the northern States or from Europe. The majority of cases of phthisis is at our northern posts supervene on febrile diseases, in constitutions broken down by intermixture, and bearing the same relations to fevers, as those other sequelæ, dropsy, jaundice, and various chronic lesions of the viscera. On the lower Mississippi, a class
of posts which presents the highest mortality, the average of phthisis is low, owing probably to the circumstance that fevers are of the most fatal tendency. At the south-western stations, and those along our middle coast, the malarial poison acts more slowly, thus developing, by a gradual deterioration of the constitution, a tubercular form of phthisis. It follows then, that a continuous residence at the south, so far from being beneficial in this disease, will often hasten its fatal issue. This fact does not however, in the least militate against the doctrine which maintains that advantage will be derived from change of climate, in the way of a winter residence, and so far as regards the propriety of the measure in chronic bronchitis, no reasonable doubt can be entertained.

As regards rheumatism, the following is the proportion of cases treated per 1000 of strength, on an average of 10 years, in each system of climate. 1st quarter 249, 2d do. 219, 3d do. 201, 4th do. 202. This class is in some measure controlled by the same laws which govern pulmonary diseases. Were cold, moisture, and sudden alterations of temperature, powerful exciting causes, the highest ratio should be given on the New-England coast and the northern chain of the lakes; on the contrary, it is found, that like pulmonic lesions, the disease is most rife in the dry and cold atmosphere of the interior, characterized by the extreme range of the thermometer, and by seasons strongly contrasted.

The climate of the Peninsula of Florida is wholly peculiar. Possessing an insular temperature not less equable and salubrious in winter than that afforded by the south of Europe, it will be seen that invalids requiring a mild winter residence, may here exchange for the inclement season of the north, or the deteriorated atmosphere of a room to which he may be confined, the mild and equable temperature, the soft and balmy breezes of an evergreen land, in which wild flowers never cease to unfold their petals. The peculiar character of the climate consists less in the mean annual temperature, than in the manner of its distribution throughout the year. The influence of temperature is often indicated more accurately by our sensations, than by the thermometer. The advantages of climate as regards its fitness for the pulmonic, not unfrequently depend on the mere circumstance of exposure to, or shelter from, cold winds. The frequency and severity of the winds at St. Augustine constitute a considerable drawback on the benefits of the climate. To persons labouring under an irritable state of the bronchial membrane, high winds are particularly injurious. If the consumptive invalid have much sensibility to harsh and keen winds, and if the immediate vicinity of the sea be known to disagree, Fort King ought to be recommended before St. Augustine, or even Fort Brooke, at the head of Tampa Bay. Fort King is
intermediate between St. Augustine and Fort Brooke. There is little difference between the themometrical phenomena presented at Key West and Havana; for a period of six years, the mercury at the former place was never known to rise higher than 90°, nor sink lower than 44°. On the eastern coast of Florida, at New Smyrna, for example, the warmth and softness of the air wafted from the West India islands across the gulf stream in the winter months, are truly grateful to the senses. Cape Sable, and the coast extending northward towards Key Biscayno, as well as the adjacent islands, would also afford an excellent winter retreat. The climate of Florida has been found beneficial in cases of incipient phthisis, and those threatened with it from hereditary or acquired disposition; it is in chronic bronchial affections more particularly, that it speedily manifests its salutary tendency. To distinguish the bronchial from the tubercular form of the disease often demands considerable powers of discrimination; and upon this distinction, frequently hangs the propriety of removal to a southern clime. There are other forms of disease, as asthma, chronic derangements of the digestive organs, chronic rheumatism, and many nervous disorders, in which the climate of East Florida will be found of decided advantage.

Cases of Fracture in the General Hospital of Hamburgh, during the year 1838. By Fricke.

On the 1st January, 1838, there were six cases of fracture remaining from the last year: the patients were all men. In the course of the year, 66 cases were received, of which 51 occurred in males and 15 in females. The whole number treated was accordingly 72. Of these, 42 were cured, 10 died, and 20 remained under treatment.

