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EDITED BY
HENRY F. CAMPBELL, A. M., M. D.,
PROFESSOR OF SPECIAL AND COMPARATIVE ANATOMY IN THE MEDICAL COLLEGE OF GEORGIA

AND

ROBERT CAMPBELL, A. M., M. D.,
DEMONSTRATOR OF ANATOMY IN THE MEDICAL COLLEGE OF GEORGIA.

"Je prends le bon ou je le trouve."

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A Case of Vesico Vaginal Fistula. By A. W. Bailey, M.D.,
Clinical Clerk of Jackson street Hospital, Augusta, Ga.

It is needless for me to endeavor to give a treatise on
this disease, as all who may desire to acquaint themselves
fully with the subject can, by reading some Surgical work,
or Dr. Bozeman's pamphlets, gain more knowledge than I
would be able to impart.

It being my object merely to report a case, having seen
several successfully treated by Drs. Campbell during my
stay in their Hospital as a private student, and to add to the
list of those already cured by the profession, and to encourage the attempts for the treatment of the disease, no matter
how formidable the case may appear.

To Dr. Bozeman, of Montgomery, Ala., the profession is
indebted for the most successful plan for the cure of this affection.

About two years ago Dr. Bozeman published his manner
of procedure, and the success which he had met with in the
use of the button suture and silver wire. In one of his
pamphlets he gave preference to the silver button, it being
lighter and "less likely to yield under pressure, admits of
a higher polish, and allows the wires to be drawn through
the small holes without dragging;" but admitting all this,
his experience has taught him that the button suture made of lead is by far the most preferable for several reasons. In using the silver button the Surgeon has to have a regular smith, who may not understand the nature of the parts, and even if he did, there are many little modifications in shape required which he could not give unless the operator was present to point them out; but with lead it is indifferent. The Surgeon can make his button while around the operating table, and beat it into any shape he may desire; for it is not until he has adjusted his sutures that he can tell exactly the shape of button required. Lead is also more flexible, and can be made to adjust itself to any surface that may be presented to the operator, and hence more likely to bring the parts in adjuxtation, and thereby cause a more successful closure and adhesion of the fistulous opening. Having assisted in several operations performed by Dr. Bozeman's plan with a leaden button suture, and having taken great interest in taking notes on the cases from the time of their entrance until their departure, have selected it as the subject of the present paper.

Vesico vaginal fistula generally occurs, as all are aware, by the pressure of the child's head against the soft parts, or the improper use of instruments during first labor, though it is liable at any period during child-bearing when the labor is such as to give rise to this dreadful complaint, for instance in impeded labor when the head has descended low down into the pelvis, and presses against the vagina and urethra sufficient length of time to produce inflammation, gangrene, and sloughing, or when the instruments have to be used to effect delivery, which very often produces abrasions, and also brings on sloughing of the parts. As to the position, shape and space that the fistula may occupy, is altogether owing to circumstances. Bozeman adds two more that the operator may be enabled to classify all cases that may present themselves under its appropriate head.

Velpean's classifications are as follows: 'The first class embraces all those fistulas which cause a communication
Vesico Vaginal Fistula.

between the urethra and vagina; the second class is made up of those which are established at the expense of the trigone vesicalis; the third class comprises all those situated in the bas-fond of the bladder." Dr. Bozeman adds the following two agreeing with Velpean so far as he goes: "The fourth class embraces all those fistulas formed at the expense of a part, or the whole of the vesical trigone, and the root of the urethra; or, trigone and the bas-fond of the bladder; or, all three of the regions together. The fifth class include all those complicating the cervix uteri, either with or without injury."

The following is a case in which the posterior wall and fundus have sloughed away to a considerable extent, implicating the cervix uteri, and forming an opening in the shape of a horse shoe, or segment of a circle, the point of which severed the left ureter.

Jane, servant girl of Mr. N. J., of Fort Gaines, Georgia, age eighteen, of robust constitution, ordinary height, well proportioned and had always enjoyed good health. This accident occurred, as I have formerly stated it does, in giving birth to first child about twelve months previous to entering the Infirmary. Her labor was a very protracted one and finally required the use of instruments to effect delivery. From the patient's weakened condition, and other circumstances connected with her, not necessary to mention here, an examination was delayed for nearly three weeks after her entrance.

May 23d.—An examination was made by Drs. Campbell, and "the opinion was that an operation would be attended with but little success: a further opinion would be taken at another time.

May 26th—To-day a second examination was made, and the opinion of the 23d strengthened, as the parts had sloughed to a greater extent than they had suspected. She bore the operation with apparently so little pain that it was noted as an indication of gangrene having taken place.

May 31st.—A third examination was made to-day, and a
prospect of a cure very unfavorable. It was, however, determined that an attempt would be made as soon as all things were more favorable. The patient did not complain very much from excoriation or scalding, nor did the secretion of calcareous matter take place to a great extent. Injections of warm water and castile soap were used several times a day up to the day of the operation, the main object being to strengthen and have the system in as good a condition as possible. This was accomplished by nutritious diet and tonics of iron and quinine in five grain doses three times a day, in syrup.

July 29th.—Gave an ounce of castor oil to put the bowels in a suitable condition.

July 31st.—To-day an operation was performed by Drs. Campbell, assisted by myself. The patient being placed on her breast and knees with a mirror situated so as to throw the reflection of the light on the parts to be operated upon. The edges of the fistula were thoroughly pared to their full extent, and six sutures of silver wire were made with Simpson's needles; the edges were then approximated as much as practicable, and secured with shot over the leaden button; the ends of the wires were partially twisted and lapped with a piece of linen, and allowed to hang from the vulva. This operation lasted nearly four hours, the delay being chiefly occasioned by the irritable and nervous condition of the patient, and the knife having wounded some small blood-vessels at the farther end of the fistula, and caused slow but troublesome hemorrhage, filling the vagina with clots of blood and obscuring the view. Injections of acetate of lead were used, vagina washed out, and the patient was then put to bed, a catheter introduced and kept there constantly, save for the purpose of cleansing, when it was removed twice a day.

Recipe tinct. of opium in twenty drop doses was given, the purpose being to constipate the bowels and secure rest for the patient.

August 9th.—The sutures were removed to-day, and dis-
covered that there is an opening at each end of the line of adhesion, and the result of non-union was suspected the entire length of the opening, from the fact that the bladder was not relieved entirely by the catheter, but that a portion of the urine came away through some part of the fistula while the catheter in situ.

August 10th.—The patient is losing strength and flesh from irritation and confinement to bed.

R.—Tartrate iron, potash and quinine in five gr. doses three time a day; diet, beef soup, bread, &c.

August 16th.—Improving, goes about the house and yard, feels a little uneasiness, other than that caused by the unnatural discharge of about half the urine, the other half remaining in the bladder, and passes off at intervals through the urethra.

August 30th.—General health improving, but urine passed off as at last note.

October 14th.—Up to this time the second operation has been put off from time to time for several unavoidable causes. She has been subject to fevers occasionally; these paroxysms have been successfully met with quinine, and also her periods of menstruation are irregular and painful. At this operation the edges of the openings were pared, and a button applied on each, one requiring two sutures, the other one. The wires being well clamped, were cut off to the shot, and the vagina plugged with lint to prevent the recto-vaginal septum from being wounded by the ends of the wires, besides the protruded wires from the vulva are liable to be jarred to some extent from the movements of the patient, and may cause displacement of the button. She was placed in bed, opiates given, catheter introduced, and removed occasionally as before. This time all the urine was conveyed from the bladder by the catheter, as none could be discovered coming from any other source. They were not sanguine on this point, as the plug was sufficient to prevent its passage into the vagina.

October 24th.—Removed the buttons and sutures, and
find only one of the openings partially united, the inferior one at the neck of the bladder; to this the application of solid nitrate of silver was made, but with little effect; the other openings where the fistula crossed the ureter, there was little hope of union taking place from the impracticability of reaching the point sufficiently to insert the suture carefully owing to its length and direction. The severed end of the ureter, they were also unable to direct into the bladder for the same cause.

A third operation was, however, determined upon which succeeded only in partial closure of the fistulous openings, still leaving two small holes, one the size of a small pin's head, and the other a little larger. Repeated applications of solid nitrate of silver at intervals of every ten or fifteen days were again made, which succeeded in the cure of the case, though at first seemed to be of but little or no benefit.

The great obstacle in this case which made it of interest to study and take notes upon, are the following:

1st. The direction and extent of the fistula.

2nd. The great amount of sloughing and consequent loss of tissue—the greater and lesser curves of the opening were so disproportionate that when the edges were pared and drawn together there were formed on the edge of the greater curve duplications or pouches, and this was really the cause of non-union at each end.

3rd. The difficulty of directing and securing the bisected ureter in its normal position.

ARTICLE VIII.

A Case in which portions of a Fetus made their way from the Uterus, through the Abdominal walls by Ulcerative Process. Patient Recovered. By DESAUSAGE Ford, M. D., Demonstrator of Anatomy, &c., in Medical College of Georgia.

Mrs. H———, widow aged 35 years, stated she had been delivered of three children—one still living, the other died
of trismus nascentium— with a third child had been preg-
nant, about five and a half months, up to January, 1860, when she aborted, the presentation a footling; the trunk, superior and inferior limbs protruding beyond the vulva, the head remaining confined tightly by the contractions— which must have been anomalous—of the os tisæ. Fearing detection, (for her pregnancy was the result of criminal intercourse) she cut off that which was hanging from her, when, to use her own language, the head went back. She supposed the foetus to have been dead about nine days. When questioned, she denied that there was any bleeding, or other discharge at the time, and could give no account of the cord, or placenta.

April 18th.—Four months after this most strange and unnatural occurrence, Mrs. II— was admitted into the Augusta City Hospital, with a fistulous opening immediately below the umbilicus, which was discharging, very freely, a dark yellow and offensive matter, undoubtedly partly fecal which could be accounted for after the extraction of the bones. She continued in this state until July 25th, when I took charge of the Hospital, discovering the bones of a fetal head protruding through this opening, then about two inches in diameter. In receiving a report—not a detailed one—from the attendant physician before my service, I gathered: that she was affected with chronic constipation, which was at first relieved by enemas and cathartics, which latter—castor oil was generally used—he thought could be detected in the secretions from the fistulous opening.

At first I supposed this a case of extra-uterine foetation, indeed the opinion was unsettled, until the examination had been made, with the bones extracted. Mrs. II— was in a deplorable and emaciated state, a condition inviting prompt relief, by surgical operation, which I performed on the 27th. It was not necessary for an incision of the walls of the abdomen, but bone after bone—the soft parts surrounding them having been disorganized—was extracted by a rotary traction with a pair of strong forceps, which
bones were the following:—two parietal; two temporal, without petrous portion attached; one petrous portion; one malleus; one tympanic bone; sphenoid; one malar; occipital; frontal, in two pieces; one scapula; radius and ulnar, with phalanges and metacarpal bones of one finger.

These bones are, in development, as near the size of a six months fetus as could be determined, which fact substantiates her story, that she had been pregnant about six months. After these bones were extracted, a digital examination disclosed a large cavity, answering to the internal form of the uterus, which cavity, in the mesian line, had an outlet like the form and position of the passage through the cervix. This large cavity communicated, by an extensive opening, with the ascending colon, the finger readily tracing the interior of the intestine, above and below, as far as it could reach.

The 28th day after the operation, prescribed:

B:—Valet's Proto. Carb. Ferri, 5g5j
Water 5viii—M.

Give a teaspoonful three times a day.

Apply to the wound, cloths wet with a solution of chloride soda. Had taken 5g castor oil this morning—no effect Fecal matter discharging through opening.

29th.—This morning passed a living worm, 4 inches long, through fistulous opening, with large quantities of fecal matter. Had an action through rectum yesterday. Ordered an enema of warm salt and water.

30th.—Ordered daily enemas of warm water every morning, an hour after breakfast. Fecal matter discharging.

31st.—Fecal matter still discharging, though much diminished in quantity. Strength better.

August 2d.—Passed a worm through the opening. Had an action through rectum, after enema. Ordered, instead of enema in the morning, castor oil 5g and spts. turpentine gtt. v.

August 6th.—Continue treatment. Condition some better. Left the city and record was not kept until

August 14th.—Is having natural operations through the rectum, with very little discharge from opening. Strength and general condition improved.

August 18th.—Had an attack of gastralgia. Ordered 100 tinct. opii. and mustard over epigastrium. Continued to improve daily, having natural evacuations through the rectum, with fistulous opening very nearly healed, and no inconveniences from discharges. Mrs. H—— left the hospital September 7th, two months and ten days after the extraction of the bones.

Remarks.—The fact that a foetus has escaped through the abdominal walls, by ulceration, and the patient recovering, indeed, impregnation existing, after such an accident, is by no means novel. (See report of a very remarkable case of Extra-Uterine Foetation in Keating’s edition of Ramsbotham’s System of Obstetrics, page 580.) In this case it will be noted that a fistulous opening was made, by ulceration, into some portion of the intestinal tube, and still the patient survived, but exactly the counterpart of the case of Mrs. H——. I cannot find, in which the uterus itself retained a part of a foetus, that part ulcerating through its walls, being extracted as detailed.

The fiendish criminality, and unnaturalness of the act of cutting off a foetus, on the part of the mother, and the apparent discrepancy of her account, together with some of the bones extracted, viz: a radius, ulnar, scapula, phalanges would seem to invalidate the opinion formed of the case; not so, however, when we consider all the circumstances, especially the fright, solicitude of the mother in any attempt, however enormous, to avoid detection. The fact of these bones of the arm having been found will explain, in a measure, the difficulty of the delivery, in that a footling presentation, unless one of the arms remains impacted with the head, could have been easily delivered, if the head was not abnormally enlarged, her statement, the inferior and superior
limbs and trunk hanging out, to the contrary notwithstanding. The absence of the presence of a humerus; a second malar bone; a second petrous portion of temporal bone; a second tympanic bone, &c., explains a statement she made, that some small bones had come out of the fistulous orifice, from time to time. Why, then, the number of these bones indefinite, might not bones have escaped, which would show the case one of extra-uterine foetation? Because, by examination, after the remaining bones had been extracted, neither the opening into the colon, nor the passage through the cervix uteri, could have been confounded with the openings through the fallopian tubes, their size, form, position excluding the possibility of such an error.

The time which elapsed after she aborted, before the first appearance of the opening in the abdomen, could not be determined, and the exact condition of Mrs. H—— from the time she severed the body of the foetus from the head, to the time she was admitted into the Hospital is unknown, the probability, however, is that the detritus of the foetus passed out per vaginam, and the uterus contracting down upon the bones of the head caused them to ulcerate their way through its walls. Adhesive inflammation was set up, which prevented the escape of the discharge into the peritoneal cavity, the exudation of plastic lymph, forming a distinct cavity, by agglutinating the edges of the uterus with those of the abdominal walls. The fistulous opening into the colon was, most probably, formed by the bones cutting through its walls. The exudations of plastic lymph, as in the external opening, formed adhesions similar to artificial anus. This internal opening, so to speak, had closed entirely before Mrs. H—— left the Hospital, as evidenced by the absence of any fecal discharge.

It is unfortunate the patient did not remain in the Hospital until the perfect closure of the opening through the abdominal walls had been effected; it was, however, granulating healthily, then about \( \frac{1}{2} \) inch in diameter; this fact, with her generally improved condition, warrants the opin-
tion of recovery, the principle difficulty (the opening into the intestinal canal) having already been perfectly closed.

Mrs. I—was much agitated at the probability of legal investigation, suggested by some of her female enemies, who, hearing the horrible enormity of her mode of delivery, seemed determined to torture the unfortunate wretch by exposure. With this anticipation hanging over her, she left the city by stealth. Means were employed to follow her, but with no success.

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Lectures on the Theory and Therapeutics of Convulsive Diseases, especially of Epilepsy. By Charles Bland Radcliffe, M. D., Fellow of the College, Physician to the Westminster Hospital, etc.

LECTURE II.

In my last lecture I endeavored to show, as far as was possible in the time, that it is necessary to adopt a new theory of muscular motion. I endeavored to show that a fundamental change in this matter is absolutely demanded by many of the facts which have come to light during the past ten or twelve years, and chiefly by the messages which may be said to have been telegraphed along the three miles of wire which enter into the coil of a galvanometer, such as that which was then upon the table. For what are these messages? One is, that there are electrical currents in living muscle and nerve. Another is, that rigor mortis does not occur until the final extinction of these currents. A third is, that these currents are weakened in ordinary muscular contraction. A fourth is, that contraction is produced when the nerve-current is weakened by the action of a galvanic current upon nerve. A fifth is, that contraction is not produced when the nerve current is strengthened by the action of a galvanic current upon nerve. In a word, the needle of the galvanometer appears to show that muscle elongates under the action of the muscular and nerve currents, and that muscle contracts when this action is weakened or extinguished.

I pointed out also, as in keeping with these facts, that muscular contraction if connected with the discharge of ordinary electricity, and not with the charging or charge.
I endeavored to show, further, that there are no sound reasons for supposing that blood and nervous influence produce contraction by acting as a stimuli to a vital property of contractility, and that there are many grounds for believing that these agents act upon muscle in the same way as electricity, antagonizing contraction, not causing it—antagonizing contraction, possibly, by means of electricity—nervous influence by the nerve-currents—blood, by keeping up the muscular and nerve currents, for it is easy to suppose that these currents may be kept up by the respiratory or chemical changes which are produced by blood in muscle and nerve.

As to the rest, I endeavored to show that there was no need of a vital property of contractility, and of the doctrine of stimulation founded thereon, to explain certain other facts which must be accounted for by any true theory of muscular motion. I endeavored to show, for instance, that the fact of muscle undergoing no change of bulk in contracting, the gain in breadth being precisely equal to the loss in length, has its exact parallel in the change which a bar of iron undergoes in passing out of the magnetic state—that contraction under "mechanical irritation" may be nothing more than the natural effect of the discharge of secondary currents, which currents are induced by mechanically interrupting the nerve and muscular current—that muscular waste is proportionate to muscular action, not because contraction is the sign of functional activity, but because a given amount of waste is necessarily incurred in that renewal of the muscular current which is necessary to relax the muscle after each contraction—that the will may act in voluntary contraction by suspending the muscular and nerve-currents; that rigor mortis, which is utterly unintelligible on the accepted theory of muscular motion, may be the natural result of the action of the common molecular attraction of the muscular tissue upon the final dying out of the muscular and nerve currents.

To bring forward all the arguments belonging to so comprehensive a subject within the space of one lecture was manifestly impossible, even with the additional moments which you, sir, so graciously placed at my disposal; and thus I was obliged to leave much unsaid. I said nothing, for instance, about the rhythmical movement of the heart and other muscle, though I might have found in the theory a key to their physical interpretation, and in them no small
confirmation of the theory, I said nothing about the par-
turient contractions of the uterus, though in the theory I
may have hoped to have found the way of explaining how
it is that these contractions begin at a certain time, and
continue until the completion of birth. But though obliged
to leave much unsaid, I hope I was able to say enough to
show that a fundamental change is necessary in the theory
of muscular motion, and to prepare the way for what I have
now to say upon the theory of convulsive diseases.

Epilepsy is at once the great type of convulsive diseases,
and the key to their interpretation. Epilepsy, however, is
a name which indicates much less than it did formerly.
Thus it does not indicate the epileptiform convulsion which
is connected with certain positive diseases of the brain, with
fever, with uremia and other retained excretions, with “ir-
ritation” in the gums and elsewhere, or with the moribund
state. And it is difficult to say precisely what it does indi-
cate; for, as our diagnosis gains in exactness, epilepsy
changes from a special malady into a mere symptom, or
congeries of symptoms. At the same time, it is convenient
to take an ideal type of epilepsy, and regard it as a special
malady; for there are numberless cases, in which, in their
earlier stages at least, it is very difficult, if not impossible,
to recognize the disease of which the convulsion is merely a
symptom.

What, then, I would begin by asking, is the theory of
simple epilepsy? Upon which theory of muscular motion
is it to be based? And, first, what are the facts?

An epileptic will often say—never oftener than upon the
very eve of an attack—“I am quite well,” and many are
ready enough to echo what he says; but he and they have
little right to say so. Where the malady has not made
much progress, there may be a cheerful countenance, a
sharp digestion, a firm limb, and at the first glance it may
not be easy to say what is wrong; but, in this case, there
are always certain features which are incompatible with
ture health and strength. In many instances there is a
want of fire in the countenance, and a dilated and sluggish
state of the pupil, which point to the brain as lacking in
energy; and in keeping with these signs, it is found on
inquiry that the memory is more or less treacherous, the
ideas more or less incapable, the imagination more or less
dull, the temper more or less irritable, the will more or less
feeble, the character more or less undecided. It is, no doubt, common enough to meet with epileptics, who, without any want of candor on their part, will maintain that their minds are free from all infirmity; but if care be taken to examine their history, it will always be found that their friends have very different opinion upon this point.

In very many instances there is a marked disposition to tremulousness and cramp; thus in upwards of seventy cases which fell under the notice of my friend and colleague, Dr. Reynolds, these symptoms occurred at one time or other and in one form or other, in more than half of the whole number.

In very many instances, again, if not in all, the hands and feet are cool or cold, the pulse is weak and slow, and a feeling of chilliness is almost habitual. Indeed, so far as my own experience extends, the powers of the circulation are always very defective in ordinary epilepsy.

In confirmed cases, these general features are so marked as to be altogether unmistakable. Not only are the pupils dilated and sluggish, but the under eyelids are puffy and coarse. Often, moreover, the complexion has acquired a dull tinge—a change which appears to depend in part upon an habitually bloodshot state of the skin. At any rate, this bloodshot condition is rarely absent, and where it is most marked, as about the forehead and eyelids, it is often accompanied by numerous spots of ecchymosis of about the size of a pin's head. The torpid features are now rarely lighted up with the fire of feeling or thought, the senses are duller than ever, the memory more treacherous, the ideas more confused, the power of attention more distracted the imagination more drowsy, the temper more uneven, and the will more incapable. At this time, also, there is, for the most part, little of that fine susceptibility of feeling which is necessary to enable one to be miserable about anything.

This change for the worse is particularly marked after the fit. Indeed, at this time the senses may be so blunted and the mind so clouded and confused, that the features of the epileptic may become blended in those of the demented person. Or symptoms of mental aberration may show themselves, and transform the epileptic for the time into the lunatic. The fits, also, may recur so frequently, that the mind may never have the chance of clearing up in the interval, and in this way the general features of the convul-
sive malady may never cease to be confounded with those of
dementia or insanity. Not unfrequently, also, there is the
gravest degree of mental infirmity from the very first, and
instead of ending in dementia the history of the epileptic
may begin in idiocy. In deed, epilepsy is so frequent an
accompaniment of this saddest of all conditions, that it can
scarcely be said to be an accident.