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The following table exhibits the kind of fracture and the duration of the treatment:—
Fracture of os nasi . . 1 . 19 days
  " lower jaw . 1 . fatal
  " several ribs . 4 . 27 days
  " sternum . 1 . fatal
  " clavicle . 3 . 31 days
  " os brachii . 7 . 95 "
  " radius complicated with contusion of wrist 1 . 106 "
  " both bones of fore-arm 2 . 57 "
  " bones of the pelvis 3 . 43 "
  " neck of os femoris 8 . 139 "
  " os femoris . 9 . 94 "
  " tibia . . 5 . 71 "
  " fibula . . 4 . 88 "
  " both bones of leg 22 . 96 "
  " patella . . 1 . 88 "

Three cases of Spontaneous Gangrene, observed in the Regimental Hospital, S. Francisco du Cidade. By Jos. Maria Pereira e Sousa.

The hospital ordinarily contains from 150 to 200 patients. The three cases of spontaneous gangrene here related are the only ones which have occurred within 17 years.

Case 1st.—Manuel Bernardes, soldier, aged 39 years, of strong constitution, was received in December, 1828, with all the symptoms of pleuro-pneumonia. Pulse in the right arm scarcely to be felt; in the left, hard, frequent, and intermittent. V. S. 24 leeches, demulcents, broth, &c. On the 5th day, pain in the right arm, in which formication had for some time been felt: the limb was swollen, but not red. On the 9th day, a livid spot was observed on the radial side of the fore-arm, the pain in the right side of the thorax increased, and violent headache and delirium supervened. On the 12th day, gangrene was observed on the fingers. the back of the hand, and the adjacent part of the fore-arm. On the 13th day, coma, stertor, and death. Autopsy. The brain was deeply injected, and each lateral ventricle contained half an ounce of serum. Old adhesions of the right lung; pericardium inseparably adherent to the heart. Left ventricle thickened and inflamed, in like manner the aorta as far as the innominata. Adherent coagula filled the cavity of the aorta, as well as the right subclavian, axillary, and brachial arteries, and their branches as far as the fingers.
Case 2d.—Joseph Duarte, about 20 years of age, was wounded on the 18th February, and remained without treatment until the 25th. He was a slender man, of a feeble constitution. A musket-ball had passed through the right lumbar-region, but no important organ appeared to have been involved in the injury. The extremity was much swollen, especially from the pubes to the knee; the wound suppurred three months, with violent pains along the crural artery and nerve. Towards the close of March, the patient complained of severe pain in the right foot, of a coldness which extended to the knee; no pulsation was perceptible in the femoral artery at its exit from the abdomen. The pain continued to increase in severity, especially in the evening. Leeches and warm poultices were repeatedly applied. On the 23d June, gangrene appeared on the toes, and they lost all sensation and motion. In the beginning of July, gangrene extended up the foot and leg: death occurred on the 11th. Autopsy. Right lung adherent throughout, and containing tubercles. Traces of pneumonia, with softening of the pulmonary tissue in the middle lobe. Heart, pale, thin, and soft. Aorta in its normal state until it approached its bifurcation, where it was inflamed, thickened, and filled with a coagulum of blood, which extended through the right iliac artery and its branches. There was suppuration in the cellular tissue around the vessels at the part where the ball had penetrated. The popliteal artery and its branches were much contracted, and the crural vein and nerve inflamed. A small piece of cloth was found in the midst of the suppuring cellular tissue of the loins. The soft parts of the sole of the foot were of a livid red colour, and were easily lacerated.