The signs of the approaching paroxysm are very variable.
The patient himself will generally say, and say truly, that
the fit takes him by surprise; and certainly the signs of dan-
ger are not those which are likely to arrest his attention.
These signs also are very apt to vary in the same person.

As the time of danger approaches, the patient may be-
come unusually fidgety, irritable, moody, forgetful, absent,
or drowsy; or he may sleep restlessly, grinding his teeth,
snoring or snorting, dreaming about things which distress
or terrify him, or even somnambulizing; or he may have a
disagreeable feeling of tightness about the throat, with
cramps or tinglings in the limbs and elsewhere; or he may
be unusually "shaky," or may be annoyed with shudderings
of a very disagreeable and violent character.

Another sign of danger may be giddiness or headache; but,
so far as the latter symptom is concerned, I should not
be disposed to lay much stress upon it as a warning in simple
epilepsy.

Occasionally, the pupils may be more dilated and slug-
gish than usual, or one pupil may be more dilated and slug-
gish than the other; or the eyes may be rotated in a pecu-
liar manner.

Usually, so far as my experience goes, the pulse may be-
come feebler than it was before; and not unfrequently the
patient will complain that nothing will warm him or keep
him warm; or he may sigh in a way which shows that he
is not breathing as freely as he ought to do; or, if asleep,
the breathing may at times become imperceptible and insuf-
ficient as to suggest the idea of death. The breathing
fails in this remarkable manner before the fit in a patient
at present under the joint care of a medical practioner in
the country and of myself, and we can both testify as to the
fact.

Later still, there may be certain vague and undefinable
sensations or movements, very varying in their character,
but all comprehended under the term *aura*—sensations of
pain, numbness, tingling, and a feeling as of cold vapor,
movements, of shuddering or spasms, beginning in a distant part, as in the hand or foot, and travelling towards the head. In other words, there may be symptoms which, as Dr. Watson thinks, are in some degree analogous to globus in hysteria, or to the numb and tingling feelings which are the precursors of paralysis and appoplexy.

In some cases there may be special premonitions. In one of my patients, the fit is invariably preceded by an intense feeling of hunger. In another patient, since insane, a little blue imp made its appearance, and grinned and mocked at him as he lost his consciousness. In a third, a guitar seemed to be roughly grated close to the ear. But these signs are of little value, for they are only perceptible to the patient, and not even to him until he has ceased to be able to bestir himself.

Last of all, there is a sign which is very difficult to catch and this is the death-like pallor which overspreads the countenance immediately before the fall. M. Trousseau called attention to this sign five years ago as one which is diagnostic of epilepsy; and, since that time, I have seen it in every instance in which I have seen the fit from the very beginning. "Il est une signe," says M. Trousseau, "qui se produit du moment de la chute, et qui n'est imitable pour personne: c'est la paled tres prononcee, cadaverique, qui couvre pour un instant la face l'epileptique. Nous ne le voyons pas, parceque nous arrivons toujours trop tard, alors que la face est deja d'une rouge tres prononce." M. Delasiauve has also noticed the same phenomena in several cases.

In the severest and most characteristic form of the paroxysm, the patient utters a peculiar choking noise, or a sudden and startling cry, and at once falls down convulsed and insensible. The convulsions are usually more marked on one side of the body than the other. They drag the mouth towards the side which is most affected, and twist the face in the opposite direction until the chin may press upon the shoulder. They push forward the tongue, and crush it between the teeth. They clasp the thumb upon the palm, and hold it down with the force of a giant. They seize the walls of the chest and abdomen, and prevent the possibility of breathing. They stiffen the limbs, so that the joints cannot be bent without some risk of breaking the bones. In some instances, they even take hold of the bladder, the bowel, or the seminal vesicles, and expel the contents; in
others they may be so violent as to bite off a large portion of the tongue, to break the teeth, or to dislocate a limb. At first, it seems as if the spasms would never relax; but afterwards they are separated by intervals, which grow wider and wider as the paroxysm draws to an end. The convulsions, that is to say, are tetanoid at first—clonic afterwards.

At the instant of the fall, a corpse-like paleness overspreads the countenance; a few instants later, and the livid, black, and bloated head and neck, and the hissing, gurgling choking sounds proceeding from the throat, suggest the idea of a person struggling under the bowstring of some invisible executioner. At times, however, the signs of suffocation are absent, and the ghastly pallor of the beginning remains throughout.

When the fit is at its height, a quantity of frothy salvia is usually blown or puffed from the mouth, and this is not unfrequently reddened with blood, if the tongue or cheek happens to have been bitten.

If the eyelids are open, the eye is seen to be projected and distorted, with the pupil dilated to the utmost, and absolutely insensible to light. As rule, however, the eyelids would seem to be closed; and well it is that they are so, for it requires some nerve to meet the hideous stare of the epileptic eye.

All this while, it is usual for the hands and feet to be cool, and bedewed with clammy perspiration. Except the head and neck, indeed, the whole body is cooler than natural, and any little additional warmness of the head and neck would seem to be simply due to the fact that their vessels are more distended with venous blood.

The other and less obvious features of the paroxysm are in keeping with these.

At first, it may be difficult, perhaps impossible, to feel the pulse, and the heart acts very feebly; but if the fingers of one hand kept upon the wrist, and the other hand be placed upon the bosom, it is found that the pulse rapidly acquires a force and fullness which it never had in the intervals between the fits, and that the heart beats more and more tumultuously and violently as the pulse rises. In some instances, however, the pulse may remain almost silent, and the action of the heart be extremely feeble from the beginning to the end.

From the first all consciousness is happily suspended—
this is our only consolation in so sad a spectacle—and the most powerful stimulants fails to evoke any sign of action in the dormant mind. The water which may be thrown upon the face (with few exceptions) causes no blinking in the eye if this be open and staring; the fire upon which the patient may have fallen may char the flesh without causing a single pang.

After continuing for two or three minutes, which seem drawn out to hours, the convulsions cease, and the patient is left with all his muscles unstrung, like a person dead-drunk, or struck down by apoplexy. The lungs, no longer restrained by the suffocating spasm of the earlier part of the fit, resume their play with deep inspiration, and then act with loud and strenuous breathings; and as the respiration rightss itself, the veins of the head and neck become unloaded, the natural color returns to the surface, and presently the patient wakes to an obscured and troubled consciousness. "Je suis brise," Calmeil tells us were very often the first words of the returning epileptic at the Saltpetriere or Charenton. The time during which the patient lies in a fit before awaking is very variable, but (except in a first attack) it is rarely more than half an hour, and it may not be more than two or three minutes.

This is the usual, but by no means the invariable, course of the fit. Often, indeed, the attempts at rallying may be very imperfect, and fit after fit may recur for a long period without any interval of waking; and occasionally all rallying may be prevented by death.

After waking, there are generally some symptoms of reaction in the circulation, but in simple epilepsy these are never marked. They may be enough to give a dull flush to the cheek and a little fulness to the pulse for a short time after the patient wakes; but, as a rule, they cease when the coma ceases, and coma is never much prolonged in simple epilepsy. Usually the patient is headachy and exhausted, listless and stunned, moody and irritable, until a night's rest has enabled him to recover the balance of his shaken nervous system. The jaded countenance also tells plainly of the past struggle, even though it may present none of those numerous and minute dots of ecchymosis about the eyelids and upon the forehead which are such unequivocal signs of a severe attack of epilepsy.

As time goes on, the mental faculties recover more and more imperfectly, and more and more tardily, and at last
their habitual state may be one of pitiful fatuity from which no single ray of the Divine principle beams forth. Or the moodiness and irritability which often follow attacks may become more and more marked, until at last they merge into attacks of downright mania. Or symptoms of paralysis may make their appearance. Or death may happen in a fit, or shortly afterwards. The natural tendency of epilepsy is assuredly towards dementia; and dementia is the frequent doom of the epileptic, if his disorder be unchecked and life prolonged sufficiently; but at the same time it is possible for an epileptic to live many years, and to have many fits, without losing powers which are necessary to render him an agreeable and serviceable member of society. When death happens, it appears to be, most generally, from exhaustion in the period of prostration immediately following the paroxysm.

But the symptoms of epilepsy are not always so startling as have been represented, and in some instances they may be so softened down as to be recognised with difficulty.

In the slightest form of the malady, the patient pauses suddenly in the midst of anything he may happen to be doing or saying at the time, his countenance becomes pale and blank, his lungs cease to play, and, after a moment of absence or giddiness, he is himself again. His memory has kept no record of this sad passage in his history, and if it had escaped the notice of others he might remain in happy ignorance of it. Or in addition to those symptoms, a lurid flush may succeed to the paleness of the countenance the veins of the neck and forehead may start out in prominent relief; the face may turn slightly towards one of the shoulders, and there may be some convulsive twitching in the face, neck and arms. In such a case there is no scream or cry, no fall, no bitten tongue, no foam at the mouth, and at most there is only some obscure gurgling in the throat, some staggering, and some slight moistening of the lips with salvia. In such a case the convulsive movements are very partial, rarely extending beyond the face, neck, or arms, but in some few instances the whole frame may be agitated by one or two violent convulsive shocks. This state of giddiness and absence and partial spasm may be followed by fatigue, loss of memory, confusion of thought, depression of spirits, or irritability of temper, and at times it may end in drowsiness or actual sleep; but usually recovery is almost instantaneous. At the same time there is rea-
son to believe that dementia is a more likely as well as a more speedy consequence in this, *le petit mal*, than in ordinary epilepsy, *le grand mal*.

In some of these cases, moreover, it would seem not only that the patient does not cry, or fall or suffer from general convulsion, but that the state of intellectual eclipse—the most characteristic symptom of epilepsy—is far from complete. Esquirol says: “il est des accès dans lesquels on n’observe pas la perte de connaissance;” and M. Herpin directs particular attention to these cases. Cases like these are common enough in certain chronic diseases of the brain as meningitis or tumor; but in simple epilepsy they are by no means common, if other proof be wanting than the mere assertion of the patient. I have met with four such cases, and have put them on record in various places.

The morbid appearances after death from simple epilepsy are necessarily very obscure, if the case have really been one of simple epilepsy, and not one of epileptiform convulsion connected with some special disease. In cases fatal during the fit the brain has been found to be congested; but this appearance is clearly owing to the mode of death, and it is allowed to be so.

In cases, again, where epilepsy has been complicated with insanity, the brain or its membranes may present various signs of inflammation, or of changes more or less akin to inflammation; but these signs are clearly referable to the mental disorder, and for no other reason than this: that they are as common, or more common, in insanity without epilepsy.

In other cases there are signs of degeneracy, such as pallor of the grey matter, softening, induration, atrophy, dropisical effusion; but these are the very signs which belong to the demented state. It is this very fact, however, which furnishes some grounds for supposing that signs of this character may have something to do with epilepsy. It does so, because the demented state is intimately connected with convulsive disorder for if a demented person be not epileptic, he is almost sure to be affected with palsied shakings, or cramps, or spasms, in one form or another.