Case 3d.—Robert Joy, Irish Grenadier, 20 years of age, of robust frame, entered the hospital on the 24th May, 1834. He was suffering from severe pain in the left foot and leg, apparently of a rheumatic character, with a feeling of coldness. The temperature of the limb was reduced; the patient had no appetite, and was unable to sleep. On the 3d June, mortification had occurred in spots from the toes up to the leg. The limb was somewhat swollen, and a violent pain extended from the middle of the leg up to the loins, being less severe above than below. Pulsation could not be detected in the popliteal artery and its branches; it was perceptible in the femoral artery as far as the groin. Pulse full, somewhat over 80, tongue red and moist. V. S. Sixty leeches applied to the upper part of the leg, warm poultices, Labarraque's fluid to the mortified parts; internally demulcents with opium, and weak broths. Six days later, the sphacelus extended above the knee, and in this condition the limb was amputated in the middle of the
thigh. On the 15th July, the stump had cicatrized, and on the 24th of December the patient went to England in perfect health. On examination of the limb, the femoral artery, at the point where amputation was performed, was found to be healthy; but its branches toward the foot were inflamed, and filled with hard and adherent coagula. The veins contained black and thick blood, and were greatly dilated; the muscles appeared as if they had been macerated, were pale, and could not be distinguished from the cellular tissue, either by their colour or consistence.

In the three cases above related, gangrene was the consequence of arteritis. The third case is interesting on account of the successful result of amputation while the gangrene was still progressive.—Jornal de Sociedade das Sciencias medicas de Lisboa.

**Mensuration of the Aorta by Percussion.—**Prof. Piorry has lately published numerous facts which tend to prove that the dimensions of the aorta near the heart, can be accurately measured during life, by percussion, even when of the normal size. The application of this fact to the diagnosis of the early stage of aneurism, renders it worthy of attention. The following is M. Piorry's method of exploration: He thinks the pleximeter much preferable to the finger; he also insists upon the importance of ascertaining the exact position, form, and elevation of the liver and the heart, as well as the fact whether tubercles or pleuritic effusion exist to obscure the natural sounds.

First,—Draw, by percussion, an horizontal line immediately above the point of the upper limit of the heart.

Second,—Another line, parallel to the first, and 0m. 027 above it.

Third,—Another line, still parallel to the others, and the same distance above the second line.

The first of these lines will give the measure of the great arteries (pulmonary and aorta united) near the heart; the second, the united dimensions of the same vessels at their point of separation; the third, the dimension of the aorta alone.

Fourth,—A fourth line, oblique to the two first, in the direction of the right sterno-mastoid muscle, and prolonged to near the point of the heart, will give the dimensions of the aorta at its curvature.

Fifth,—A fifth line, intersecting the three first perpendicularly, and extending, above downwards, twenty-seven to thirty millimetres from the left sterno-clavicular articulation towards the heart, will give the dimensions of the artery below its curvature.

Sixth,—A sixth line, drawn horizontally in the direction of the arch of
the aorta after its first curve, will mark the extent of this vessel from its first to its second curve, and as low as the point where it plunges into the thorax in its descent.

The above lines, it will be understood, are to be ascertained and limited by percussion, first ascertaining with care the natural dulness over the artery, and the precise point where this ceases, and extending this point a few centimetres beyond to allow for the curve in the artery. — Great care should be taken to percuss lightly and many times, before fixing the limits; and the touch and auscultation should be used when possible, to aid in the diagnosis. — Archives Gen. de Méd.

Cauliflower Excrescence from the Os Uteri. Amputation of the neck of the womb followed by Pregnancy. — By Prof. Simpson, Edin. — The patient, æt 33, had been married 13 years; had borne five living children, and had a miscarriage at the sixth month. In June, 1833, she weaned her youngest child. For about a month previously to that date, she had a red discharge from the vagina, which was constant in its occurrence though not great in quantity; it continued during the autumn. In Oct., she passed what was supposed to be an abortion of the second month. The vaginal discharge which had been present during the period of apparent pregnancy, increased considerably after the miscarriage, and was often mixed with coagula. It had always a very offensive smell and more or less of a red tint, but sometimes it appeared comparatively pale and watery; it was as profuse, but less discoloured at night, as during the day when taking free exercise. From the period of supposed abortion in Oct. up to May, three or four cloths were regularly soaked every twenty-four hours. On two occasions pure blood suddenly escaped in considerable quantity and without apparent cause. There was no monthly increase of the discharge answering to the catamenial period. During the whole course of the disease no pain or uneasiness was felt in the uterus, (except during the abortion) but the patient had become pale and anaemic, and so weak as to be occasionally confined to her bed.

On examination, per vaginam, a tumour was found attached to the posterior lip of the uterus. It was about the size of a small pear and was attached by a very broad basis. Its surface felt somewhat rugged and granulated; it was firm, but not hard in its consistence; it was not painful in pressure; it bled freely every time it was examined. By the speculum, the surface of the tumour was seen to be irregular, and of a bright red, strawberry colou.
An operation was proposed, and after three weeks acceded to; the tumour having, in the mean time, grown considerably, and extended in its base, so as to involve more of the angles of the os uteri, as well as of its posterior lip.

On the 25th of May the operation was performed. The patient was laid upon her face, her body placed across the bed, and her lower extremities allowed to hang over the front of it. The thighs were held separate from one another. My object was to pull down the diseased neck of the uterus till it protruded externally beyond the mouth of the vagina, and then freely excise it. For this purpose, I introduced the two first fingers of my left hand into the vaginal canal, up as far as the tumour, and used them as a guide by which I fixed the teeth of a long vulcellum into the sides of the excrescence. The tissue was, however, so soft as to tear under slight traction, and thus afford me little purchase for pulling the mass downwards. The instrument was refixed nearer the root of the excrescence, and a second vulcellum was superadded to render the purchase more secure. With these, I was enabled to pull down the tumour gradually and cautiously, till it was entirely protruded beyond the external parts. I then cut off the protruding mass, dividing it from behind forwards, and removing the whole vaginal portion of the cervix uteri. The uterus immediately slipped up into its natural position. Very little hemorrhage followed. I stuffed, however, the vagina pretty firmly.

The patient bore the operation well, and complained wonderfully little during it. In the evening, the vaginal plug was removed, in order to allow her to evacuate the bladder: it was not considered necessary to replace it. No local or constitutional symptoms of any importance followed the operation. The great vaginal discharge immediately ceased. The incised surface, when examined through the speculum, a few days after the operation, presented a healthy granulating appearance. She sat up on the 10th day, and in a few days more, she was walking about the house attending to her usual domestic duties.

She has not been one hour sick since the operation, and has now regained her usual health and spirits. No morbid discharge from the vagina has hitherto appeared. She has never since menstruated, and about five weeks ago, she fancied that she felt the symptoms of quickening. On examining the abdomen, November 14th, with the stethoscope, I heard distinctly both the placental souffle and the sound of the foetal heart. The os uteri is closed, and on examination by the finger gives the sensation of a firm puckered cicatrix.

The above tumour, after its removal, was 2 3/8 inches broad, and 2 1/4 inches deep. Its surface presented a well-marked granulated appearance, with deeper fissures crossing it, and giving it an irregular and lob-
ulated appearance. On rubbing down a small part of the recent tumour, a kind of vascular or cellular framework was all that was left behind. The mass, after having been steeped in a strong alchobolic solution of corrosive sublimate, when divided, resembled very much brain hardened by the same menstruum. A number of minute cells were scattered over the surface of the section, and on slightly rubbing the divided surface, it broke up into numerous small, connected, grape-like granules. The external appearance resembled strikingly the head of the cauliflower.—*Edin. Med. and Surg. Jour.*

**Tumour of the Brain, with Hydrocephalus, and arrest of development of the Uterine System.** By Dr. O'Bryen.

The patient was a young lady of 22 years. She stated, and her mother confirmed her report, that at 2 years, she had a fright, which gave rise to fits, which have continued ever since, every six to twelve weeks; probably epileptiform; also, that the right side of her body was paralyzed about the same time, which continued for twelve months: this state having been preceded by symptoms of disease within the head; the fits having continued for four days, accompanied by vomiting, prior to the paralytic attack. At 7 years of age, she had another such attack, preceded by the same symptoms of irritation of the membranes of the brain, at which she lost the sight of her left eye; the left side was at this time paralyzed, and remained so for eight months.