In other cases, again, the skull may be thicker and heavier than usual, and several internal projections—as the clinoid processes—may be considerably developed, or various parts of the dura mater may be converted into bone. Indeed, there are no constant changes in the brain proper or its
coverings—not even that change in the pituitary body of which so much has been said by Wenzel; for writing of it. Rokintasky says that he has "frequently failed to discover it in those who had notoriously suffered from epilepsy and convulsions," and that he has "met with it in others who were thoroughly healthy." It is in the medulla oblongata, indeed, that we alone meet with any appearances after death which can be regarded as constant. In early cases of epilepsy, it is true, we may fail to find anything characteristic even here; but in confirmed cases the medulla oblongata is often harder than natural, from the interstitial deposit of a minutely granular albuminous matter, or else softened, swollen, and presenting evident signs of fatty degeneration. Professor Van der Kolk, who was the first to detect these appearances, has also detected some marked changes in the bloodvessels, of the part, and to these changes he directs particular attention. He has examined fifteen epileptics after death, and in them all the posterior half of the medulla oblongata, on making a transverse section, was found to be redder and more hyperemic than it ought to be; and this was the case whether death happened in an attack or not. On more minute examination, he found the bloodvessels dilated to thrice their natural dimensions, and their walls much thickened. And on comparing the medulla oblongata of several epileptics who bit their tongue, with the medulla oblongata of other epileptics who did not bite their tongue, he found (what is a very curious fact) that the capillaries were especially dilated in the course of the hypoglossus and the corpus olivare in the former case, where the tongue was bitten in the fit, and in the course of the roots of the vagus in the latter case, where the tongue was not bitten in the fit. These discoveries of Professor Van der Kolk are the most recent as well as the most important facts in connection with the post-mortem appearances of epilepsy.

What, then, is the theoretical purport of the foregoing facts? To which view of muscular motion does it point? And first—for herein may be found the key to the whole matter—what is the theory of simple epilepsy to be deduced from the facts which concern the circulation and respiration of the epileptic?

1. No very certain conclusion is to be drawn from a consideration of the state of the circulation and respiration in the interparoxysmal period, except this—that plethora in
the form so often exemplified in the butcher is never met with, and that feverish activity, even as an accident, is of rare occurrence. There are, indeed, cases of epileptiform diseases which the circulation may exhibit at times some signs of activity; but these cases, as we shall see in the next lecture, present no objection to the conclusion which is forced upon us by the facts—that the pulse is rarely otherwise than weak and slow in the interparoxysmal period of simple epilepsy.

In the fit itself, the facts, when fairly read, admit of one conclusion, and one only. At the instant of the fall, a corpse-like pallor overspreads the countenance and the pulse dies out at the wrist—phenomena which seem to be only intelligible on the supposition that the arteries are nearly empty of red blood. A moment or two later, and the black and bloated face, the choking sounds, and the absolute suspension of all respiratory movements, show very plainly that the formation of red blood is arrested for the time. During the course of the convulsion, indeed the state is one of suffocation. During the convulsion, that is to say, the supply of arterial blood is cut off at the fountain-head.

There is, however, one fact which, at first glance, might seem to show that there is an increased injection of arterial blood during the convulsion. Such injection is manifestly very imperfect at the onset of the fit, for upon no other supposition can we explain the corpse-like paleness of the countenance and the feeble and imperceptible pulse. But if the finger be kept upon the wrist during the convulsion, it will be found that the pulse will go on rising until it has acquired a force and fullness which it never had in the interparoxysmal period; and if the hand be placed on the breast, it will be found also that this rising of the pulse is accompanied by increased action of the heart. These facts are evident and unmistakable, but they do not show, as without reflection they might seem to do, and as they are often supposed to do, that red blood is being injected in greater quantity into the arteries during the convulsion.

When the process of respiration is arrested, the right side of the heart and the venous system generally are soon gorged and distended with black blood. Under these circumstances, indeed, the gorged and distended state of the right side of the heart may reach a point in which the folds of the tricuspid valve are forced widely apart, and an opening
left through which the beatings of the ventricle are made to tell almost as much in driving the blood back through the auricle into the veins, as in sending it onward through the pulmonary artery into the lungs. But it is not right to suppose that the left side of the heart and the arterial trunks are empty of blood; and this may be readily verified by watching the changes which take place in the carotid and jugular of a rabbit during the process of suffocation. On exposing the vessels, the artery is seen to be filled with red and the veins with black blood. On suffocating the animal by tying a ligature around its windpipe, the color of the blood in the artery darkens rapidly, and in about two minutes and a half it is every whit as black as that of the blood moving in the neighboring veins. Nor is the vein gorged and distended and the artery comparatively empty. On the contrary, the artery is felt to pulsate as strongly under the rush of black blood as it did previously under the rush of red blood. Nay, the pulse of the black blood is actually stronger than the pulse of the red blood; for, on testing with hemadynamometer, the late Professor John Reid (who first directed attention to these facts, and who has investigated the condition of the circulation in asphyxia more carefully than any other observer) found the mercury highest at the moment when the blood in the artery had become thoroughly venous and black.

A full pulse and a throbbing heart, therefore, must be looked upon as natural accompaniments of asphyxia: and thus the full pulse and the throbbing heart of the epileptic paroxysm, instead of showing that a larger quantity of red blood is being injected into the arteries at the time, may show that these vessels are then laboring under a load of black blood, as they do in asphyxia. And that the full pulse and the throbbing heart of the epileptic paroxysm must have this latter significance is evident, for the livid black, and bloated head and neck, and the complete suspension of all respiratory changes, show very clearly that black and not red blood is coursing through the vessels at this time.

When the convulsion is over there is little to notice in the state of the circulation and respiration. When the spasms cease, the respiration is speedily re-established, and the readmission of arterial blood into the system may be attended with some transient and inconsiderable febrile reaction; but this reaction has nothing to do with the convulsion, for when reaction is present convulsion is absent, and if con-
vulsion returns, it is not until every trace of reaction has first taken its departure.

Regarding, therefore these facts—the corpse-like paleness and the comparative pulselessness at the onset of the paroxysm, and the signs of positive and unequivocal suffocation by which this stage of paleness and pulseness is succeeded—and remembering the previous arguments, which show that the convulsion is not to be ascribed to the presence of the stimulous of venous blood, there appears to be only one conclusion, and this is, that the convulsion of epilepsy is connected with the want of a due supply of arterial blood in the vessels.

Nor is it an objection to this view that the convulsions cease when the blood has become thoroughly deprived of its arterial properties. In order to discharge their office of conductors, it is certain that the nerves must be supplied with a sufficient quantity of arterial blood. If, for example, the principal vessels of a limb be tied, the nerves of that limb, wanting their due supply of blood, are unable to carry messages to the mind, or to transmit mandates from the mind to the muscles, until the collateral circulation is sufficiently established; and hence it is a fair inference that there must be a point in the process of suffocation where, wanting a due supply of arterial blood, the nerves must cease to be conductors, and where, consequently, the convulsions will come to an end; for, upon any hypothesis, the convulsions will come to an end when the nervous centres cease to be in proper connection with muscles.

But, it may be asked, is there no change in the blood itself? Is there not some important truth in the "humoral theory of epilepsy," as recently advanced in this place by the late lamented Dr. Todd? "I hold," said this distinguished physician, "that the peculiar features of an epileptic seizure are due to the gradual accumulation of a morbid material in the blood, until it reaches such an amount that it operates upon the brain, in, as it were, an explosive manner; in other words, the influence of this morbid matter, when in sufficient quantity, excites a highly paralized state of the brain, or of certain parts of it, and these discharge their nervous power upon certain other parts of the cerebrospinal centre, in such a way as to give rise to the phenomena of a fit. A very analogous effect of that which results from the administration of strychnia, which is best seen in a cold-blooded animal, like the frog. You may administer the
drug in very minute quantities for some time without pro-
ducing any sensible effect; but when the poison has ac-
cumulated in the system up to a certain point, then the
smallest increase of dose will immediately give rise to the
peculiar convulsive phenomena. This is the humoral theory
of epilepsy. It assumes that the essential derangement of
health consists in the generation of a morbid matter, which
infects the blood; and it supposes that this morbid matter
has a special affinity for the spinal cord. The source of this
morbid matter is probably in the nervous system, it may be
in the brain itself. It may owe its origin to a disturbed
nutrition—an imperfect secondary assimilation of that organ
—and in its turn will create additional disturbance in the
functions and in nutrition of the brain.” And again:
“According to the humoral theory, the variety in the nature
and severity of the fits depends on the quantity of the poi-
sonous or morbid material, and on the part of the brain
which it chiefly or primarily affects. If it affect primarily
the hemispheres, and spend itself, as it were, on them alone,
you have only the epileptic vertigo. If it affect primarily
the region of the quadrigeminal bodies, or if the affection
of the hemispheres extend to that region, then you have
the epileptic fit fully developed.”

This theory is based upon the well-known connection be-
tween the presence of urea in the blood, or carbonate of
ammonia resulting from the decomposition of urea—the
result of defective renal action—and one form of epilepti-
form convolution; and it might also have been based upon
the connection between convolution and blood overloaded
with bile. But if there is any evidence in these facts in
favor of the existence of this hypothetical morbid material,
there is none in favor of the idea that the modus operandi of
the material is in exciting a highly polarized state of the
brain, if by this state is meant anything like a condition of
excitement. On the contrary, it is certain (as will be shown
in the next lecture) that the action of the brain and of the
nervous system generally is reduced to the very lowest ebb
at the time when convolution is brought about by the accu-
mulation of urea and bile in the blood; and it is not less
certain that strychnia, instead of acting as Dr. Todd sup-
poses it to act—that is, by exciting a highly polarized state
of certain parts of the nervous centres, acts by reducing the
stimulating powers of the blood and by diminishing the
electrical action of both nerve and muscle.
There is little doubt, however, that retained excretions must play an important part in the production of epilepsy. A free discharge in the office of excretion, not only in the kidneys and liver, but in every excretory organ, is essential to the preservation of healthy blood; and it may well be believed that an imperfect discharge of the office of excretion, in one or other of the excretory organs, may lead to the accumulation of effete matter in the blood, and that this accumulation of effete matter may be a not unimportant cause, in bringing about an attack of epilepsy. But there is no reason for supposing that the blood under these circumstances become stimulating. On the contrary, the conclusion which arises out of the history of the cases where the urea or bile is suppressed, is the natural conclusion, and this is, that blood thus altered is less fit to discharge its several offices; in other words, less stimulating.

Nor does there appear to be any reason for supposing that venous congestion has a more important part to play in the production of epilepsy than that which has been assigned to arterial injection. No doubt the veins of the brain and head generally are congested from a very early moment, but there is a moment antecedent to this in which the death-like pallor of the face is a sufficient proof that the veins were emptier than usual before they became congested. At any rate, the acknowledged anatomical difficulty must be overcome before it can be supposed that Dr. Marshall Hall's hypothesis of *trachelismus*—or the prevention of the return of blood from the brain by the spasm of certain muscles in the neck—has anything to do with the causation of epilepsy.

It would seem, then, as if there was something utterly uncongenial between epilepsy and arterial excitement. It would seem, indeed, as if the spasms, as well as the loss of consciousness and sensibility, were connected with want of arterial blood—empty vessels in the first instance, vessels filled with black blood afterwards. It is not improbable, also, that the blood may have been previously rendered less stimulating by the retention of something which ought to have been eliminated by one or other of the organs of excretion. In a word, the phenomena are entirely in harmony with the previous considerations respecting muscular motion; for according to them, the action of arterial blood is to antagonize construction, and not to cause it.
2. Interrogating the nervous system, the facts are found to have that theoretical significance which the state of the circulation and respiration would lead us to expect.

These facts will scarcely warrant the idea that epilepsy if connected with anything approaching to over-action of the brain proper. On the contrary everything seems to point to a state which is the very opposite of over-activity. Thus, the comparative want of memory, intelligence, fancy, and purpose, which marks the interparoxysmal condition; the utter annihilation of everything mental in the fit itself; and the gloom and prostration following the fit, are facts which can have no double meaning.