From this period until 14 years of age, the fits continued very slightly. She learned to read and write, and was not considered stupid. At 14 years of age, the fits became more severe and of longer duration. Neither menstruation nor any of the signs of puberty made their appearance.

Nov. 12th, 1836.—In the month of June, 1836, she became heavy and feverish, with shivering and great fulness of the abdomen, which was followed by numbness, formication, and spasmodic contraction of the whole right side of the body; she had also an epileptic fit, which lasted two hours. Slight delirium followed, and after some time, the right side became paralyzed; the power of speech and motion have gradually returned up to this day. There is occasionally a spasmodic motion in the muscles of the left eye; no fit since June; violent intermittent headache, with weight in the head, and great disinclination to move it. Sleepiness; expression of countenance childish; difficult articulation. There is a faltering and drag in her right leg. Bowels costive. Occasionally subject to take cold, but no indications of thoracic disease. Other functions natural.
She died August, 1838, not having been again seen by Dr. O'B. until about a week before her death.

For a long time (three months) there had been a disposition to coma, and also for a few days convulsions, particularly of the right side. When last seen, the pupils were contracted and insensible, the muscles of the right side of the face slightly contracted; the right arm and leg bent and in continual motion.

Two years before her death, her attending physician had made a very careful examination of her external appearance. The forehead was much elevated; the head was large, but not remarkably so; the occipital bone much developed. Ossification in some portions was hardly complete; face, that of a child 8 or 10 years old, without much expression; eyes very prominent; pupils large, but contractile; occasional strabismus of the left eye; total loss of vision since 7th year; in the right eye vision imperfect; no appearance of puberty.

On post mortem examination, the membranes of the brain were found very much thickened. The convolutions almost obliterated, and the substance of the organ perhaps softened. The ventricles were much distended with clear fluid, about 18 oz. escaping from the right—the lining membrane being white, tense, and very resistant, like that covering the convolutions, A tumour rose from the left optic thalamus, covered by the lining membrane of the ventricles, its point being directed obliquely from within outwards, and being about one inch from the floor of the left ventricle. Removing the brain from the skull, the tumour was left adhering to the dura mater, or rather to its lining membrane. A second branch of the same tumour now appeared extending along the petrous portion of the temporal bone, and penetrating the tentorium cerebelli above the internal auditory foramen, and firmly adherent to the arachnoid covering the left lobe of the cerebellum. The brain, at its base, presented a loss of substance into which the tumour fitted exactly, commencing to the right of the tuber annulare (this being intact) including posteriorly one quarter of an inch of the crus cerebri, and proceeding anteriorly, involving two convolutions of the middle lobe, to the depth of nearly one inch, on the outside leaving the fifth pair, and on the inside the corpora albicantia intact: here the tumour penetrated the left optic thalamus, destroying a part of the corpus striatum more anteriorly, and the left optic nerve posterior to the commissure, and the first pair at their origin. Thus the tumour appears to have destroyed in succession, the left optic nerve posterior to the commissure, which latter remained intact though rather flattened; 2dly, the first pair on the same side; 3dly, the left optic thalamus and a part of the left corpus striatum, thus causing a
loss of substance through which one branch entered the ventricle pushing before it the lining membrane. The lateral branch destroyed two convolutions and above a quarter of an inch of the left crus cerebri, penetrated the tentorium cerebelli, and was simply adherent to the arachnoid covering the superior surface of the left lobe of the cerebellum, to which the dura mater was so adherent that it could not be separated from it even with a scalpel. At the base of the cranium, the left anterior and posterior clinoid processes were absorbed, and the tumour was adherent by a narrow base to that portion of the membrane lining the dura mater, which covers the left carotid after it enters the cranium. The surface of the tumour was very rugged, and appeared formed principally of calcareous matter. The cerebellum was the only part of the cerebral mass that was perfectly healthy, if we except the adhesions above spoken of.