Nor is a contrary opinion to be drawn from the morbid appearances which are disclosed after death. If these chance to indicate previous inflammation, it does not follow that convulsion had any direct connection with the inflammation as inflammation; on the contrary, the convulsion may have happened before or after the inflammation, when the energies of the brain were prostrate or exhausted—an alternative which we shall see to be the correct one when we come to speak of eleptiform disease connected with special disease of the brain. And surely it is not possible to draw any but one conclusion from the appearances which are common to epilepsy and dementia—pallor of the grey substance, atrophy, chronic softening and induration, dropsical effusion and the rest?

But what of the state of the medulla oblongata? for, as Professor Schroder Van der Kolk has well shown, the seat of the characteristic spasms, the bilateral character of the spasms, and the appearances presented after death, all point to this organ as one which is specially concerned in bringing about the epileptic paroxysm.

The spasms of epilepsy begin in muscles which receive nerves from the medulla oblongata—in muscles, that is to say, which are supplied by the facial, the accessory, the hypoglossal, and the portio minor trigemini; in slighter cases they are limited to these muscles. The spasms of the walls of the chest and abdomen, which are the most prominent and marked features in the complete attack of epilepsy, and which may be so fierce and unyielding as to cause fatal suffocation, also point to the same nervous centre; for a similar state of things is brought about by the action of a strong stimulus upon the great afferent nerve of this centre—the pneumogastic.
The bilateral character of the spasms is another argument that the medulla oblongata is especially affected in epilepsy. The lateral halves of this organ are connected in the most intimate manner by transverse fibres and commissures—much more intimately than the lateral halves of the brain and spinal cord; and hence it is that the corresponding nerves belonging to the two sides of the medulla oblongata are under a stronger physical necessity to act together than that which rules the corresponding nerves belonging to the two sides of the brain and spinal cord. In the case of the two latter centres, the nerves belonging to one side may be paralysed or otherwise affected without any obvious injury to the nerves of the other side; but not so in the case of the latter centre. Indeed, it is evident that the actions which eminate from the latter centre—the play of the features, the motion of the tongue, the vocal adjustments of the larynx, the respiratory movements, &c.—must at once come to an end unless there be the strictest sympathy and concert in the action of the corresponding nerves of the two sides.

Now in epilepsy the spasms are always more or less bilateral, and for this reason, therefore, it may be supposed that they have some special connection with a nervous centre of which one lateral half cannot act without the other.

The appearance after death point also to the medulla oblongata as especially concerned in the production of epilepsy. In an early stage of the disorder, we may fail to find any characteristic changes; but, in confirmed cases, the texture is harder than natural, from the intestinal deposit or a minutely-granular albuminous matter, or else softened, swollen, and exhibiting signs of evident fatty degeneration. The posterior half of the oblongata is redder and more hyperemic than it ought to be; and, on examining the blood-vessels in this congested portion, they are found to be of thrice their natural dimensions, and with their walls much thickened and altered—this dilatation and alteration being chiefly in the corpus olivare and in the course of the hypoglossus in the case of epileptics who bite their tongues, and in the course of the roots of the vagus in the case of epileptics, who do not bite their tongue.

It is evident, then, that the medulla oblongata is especially affected in epilepsy; but it does not follow, as Professor Van der Kolk supposes, that the essential cause of the con-
vulsive affection is to be found in an exalted sensibility and activity of the ganglionic cells of this centre.

In favor of this view—that epilepsy is dependent upon exalted sensibility and activity of the ganglionic cells—appeal has been made to the fact of spasms, to the presence of a full, bounding pulse, and to the freedom from attack which is for some time the fruit of an attack, particularly if this has been violent; but the answer is not necessarily that which Professor Van der Kolk supposes it to be. After what has been said about muscular motion in the first lecture, it is not possible to allow that spasm in itself is an argument in favor of exalted sensibility and activity in ganglionic cells. After what has just been said about the phenomena of the circulation in epilepsy, it is impossible to allow that the condition of the circulation favors spasms by bringing about a more active state of the medulla oblongata, (the functional activity of this, as of every other organ, being in direct proportion to the activity of the circulation of red blood in the organ); for it has been seen that the bounding pulse to which reference is made, is filled with black blood, and not with red. Nor can the freedom from attack, which is for some time the fruit of an attack, be appealed to as a certain proof that the attack is the sign of the discharge of some overcharge of excitability previously present. On the contrary, it may be argued with some degree of plausibility, from certain facts which have to be mentioned in the next lecture, that the attack was preceded by depression of the circulation and innervation, that the convulsion supervened when the depression had reached a certain point, and that the recurrence of the attack was prevented for a time by the state of reaction in the circulation and innervation, which is a consequence of the convulsion. The case may be one, indeed, of which the history of the rigors of ague may serve as so inapt illustration; for here we have, first, the circulation failing more and more until the bathos of the cold stage is reached; and, secondly, a state of reaction which banishes the rigors most effectually so long as it continues.

It would even seem as if appeal might be made to the appearances after death, and to the actual condition of the circulation in the fit, for positive arguments against the idea of anything approaching to exalted action of the medulla oblongata.

The signs of fatty degeneration can have but one signifi-
cance—under-action, not over-action. The interstitial deposit, also, implies an equivalent absence of healthy nerve-structure, and so does the dilated condition of the blood-vessels; and this absence of nerve-structure must necessitate a corresponding absence of nervous action. The appearances after death, indeed, if they show anything, show that the medulla oblongata of the epileptic is damaged in structure, and because damaged in structure, weaker in action, than it ought to be.

The great argument against the idea of anything like over-action of the medulla oblongata in epilepsy, however, is to be found in the state of the circulation; for if, as may safely be assumed, the activity of any organ is in direct relation to the activity of the circulation of red blood in that organ, how far from anything like over-action must be the state of things in which as is the case in the epileptic paroxysm, the vessels are at first comparatively empty of red, and afterwards completely filled with black blood?

Nor can the curious discovery of Dr. Brown-Sequard, that certain injuries of the spinal cord are followed by an epileptiform affection, be construed into an argument that there is anything like a state of exalted action of the spinal cord in epilepsy. This curious result, which is brought about by puncturing or dividing more or less completely almost any part of the spinal cord, is developed, not immediately, but in the course of three or four weeks after the injury. The attacks, once developed, occur spontaneously at various intervals, often several times a day; they may also be brought on by pinching or otherwise irritating the portion of the skin which corresponds to the region of the whiskers in man. This excitable spot is supplied by twigs belonging to the suborbitary, the auriculo-temporalis, the second, and perhaps the third, cervical nerves; and it is a curious fact, that the irritation which brings on a fit when applied to the skin in which these twigs terminate, has no such effect when applied to the twigs, themselves. Any other part of the skin may be pinched or irritated with impunity, but this one spot can scarcely be touched without at once bringing on a fit.

These facts are very curious, and in the main, very unintelligible; but this much at least is evident, that they do not countenance the idea of any over-action of the spinal cord in epilepsy. The fact that the epileptiform affection does not make its appearance until four or five weeks after
the injury would appear to show very clearly that the fits have nothing to do with that local inflammation in the cord which may be supposed to have been set up in the first instance by the injury. After such a lapse of time, indeed, is it not the natural conclusion, that any over-action of the cord arising from the inflammation produced by the injury must have died out, and left the cord damaged, weakened, under-acting? Nor is a contrary conclusion to be drawn from the excitable condition of the nerves proceeding from the neighborhood of the cheeks; for both sides of the face are thus affected, if both sides of the spinal cord have been injured. What the full significance of this curious fact may be we may have yet to learn, but at any rate there is no reason to suppose this excitable condition of the skin implies an over-acting condition of the nerves or nervous centres concerned in the phenomenon. The excitable portion of skin is not over-sensitive, for the animal manifests no signs of uneasiness when it is handled immediately after a fit. Over-sensitiveness, moreover, would seem to have nothing to do with the matter. At any rate, pain, and not convulsion, is the consequence of handling those portions of the skin of the animal which may have been rendered highly hyperæsthetic by the injury to the cord which brought on the convulsions. It is certain, also, that a somewhat similar condition of excitability is brought on when, as in several experiments related in the first lecture ante. June-July, the skin is cut off from the full influence of the nervous centres; and hence the natural inference would be, that the action of the nervous centres in the epileptic guinea-pig is minus rather plus.

As in the former instances, however, so here; we turn to the condition of the circulation and respiration in order to know what is the actual functional condition of the spinal cord in epilepsy; and so turning, we see that the action of the cord under these circumstances must be almost or altogether nil. For what action can there be when little or no arterial blood is injected into the vessels?

A similar argument will also dispose of the idea of over-activity of the ganglia of the sympathetic system as a cause of epilepsy. It is very possible that the contracted state of the arteries, which is implied by the death-like pallor of the countenance and the comparative pulselessness at the wrist, may show that the coats of the vessels are in a state of spasms; and it is also possible that the cause of this spasm
may have to be sought in the sympathetic system; but it
does not follow that over-action of this system is this cause.
On the contrary, the experiments of Drs. Kusmaul and
Tenner already referred to show most conclusively that
strong epileptiform convulsion is possible when the action
of the sympathetic ganglia is entirely suspended by arrest-
ing the supply of blood to these organs.

And certainly no opposite conclusion is to be drawn from
the vague and undefinable sensations or movements very
varying in character, but all comprehended under the term
aura—sensations of pain, numbness, tingling, or a feeling
of cold vapor; movements of shuddering or spasm, begin-
ing in a distant part and travelling towards the head; for
the most probable interpretation of these symptoms is that
of Dr. Watson—that they are in some degree analogous to
the numb and tingling feelings which are the frequent pre-
cursors of paralysis and apoplexy, or to the globus of hy-
teria—phenomena which by the most perverse process of
reasoning can scarcely be supposed to indicate other than
a state of defective innervation somewhere.

But, it may be asked, is there nothing else? Is there no
peculiar state of the nervous system in epilepsy? Is there
no morbid irritability? In order to answer this question,
it is necessary to ask another—What is morbid irritability?
It is not inflammation; it is not fever; it is some indefin-
able and negative state which occurs frequently in teething,
in worm disease, in uterine derangement, and in many
other cases—a state in which the patient is unusually de-
pressed by depressing influences, and unusually excited by
exciting influences. But what is this state? Is it any-
thing more than mere exhaustion? In difficult teething,
the strength is worn away by pain and want of sleep; in
worm disease, the parasites help to starve and exhaust the
system; in uterine derangement, the health is undermined,
in all probability, by pain and by sanguineous or other dis-
charges. In each case there is unequivocal exhaustion of
body and mind, and the signs of morbid irritability appear
to be nothing more than the signs of such exhaustion. A
weak person is more affected by the several agencies which
act upon the body from within and without, and he is so
because he is without some of that innate strength which
which belongs to the strong person; and the person who is
morbidly irritable, is in reality one who, for want of this
principle of strength, responds impatiently to the several
stimuli, whose office it is to elicit his vital phenomena. In a word, this undue morbid irritability may be nothing else than the natural consequence of that general want of power the signs of which are written so legibly upon the vasular and nervous systems of the epileptic. There is no necessity, then, to look upon this morbid state of irritability as an evidence of the existence of any peculiar condition in some part of the nervous system; for, thus interpreted, it only shows that the state of muscular contraction is ill antagonized by nervous influence. Thus interpreted, indeed, morbid irritability only becomes another name for inefficient innervation.

The theory of simple epilepsy, therefore, which may be deduced from a consideration of the facts relating to the nervous system is in harmony with that to which we have been led by a review of the state of the circulation and respiration in the epileptic; and this theory is one which tallies as completely with the view of muscular motion set forth in the first lecture, as it disagrees with that commonly received opinion according to which the muscles are supposed to contract convulsively because they are subjected to excessive stimulation.

Clinical Report on True Ringworm (Tinea Tonsurans.)
By Jonathan Hutchinson, Assistant-Surgeon to the London Hospital, and Surgeon to the Metropolitan Free Hospital.

The diagnosis of ringworm to the practised eye is not usually difficult. Its patches differ from those of eczema, impetigo, and common porrigo, in that they have no inflammatory crust, only a thin branny desquamation being present. In the latter, the hairs are not destroyed, but simply matted together in the crust, while in ringworm they are broken off short. The roundness of its patches, and their abrupt definition, together with the paucity of scales, distinguish it from all the forms of psorasis; and the latter are besides very rare on the scalps of children. In alopecia circumscripta the patches are glabrous, quite destitute of hair, and free from even the smallest scales. In some cases in which ringworm departs from its usual type—for instance, if attended by inflammation—its differential diagnosis becomes difficult. In all such cases the appeal is to the microscope. To make a satisfactory diagnosis with the microscope the hairs from the patch should be carefully pulled.
out with tweezers, and some of the branny scales should also be scraped off. These should be put into a drop of glycerine on the microscope-slide, and covered in the usual manner. The addition of acetic acid renders the hair-structure more transparent, and the sporules, therefore, more conspicuous, but glycerine is usually quite sufficient. After observing the general size of the hair-fragments, &c., with a half-inch object-glass, a quarter-inch, or a fifth, should be employed.

Microscopic Diagnosis.—The presence of sporules of a fungus is an essential character. These are usually best seen in groups on the outside of the hairs; but a little practice will soon enable the observer to detect them in great numbers in the interior of the hair-shaft itself. If any hairs have been pulled out with their bulbs the sporules may most probably be seen very distinctly in the lower and less opaque part of the latter structure. But the peculiarities presented by the hairs themselves (apart from the actual demonstration of parasitic elements) are very marked. Instead of being round, of regular thickness, in long portions, and partial translucent, they are black, in short broken fragments, swollen, bulging at parts, and with their external layers split off in places. The black tint (which is due, not to pigment, but to altered refraction from disturbed arrangement of the hair-fibres) is arranged in longitudinal bars, giving the hair a fasciculated appearance. If the extremity of a ringworm-hair is brought under view it is seen to be broken and split up into fibres, resembling on a small scale the stump of a worn besom. In, and on, the epidermic scale sporules will also be found. It is consistent with my own observation, that the younger the patient the more likely is the disease to be restricted almost solely to the hairs of the scalp, whilst in those beyond the age of about ten years, the epidermic scales are often attacked, the hairs being less extensively affected. When the patches are situated on the skin of the trunk, neck, or anus, the small hairs of the part are almost always attacked, but they do not become infiltrated in the manner so often seen on the scalp, nor do they usually break off. In these regions the disease is primarily one of the epidermis rather than of the hairs.

Is true Ringworm Contagious?—The popular belief in the extreme contagiousness of ringworm is of old standing, very firm, and very widely spread. It is also supported by the experience of most dermatologists. One or two authors, however (after giving descriptions by which it is placed beyond doubt that they were writing about the disease in question), deny its contagiousness. Thus, one authority writes: "This dis-
ease is not contagious;" and adds, "that it is not communicable by inoculation." I am not aware that any evidence is on record supporting the view that it is not inoculable, while there are many facts conclusively proving the opposite. The experiment is one easily tried, and on such a matter the onus probandi certainly rests with those who deny it.* Mr. Erasmus Wilson, after broaching the theory that the supposed cryptogamic sporules are in reality oil-globules, the result of fatty degeneration of the hair-shafts, has the following extraordinary passage:

"Another consequence naturally follows the admission of the explanation here given, which is, that this disease being inherent in the hair, and being due to an abnormal nutrition of the system, is in nowise contagious. I need scarcely observe, that this is a question of the utmost importance as affecting the peace and happiness of families and the education of youth. The disease occurs as commonly among the children of the wealthy as among the poor; and when the idea of its being contagious is entertained the scourge is rendered doubly severe."

Thus it would appear that a theoretic conjecture as to the pathology of the affection is to decide this important question, there being no need for clinical investigation as to what is really the fact. Let me ask any one who has glanced ever so cursorily over the cases I have cited whether he would to try to "secure the peace and happiness of a family," or "promote the education of youth," by assuring an anxious mother, or the head of a children's boarding-school, that the disease in question cannot spread by contagion, and that no precautions need be taken? The clinical proof of the contagiousness of true ringworm is as conclusive as is that of similar nature in respect to scabies. When we see a disease in itself slight and easily curable by local means, suddenly showing itself in five or six individuals in the same family of different ages and states of constitution, and none of whom were ever liable to it before, it is surely futile to allege that constitutional causes are sufficient to explain the occurrence. The case is yet stronger, if possible, the affected children belong to different families; and it culminates when we find that the disease has spread to

*It is desirable that those engaged in the microscopic examination of ringworm products should be careful lest they inoculate themselves. This accident occurred to myself, and I had a large, well-characterised patch on one side the neck.
the neck and hands of the mother or nurse of the patient. To assert that a disease is actively contagious under assisting conditions is quite a different thing from alleging that it will inevitably affect every one who touches the patient. It is not at all infrequent to witness scabies confined to a single individual in a family, although the exposure may apparently have been considerable. In my report on favus I showed that although undoubtedly capable of spreading by contagion yet the fungus of that disease is difficult to transplant, and will not grow on a new soil unless precautions be taken to give it a fair chance. The fungus of ringworm is much more easily transferred from one to another, yet it also may well be supposed to require certain conditions (i.e., a soft skin or succulent hairs and a fair opportunity of access) in order that it may implant itself.

Is Ringworm a Constitutional Disease?—With regard to the question as to whether any constitutional predisposition exists in cases of ringworm, it has already been answered by the facts adduced as to contagion. These facts are of the same nature in scabies and in ringworm. In both these, the invariable presence of a parasite has been proved; both are curable easily by local means, which destroy the vitality of the parasite; both are easily contagious; both are constantly seen in the most healthy individuals. It is impossible to believe that any form of dyscrasia can produce scabies, and it is equally inconsistent with clinical evidence to hold that ringworm can be produced by such causes. That scabies is a much more severe disease in some individuals than others is well known, and the same is no doubt equally true of ringworm. In the first place, early age, which involves softness and succulence of the cutaneous structures, predisposes to both, or rather it would be more correct to say, that advancing age pari passu protects from both. Both are attended with a greater amount of irritation in those of fair complexion, and probably both are more liable to occur in such. But to admit this is a very different matter to admitting that the strumous diathesis, or any other form of general ill-health, predisposes to them. And in support of the latter suspicion there does not exist any evidence whatever.

Identity of Ringworm on the Scalp with Ringworm on the General Surface.—The great frequency with which ringworm occurs in the same individual, both on the scalp and on other parts of the surface, and the common occurrence of the diseases in these different parts in different individuals of the same family, from mutual contagion set at rest all doubts which
might have been felt as to the identity of the affection. Every now and then, even in young children, we see cases in which the disease appears to avoid the scalp; but this is probably explained by some peculiarity of the hair in such individuals. The hair of the scalp in adults appears to be proof against the inroads of the fungus, and in them we always see the patches on the skin of the chest or arms. It may easily be supposed that the hair-structure in different children differ considerably as to the hardness of its cortex. When the patches occur on the skin of other parts, the fungus usually attains a more luxuriant development than when on the scalp. The small hairs of the chest on the affected parts, are usually attacked by the fungus, but are rarely infiltrated extensively. The ravages are much more superficial than on the scalp, and for that reason the cure is much more easily effected. Upon the question of the identity between ringworm and some forms of sicosis I shall not here enter.

Treatment.—From time immemorial it has been customary to employ various local irritants for the cure of ringworm. Ink is the favorite application of mothers, and is a scientific and frequently successful remedy. At the Hospital for Skin diseases, Mr. Startin always blisters the patches with the veritating fluid. A single blistering is usually sufficient for patches on the skin, but those on the scalp often require two or more. Many surgeons employ nitrate of silver in solid stick. M. Bazin insists strongly on epilation as a means of cure, and there can be no doubt that it is an extremely important one. By removal of the affected and adjacent hairs we can reduce a ringworm patch on the scalp to the same condition as one of the general surface, thus rendering it much more accessible to the influence of parasiticides. Of the latter it probably does not matter much which we select. The creosote ointment is a very good one, so also is the application of strong acetic acid. The great point in treatment is to keep clearly in mind that the destruction of a vegetable parasite is the object aimed at. It is needless to point out how strongly the fact that ringworm is curable by local means supports the opinions held in this report as its purely local patholo-

Conclusions.—1. True ringworm, or tinea tonsurans, may be defined as a disease affecting either the scalp or the general surface, in which circular patches are formed, on which the hairs break off short, and a short, and a slight, branny desquamation is seen, both hairs and epidermic scales exhiting under the microscope the sporules and thalli of a fungus.
2. Ringworm in the scalp is rarely seen, excepting in children; but on the general surface is not very unfrequent in young adults.

3. It is contagious, and spreads by contagion only.

4. It is not attended by any peculiar form of dyscrasia, but on the contrary, often attacks children in perfect health.

5. It is much more easily curable on the general surface than on the scalp, owing to the circumstances, that in the latter situation the fungus has obtained access to the follicles of the hair.

6. Being a purely local disease, ringworm does not require, per se, any constitutional treatment.

7. A purely local treatment, if efficiently pursued, is always and rapidly successful.

8. Epilation, and the use of one or other of the known parasiticides, are the measures of treatment required.

9. There is no real difference between ringworm on the general surface.

10. Ringworm, although not unfrequently causing minute vesicles, has no true analogy with herpes.—Med. Times.

Remarks on Fish Poisons. By Dr. Reil.

The observations made by the author on this subject are, essentially, the following:

Fish may prove injurious to health either in the preserved condition, that is salted, pickled, or dried, or in the fresh state. Their poisonous properties in the simple or fresh state may be owing to the following circumstances:

1. They may themselves under all circumstances be poisonous, as has been maintained in regard to several species of fishes, although the fact requires further proofs.

2. They may under certain circumstances acquire poisonous properties, as for instance, by diseases peculiar to them, or at certain seasons of the year, or, as is known of the Cyprinidae, barba and Cyprinus carpio, at the spawning season.

3. Poisonous substances, such as Hydrocarpus inebrians, Menispermum occulum, Delphinium staphysagria, etc., may have been used in catching them, or they may have been poisoned in another manner—for instance, by acids and metallic salts, which contaminate the water in the neighborhood of factories.

4. Their injurious properties may be owing to commencing putrefaction.
The different modes of preserving fish give rise to chemical processes which cause the formation of poisonous matters. Injurious consequences from eating salted fish, particularly salted sturgeon, are frequently observed in Russia. But also codfish, and the smaller kinds of preserved fish, have given rise to symptoms of poisoning. Cases of poisoning from herrings are perhaps the rarest, and this is probably owing to the fact that the time for catching herring is limited to a certain season, that they are salted without delay when still at sea, and that they are more rapidly consumed.