Other organs generally healthy. The uterus existed only in miniature, being one inch in length and four lines in breadth. The ovaries were about the size of an almond, and when divided, presented two or three cavities. Vagina small.—Dublin Jour.

Smallpox.—Scars prevented by the application of Mercurial Plaster. Some years ago, M. Serres at La Pitié, introduced the practice of covering the face of patients with smallpox, with the mercurial plaster of Vigo. Other physicians have since employed the same means with success, and lately M. Chomel of Hotel Dieu, Paris, has repeatedly employed it with the same result. The eruption was modified in all those parts of the body to which the plaster was applied—it was not accompanied by the red areola which surrounds the pustules—the face was less swollen and tense than is common. M. Serres has proved by repeated experiments that other local applications, as the diachylon, gum arabic in water &c. exert no influence on the eruption. The following cases in M. Chomel’s practice will further illustrate this important subject.

Case I. A young girl, æt. 19, entered the ward St. Augustine. She had been vaccinated, but as she says unsuccessfully. The eruption was preceded by the ordinary symptoms, lassitude, pain in the back, vomiting &c., it is semi-confluent. A mask formed of the plaster of Vigo was applied to the face on the 2nd day of the eruption: 24 hours afterwards, the patient tore it off; but notwithstanding the short length of time that it was applied it produce a remarkable effect. In fact, on the neck, the breast, and every other part of the body, the pustules were
developed with all their characteristic marks, they were opaque, depressed in the centre, and surrounded by a bright red areola. On the face, the progress of the disease was quite different, and instead of pustules there were only acuminated vesicles and solid papulae. On certain points, where the plaster had not adhered, there were small pustules, but no where else. A simple inspection of this case is enough to convince any one that the mercurial plaster exerted a beneficial and specific local influence, and that the patient will not be pock-marked.

Case II. In the same ward, is a patient now convalescent, who has been subjected to the same treatment. Desquamation has followed its usual course in every part of the body except the face, where crusts did not form, except at certain points, where pustules had existed and where the plaster had become puckered.

Case III. In this case, the patient was five and a half months advanced in pregnancy. The application of the plaster checked the progress of the eruption upon the face, where it was only marked by the appearance of small whitish papulae. Scabbing did not occur; except about the lips and eyelids, where pustules appeared and where the plaster was not applied. 

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Croton Oil in certain Nervous Diseases — By Dr. Newbigging.

The author's attention was first called to this subject by seeing the oil successfully administered in a case of tic douloureux which had resisted the use of depletion counterirritation &c. under a variety of forms. He has also used it with great success in cases of epilepsy which he thinks was dependant on disordered circulation of the brain — in other cases where organic disease probably existed, the remedy failed. It was also unsuccessfully used in a case of laryngismus stridulus.


The following additional case of Thymic Asthma was received too late for insertion in the proper place:—

Case of Thymic Asthma. Communicated by Dr. Bliss.

On the 12th of March, a female infant, aged six months, while playing with an attendant, who held it in her arms, suddenly threw the head back. The eyes became fixed, countenance livid, the extremities extended, rigid, and affected with a slight tremulous motion; which symptoms were followed with almost instant extinction of life.
About a month previous, I had been requested to visit the child, who had suffered two paroxysms similar to that which was the immediate cause of death: one of which occurred the evening previous, and the other on the morning of the day I was requested to visit her. At this time she was affected with a deranged state of the bowels, frequent green watery stools, and she also had slight bronchial inflammation. These symptoms were relieved by remedies in the course of three or four days, and with the exception of an occasional slight cough and the recurrence in one instance of the symptoms above described, in which the countenance was remarkably livid, the mother represents the child to have been in apparent good health up to the moment of its death.