The character of the poison generated in preserved fish is still doubtful; at the first the poisonous substance was thought to be of cryptogamous growth, or a fatty acid; more recently Schlossberger advanced the view that the propylamin (trimethylamin) contained in the brine is the poison in question but this opinion has been refuted by the experiments of Buchheim.

Clinical Report on Epithelial Cancer of the Lip. By Jonathan Hutchison, M. D.

This report embraces a statistical analysis of one hundred and twenty-seven cases of epithelions of the lip, occurring in hospital practice, in all of which operations for the removal of the disease had been performed. The lower lip was affected in ninety per cent. of the cases, the upper in four per cent. and the angle of the mouth in six per cent. From the series, we find that women are subjects of the disease in the proportion of five to every hundred males, and when they are affected, it is most frequent in those who are in the habit of smoking. The average age of the patients was fifty-eight years, the extremes being twenty-eight and eighty-two years. In all excepting about twelve cases was the disease primary.

The results of the operations for the removal of cancer of the lip in one hundred and twenty-seven cases may be summed up as follows:

Three patients died of erysipelas within ten days of the operation; in seven, the cancer returned in the wound; nine had a return of the disease in the cicatrix at different periods after the operation; in five the lymphatic glands became affected subsequently; three had the same disease on the opposite part of the lip; and one hundred and five are reported as having recovered from the operation, having left the hos-
pital with sound cicatrixes. Inasmuch as most of the reports were made within a few months of the operation, a sufficiently long period had not elapsed to discover whether the disease had returned in a larger proportion of cases than above indicated.

Diagnosis of Apoplexy.

Mr. Poelman, the Professor of Physiology in the University of Ghent, communicated to the Academy of Sciences at a recent meeting, an account of some curious phenomena which he had observed in a dog, with some remarks upon an examination which he made of the animal after its death. During several months, while attending a family as physician, he had noticed a dog which appeared to be in perfectly good health, and possessed of all his instinctive faculties, but which was totally unable to co-ordinate his voluntary movements; frequently, during the course of the day, he was observed to whirl himself round, always in the same manner, and for more than a quarter of an hour at a time. Upon making an examination of the body, M. Poelman found nothing peculiar in the thoracic and abdominal viscera, but in the cerebellum, and especially in the middle cerebellar peduncles, there existed a considerable number of calcareous concretions which gave a very firm consistence to these parts; the scalpel, which he employed for the purpose of cutting into this substance was much notched; in short, the cerebellum, with the exception of the vermiciform process was, so to speak, petrified. M. Flourens who brought the communication before the Academy after commenting upon the exact relation which was shown in this case between the pathological phenomena, and symptoms and the functions of the disordered parts, said:

On this occasion, I request the Academy to permit me to make some general remarks upon the diagnosis of apoplexy, the feasibility of which appears entirely proved by my researches upon the encephalon. By these researches I have shown that the encephalon, considered as a whole, is composed of three distinct parts essentially, that is to say, functionally.

1. The brain, properly so-called, consisting of the cerebral lobes or hemispheres, the seat of intelligence.

2. The cerebellum, the seat of the co-ordinating power, which keeps in equilibrium the movements of locomotion.

3. The prolongation of the spinal cord, or more exactly speaking, that part of this prolongation which I have named
the vital protuberance or point, the seat of the principle of life itself.

Hence, three classes of apoplexy may be arranged; the cerebral apoplexy, the cerebellar apoplexy, and the bulbous apoplexy. The symptoms of these are only deranged functions; the functions once known, nothing is more easy than to trace the symptoms to the organ which is injured or diseased. Lost intelligence marks the seat of the apoplexy to be in the brain properly so-called (the cerebral lobes or hemispheres); the derangement of the balance of the movements of locomotion denotes the seat of the apoplexy to be in the cerebellum; whilst sudden death would lead to the opinion that the seat of the apoplexy (apoplexia foudroyante), was to be found usually in the vital protuberance, although sudden death may depend, of course, upon a certain degree of lesion in several other parts of the encephalon.

I suppose, here, simple cases of apoplexy, because I speak from a physiological point of view, the science of this physiologist being to separate organs and their peculiarities, in order to arrive at simple facts. In pathology, facts are almost always complicated; it is seldom that a single organ only is disordered, and several organs are frequently, more or less, in this condition. Hence, for the physician diagnosis is more difficult than for the physiologist; but the plain laws, laid down by physiology, may serve as guides, and lead to the unravelling and analysis of complicated cases.—London Medical Review.

Hoffman's Anodyne in Delirium Tremens. F. B. A. Lewis.

I was at Deer Island Hospital for a few months after my graduation, and while there treated quite a number of cases of delirium tremens, and of intemperance, the latter including those who had irritation of the stomach, and the "shakes," as some term the state, but not amounting to decided delirium. I employed the various means presented by the text books, and watched the success of students in the same Institution, with variable success; and at one time, thinking that Hoffman's anodyne might answer the indications, I tried it in 17 cases of delirium tremens and 14 cases of intemperance, in doses 5 ss. every hour, and of the 31 cases I did not lose one. Perhaps this will not in the least interest you, but as I see the journals filled with new treatments for this disease, and being a subscriber to the Journal, I thought it possible it might deserve a space in its pages.—Boston Med. & Surg. Journal.
On the use of stimulents in the treatment of Continued Fever.

By D. Tweedie, Physician to the London Fever Hospital, &c.

Speaking upon this subject in his recent Lumleian lectures before the Royal College of Physicians, Dr. Tweedie says:

"It is always necessary to watch the effects of the first few doses of wine, and if the pulse abates in frequency, becomes soft and fuller, the tongue moist, and the heat of the skin not increased; and, when there has been delirium, if the patient becomes more calm, and has intervals of sleep, we may feel sure that the wine is doing good. On the other hand, if the pulse increase in frequency and strength, the skin becomes hotter, and the patient restless, flushed and excited, with throbbing of the temporal and cartoid arteries, we may conclude either that wine is not suited to the case, or has been given too early, and should therefore be withdrawn. But, as a general rule, it is perhaps better to give wine a little too early than a little too late, since, if it appears to disagree, it is easy to suspend its use; but it may be very difficult to restore the vital powers if they have been allowed to remain too long unsupported.

"Nor should the wine or brandy be discontinued until convalescence is fairly established; but as the symptoms for which the stimulants have been prescribed disappear, the quantity should be gradually abridged by giving smaller portions and at more distant intervals.

"In regard to the amount of wine and alcoholic stimulants that may be administered in typhus, no precise rule can be laid down, as the ever-varying circumstances presented by individual cases can alone determine this. It is prudent to begin with half an ounce or an ounce, and to repeat this amount at longer or shorter intervals, according to the effect produced. From six to twelve ounces may be considered to be an average daily allowance, but sometimes it is necessary to give two or three pints, or even more, in twenty-four hours, and, it is surprising to observe, without the slightest intoxicating effect, even when the patient has been previously unaccustomed to stimulants. Indeed, in low fevers, the exhausted state of the nervous system appears to be antidote to the effects of stimulants—in short, to create a tolerance of wine and diffusible stimulants.

"The wine should always be conjoined with nourishment, in order to assist its due assimilation, though in many cases the digestive powers are so feeble that they are unable to elabor-
ate even the lightest articles of food, and therefore the wine or brandy may be given simply diluted with water.

"I have just alluded to the daily quantity of wine that it may be necessary to prescribe in typhus, and stated that no precise rules can be laid down, as the circumstances of each case must determine it. You are doubtless aware that there is a great tendency in the present day to revive the Brownonian system, which flourished for a time in the latter part of the last century, in all acute diseases, including fevers, without regard to individual peculiarities. The doctrine inculcated by some teachers with respect to inflammation is, that this process being a deranged nutrition, involving supply and waste, and the waste being considerable while the inflammatory process lasts, there must be a compensating supply; that as the supplies for the formation of the abnormal products of pus and lymph must be drawn from the blood, or from both, the vital powers become exhausted, in proportion to the organic disintegration that takes place. Hence it is concluded, that the more the inflammatory process drawn upon the blood the greater will be the exhaustion of vital force, and the consequent effect upon the whole frame.

"Upon this physiological theory of the phenomena of inflammation is based the overthrow of established therapeutic principles, on which the treatment has been for ages conducted. But surely even the abettors of this theoretical view must admit that the object of treatment is to anticipate or prevent those so-called destructive processes: in other words, to promote resolution by all available means. Is this to be accomplished by extravagant doses of wine and brandy, regardless of the ever-varying condition of the sufferer or period of the disease?

"Similar reasoning is adduced in regard to the phenomena of fevers whatever be their type or special circumstances. It is against the indiscriminate employment of stimulants in fever that we protest, being convinced that their proper administration requires as much consideration as is generally bestowed on other measures employed as curative agents.

"The enormous quantities of wine and brandy recommended in even the early stage of fevers, whatever be the form, the individual circumstances, or whether there be local affections present, have often surprised me, and inclined me to doubt the accuracy of the statements. I have certainly seen intercurrent inflammations materially aggravated by the injudicious stimulation adopted, and on more than one occasion all the ordinary characters of acute delirium tremens supervene
The conditions attending every attack of Acute Rheumatism.

By Dr. Wheelock, of Belfast, Maine.

An experience of twenty years, we are told, has convinced the author that every access of acute articular rheumatism is immediately preceded by a special condition of the nervous system, induced by mental anxiety or by the action of the depressing passions; and that if, when the body is in this condition, a suppression of the sensible or insensible perspiration have taken place, the result is invariably acute rheumatism.

"This truth," Dr. Wheelock natively adds, "though a simple one, is to my mind, startling, and, without egotism, the most important pathological discovery in the present century."

Reference is made to fifty cases of acute rheumatism as supporting this view, and a dozen of these is given in illustration, which can scarcely be regarded as altogether conclusive, seeing that few human beings suffering from any malady will not present some traces of the action of mental anxiety or depressing passion, if such traces be sought after.

This view, according to Dr. Wheelock, suggests an additional indication of treatment. "It is to bring into operation the requisite normal influences. The patient is to be made to

when the unlimited administration of brandy had been left to the discretion of a nurse, who fancied that she was only obeying instructions when she poured down dose after dose of pure brandy. There is surely no practical philosophy in such indiscriminate abuse of a really valuable remedy when given on rational principles; and I deem it the duty of every physician who is convinced of the dangerous tendency of the Brownonian doctrine applied indiscriminately in the treatment of diseases, acute as well as chronic, to express his opinion boldly and decidedly, that the young and inexperienced practitioner may be warned of the dangerous consequences of this recently revived doctrine. * * *

"Let me also allude to the importance of giving the wine at stated intervals, and only when the excitement is moderate. It is especially necessary to give it during the night, when there is often great exhaustion. A dose of wine judiciously given at this diurnal period is often followed by calm, refreshing sleep; and hence the incalculable advantage of an interested, experienced nurse, on whom so much responsibility—indeed the life of the patient—often rests."
understand the true nature of the disease and its cause. Though it cannot be expected that every individual shall exercise the force necessary to the forgetting or ignoring mental agitation in these cases, yet it may be presumable that a knowledge of the real producing cause may not only prevent a recurrence of it, but will greatly assist in fortifying the sufferer against its protracted continuance. In my own experience, I have found, when patients are informed that it has been brought on themselves by a mental agitation that might seem to have been avoided or was inexcusable and needless, the disease has been shortened in its course or immediately stopped; and where there had been successive attacks, the patients had thus been apparently spared these recurrences."