The circumstances of the case were such, as to induce me to solicit permission to examine the body; and Dr. Buck, at my request, made a dissection;—the result of which, as furnished by his notes, is as follows:

Dissection.—The thymus gland measured four inches in length, and three in breadth, and consisted of a broad expanded portion below, that spread out over the heart, leaving only its apex uncovered. It adhered closely to the pericardium, and extended on either side to the roots of the lungs; its greatest thickness was three-fourths of an inch in the middle, at the edges it was thin and sharp. This portion sent a slender prolongation upwards as high as the inferior edge of the cricoid cartilage, that adhered by loose cellular tissue to the trachea and great vessels of the heart, and terminated in two, pointed, diverging crura that embraced the sides of the trachea. The substance of the gland was of the colour of the pancreas, and at its thickest part was of the same consistence. The mucous membrane lining the larynx and trachea was pale and healthy. The lungs were quite firm, and crepitated but little; their substance was red, tough, and exuded but little fluid. The heart was not examined. A small extent of the transverse colon was opened and found thickly scattered with swollen isolated glands.

Medical Faculty of the New-York University.—We learn with pleasure the organization of a new Faculty in this Institution, and under circumstances likely to ensure its successful operation the ensuing season. The following gentlemen have been elected professors: Drs. Pattisson and Revere, late of the Jefferson College, Philadelphia, to the chairs of Anatomy and the Theory and Practice of Medicine; Dr. Mott, now in Europe, and who has not yet accepted his appointment, to the chair of Surgery. Drs. Paine, Bedford, and Draper fill the three remaining chairs, of Institutes of Medicine and Materia Medica, Midwifery, and Chemistry. The Faculty have leased the building known as the Stuyvesant Institute, an edifice admirably adapted to the purpose.

Spring Course of Lectures at the College of Physicians and Surgeons.—The Lectures will commence on the first Monday in April, and will continue about three months.

Club-feet and Analogous Deformities—W. Detmold, M. D.
Diseases of the Kidneys—W. Roberts, M. D.
Diseases of the Chest. Auscultation, and Percussion to be illustrated by Clinical Instruction—J. A. Swett, M. D.
Diseases of the Eye, with Clinical Instruction at the Eye Infirmary, G. Wilkes, M. D.
Diseases of the Uterus and its Annexes—C. R. Gilman, M. D.
Operative Surgery—W. Parker, M. D.
Anatomy of the Nervous System—J. Quackenboss, M. D.
Surgical Anatomy—R. Watts, Jr., M. D.

Private Asylum for the Insane. — We are gratified to learn that an Institution of this kind is about being opened at Kipp's Bay, an agreeable and convenient situation, about three miles from the city, by Dr. J. Macdonald, formerly physician to the Bloomingdale Asylum. The great and peculiar advantages of such Institutions are already recognized, and from Dr. Macdonald's known acquirements and experience in the treatment of mental diseases, we cannot but believe that his undertaking will be highly successful.

New Law in relation to foreign practitioners of Medicine. — The State Legislature have recently modified the law of May 16, 1833, as follows:—

"No person coming from another country shall practice physic or surgery in this State, until he shall have been examined and licensed by the censors of the State Medical Society, and no person coming from another State shall practise physic or surgery in this State until he shall have filed a copy of his diploma in the office of the clerk of the county where he resides, and until he shall have exhibited to the Medical Society of that county satisfactory testimonials of his qualifications, or shall have been examined and approved by its censors."

Health of the City.—The bills of mortality show a large proportion of deaths among middle-aged females and children under five years of age. It has been currently reported that the presence of puerperal fever for the last two months has been the cause of the first mentioned fact. But on inquiry, we are unable to establish the existence of any thing like an epidemic puerperal fever. Acute inflammatory affections of the chest, measles, and to a certain extent, scarlatina, are now prevailing among children — the former with more than ordinary severity.

M. Esquirol, long known as a leading authority on subjects connected with Insanity, and as physician to the hospital at Charenton, near Paris, died on the 12th of December last, æt. 68 years, of pulmonary disease.

Sir Astley Cooper died in London on the 12th of February last, æt. 73 years. We have not yet received the particulars of the last days of this great and good man.
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