This paper, which was read before the Parisian Academy of Medicine, is divided into two entirely distinct parts; one relating to the exposition of practical facts, the other to the modus operandi of the remedy. M. Pize holds, without much show of reason, that the drug has a sedative action upon the heart; and this opinion led to a prolonged and futile discussion in the Parisian Academy of Medicine upon the action of medicine in general. The practical facts are of considerable interest.

In the first case, a girl, twelve years of age, presented for six days all the symptoms of typhoid fever, and simultaneously suffered from epistaxis, turgidity and sanguineous exudation of the gums, expectoration, emesis, sanguinolent motions and urine; numerous ecchymoses were disseminated over the surface of the limbs. This condition had persisted for a whole week, in spite of sulphuric acid, lemonade, extract of rhatany, ergot of rye, mustard poultices, &c.

A three and a half ounce mixture, containing fifteen grains of liquid sesquichloride of iron, was prescribed. In twenty-four hours, the hemorrhagic tendency was checked, the urine alone remaining sanguinolent. The pulse, which had been very frequent, returned to 80 pulsations. On the following day no blood was discharged, and the spots of purpura assumed a dark hue. From that period, the disease proceeded rapidly towards cure.
The subject of the second case was a lad of sixteen, who, after considerable growth and hard work, with insufficient food, was seized with febrile symptoms, extreme prostration of strength, and, on the fourth day, presented numerous spots of purpura on the limbs, with sanguinolent motions and epistaxis; the pulse rising to 100 pulsations.

A four-ounce mixture, with fifteen grains of sesquichloride arrested the hemorrhage in twenty-four hours, and reduced the pulse to 90 pulsations. The potion was continued the next day, and all the symptoms ceased. The Medicine was then discontinued for two days. Epistaxis returned twice, but with less violence than before. The pulse again rose to 100. The mixture was resumed; on the ensuing day no hemorrhage took place, and the pulse declined to 82. Convalescence was very rapid under the influence of the sesquichloride, which was continued for several days; a small quantity of substantial food and wine were also prescribed.

M. Pize's last case refers to an unmarried woman, twenty-five years of age, who, two years before, had presented symptoms of chlorosis. After five or six days' indisposition, intestinal hemorrhage appeared, epistaxis and numerous spots of purpura on the limbs. The pulse was weak, and rose to 110. The day after the use of the chalybeate potion, hemorrhage ceased, the pulse returned to 86, and fell two days later to 62. The disease terminated as in the two preceding cases.

M. Pize then adverts to the analogous case, published subsequently to his own, by Bourguignon, a case in which the reporter deemed it expedient to add a fourth, recently published in the "Gazette Medicale de Strasbourg," by Mr. Leroy, de Saint-Ybars.

The following, in M. Pize's estimation are the obvious inferences from these four cases, all relating to purpura hemorrhagia.

1. Sesquichloride of iron is pre-eminently the agent for the cure of the disease; it arrests the hemorrhagic tendency in the space of twenty-four or forty-eight hours, and, continued, for a few days, rapidly brings about the convalescence of the patient.

2. This medicine produces an immediate diminution in the rapidity of the circulation, decreases the quickness of the pulse in twenty-four hours from 110 to 80 pulsations, and may therefore fairly be considered as a direct sedative of the action of the heart.
In an essay read before the Rutherford County Medical Society, May 3, 1860, Dr. L. M. Wasson, of Murfreesboro, Tenn., attempted to prove syphilis to be the parent of scrofula (Nashville Jour. of Med. and Surg. But this assertion, although admitted in part by others, is loosely based upon the impaired vitality, prostration and cachetic condition of the system, induced by syphilis, and resulting in the "lymphatic temperament, which is the temperament of scrofula." The system is thought to become inclined to the scrofulous diathesis, because every fibre of the economy cannot but be affected by "blood vitiated with ingredients so incompatible with every tissue of the body," as the venereal virus. Supposing that to be true, as far as it goes, it does not follow as undeniable fact, "syphilis does produce, in every particular, the scrofulus diathesis," nor that it is "a most powerful and frequent cause of scrofula."

In order to corroborate the assertion of Dr. Cullerier that hereditary syphilis is always due to maternal influence, (Memoires de la Societe de Chirurgie, tom. iv., p 230) Dr. Notta has published a memoir containing a number of observations which go to show, that the issue will be free from the disease when at the time of conception the mother was free from it, notwithstanding the father may have been affected either at the time or previously, but that syphilitic children will be the result where the mothers have been subjected to the influence of the virus previous to conception, while the father was then suffering or had passed through the disease. In registering these facts, we are not prepared to admit the conclusions drawn from them, preferring to wait for the result of a more ample experience.—Arch. Gen, de Medec.

Prof. Sigmund, of Vienna, finds the proto-iodide of mercury only applicable to the papular and pustular forms of syphilis, and even there it is slower in effect than other mercurial preparations. Its reputed peculiarity of not inducing salivation is groundless; even when combined with opium, it gives rise to diarrhoea, and in obstinate forms of the disease, it is of little or no use, while in anemia it is positively injurious. It by no means deserves the preference given to it in the treatment of children, and admits only of further trial in some obstinate forms, combined with iodide of potassium, but not in subjects disposed to catarrh
Observations on Syphilis.

March,

of the lungs, stomach or intestines.—Wien Wochenschr.: Med. Times and Gaz.

Prof. Hébra has given, in one of the late meetings of the Medical Society of Vienna his experience since 1858 of the treatment of syphilis by syphilization. Taking the matter from a simple chancre, he continues the inoculation as long as pustules are formed, or until all the syphilitic symptoms have entirely disappeared. Patients, upon whom no more pustules are produced, even by repeated inoculations from different chancrea, are pronounced "immune." The inoculations were made three times a week, commencing with four punctures in the side or upper arm and then in the thighs. The aggregate number of punctures reached from 7 to 604. The earliest immunity ceased after the nineteenth inoculation, or the forty-second day, with seventy-six punctures; the latest by 219 punctures after 150 days. The patients, with the exception of two, received no medicine, not even a warm bath, but were allowed nutritious food and walking at pleasure. The artificial pustules were covered with a piece of oiled linen: frequently it took from three to six weeks to heal them up. A few patients, in whom inoculation had not been pushed to immunity, were attacked again with syphilis. Out of twenty-four (three with primary chancrea, nineteen with secondary syphilis, two with non-syphilitic lupus serpiginosus) fourteen had been dismissed, the rest remaining under treatment. The application of mercurial ointment in two cases did not influence the development and course of the artificial pustules. All patients made perfectly immune are permanently cured. They feel perfectly well during the inoculation, improve in appearance and gain in weight; by and by all syphilitic symptoms disappear. Parallel experiments, however, prove the decided superiority of mercurial treatment.—Wien Wochenschr.: Oglethorpe Med. and Surg. Jour.

Against syphilitic chaps and fissures of the toes, an ointment containing litharge, white precipitate and a few drops of laudanum, has been used with marked success in many of the hospitals of Germany. The same ointment is recommended for the serpiginous and phagedenic ulcers which occasionally supervene upon vaccination in children of a serofulous or syphilitic constitution. The process of cicatrization is practiced by bathing the sores with a decoction of hemlock and marsh-mallows.—Med. Chir. Rev.
On the Diagnosis of Tumors of the Breast. By John Erichsen, Professor of Surgery and of Clinical Surgery in University College, &c.

[In the present article Mr. Erichsen treats principally of the diagnosis of cancer of the breast from cystic and adenoid tumors of that organ.]

These cystic growths, though not so common as cancer and the other solid tumors, are yet of by no means infrequent occurrence. They are of three distinct kinds:—1. Those in which the tumor consists of a singular unilocular cysts. 2. Those which consist of several independent cysts aggregated together into one tumor—multilocular cysts. 3. Those in which a series of small cysts are diffused through a fibrous or hypertrophied mass; in fact, a combination of cysts with a chronic mammary tumour. Two theories are in vogue as to the origin of this form of cystic development. According to one set of pathologists, it is produced by the obstruction and subsequent dilatation of a lacteal duct. But this theory, I think, is weak: from the fact of our not being able to trace one of these ducts into the cyst; from the fact that the fluid contained in these cysts shows no trace of lacteal origin; and from the fact that such cysts are met with elsewhere, in places where no lacteal duct previously existed. The other theory is, that these cysts entirely new formations; and this, partly for the reasons before mentioned, and partly because these cysts closely resemble those met with in other secretory glands both as to structure and contents, appears to me to be the more tenable of the two.

These tumors, I must premise, whether unilocular, multilocular, or consisting of cysts diffused in a mass of fibrous or hypertrophied gland-tissue, are always composed of thin walls, formed of condensed cellular tissue, and containing in their interior a fluid variable in amount and character; being in one serous, in another glairy, and in a third bloody; it is very commonly of a light straw color, not unfrequently it is brown, and sometimes sanguineous, but these differences are accidental and of no importance.

We will now consider the diagnosis of these cystic growths from cancerous and other solid tumors of the breast. And, first, with regard to the unilocular cyst; this is the most common form, and occurs generally in women at what one might call the "cancerous age," forty-five to fifty; it is frequently referred to pressure, or to a blow on
the part, or it may be connected with uterine disturbance at the period of the cessation of the menopause. Thus so far as the age and proximate cause are concerned, the history throws comparatively little light on the subject, and the diagnosis has therefore to be made entirely by palpitation and examination of the tumor. Now you can easily conceive that, depending only on manipulation to form a correct judgment of the nature of the tumor, the surgeon may be exceedingly liable to form an erroneous opinion. I could relate to you many cases in which error of diagnosis has occurred, but I will confine myself to a few of the more illustrative.

I was requested some time ago, by my friend, Mr. Walter Wilson, to see a married lady, aged 45, who had in the right breast a tumor of about the size of an apple, hard and painful on pressure. This, she said, had been diagnosed as a fibrous tumor by a surgeon in the country, who had recommended her to come to London and have it removed. On examining the tumor I suspected it to be a cyst. It had not the stony hardness of a solid tumor, but felt obscurely elastic on deep pressure. Acting on this supposition, I introduced an exploring trocar and let out about two ounces of dark serous fluid; the cyst never refilled, and the patient went home perfectly cured.

I was requested one day to see an unmarried lady, aged 44. On going to the house I found her bathed in tears, and her sisters in great distress around her. I was told she had a tumor of the breast, which had been pronounced to be a cancer. On examination I found a tumor in the right mamma, about as large as a pigeon's egg. It had been noticed about fourteen months previously, and the patient had been under both medical and surgical treatment for it. It was rounded, circumscribed, situated at the outer and upper part of the gland, hard but smooth, and not heavy to the feel. On close manipulation, I felt some elasticity. I told the patient that I did not think it was a cancer, but a cyst, and that if I punctured it and drew off the fluid contained within it she would probably have no further trouble. She then informed me that she had seen an eminent surgeon, who had pronounced it to be a cancer; had explained that an operation was necessary; that the whole of the breast must be removed, and had fixed an early day for its performance. I requested to meet this gentleman, but this was refused by the patient and her friends; and as our opinions
differed so widely, it was agreed that she should have the
benefit of Sir B. Brodie's opinion. That distinguished sur-
egon saw the case with me the next day, and, he having
acquiesced in the opinion I had expressed, I tapped the
cyat, and let out about an ounce and a half of yellowish
serous fluid. The tumor collapsed, all idea of operation was
abandoned, and the patient has continued well up to the
present time.

I saw the other day a very similar case. It was that of
an unmarried lady, aged 48, who had had for about twelve
months a tumor in the left breast, which had gradually in-
creased in size, until it had attained the magnitude of a
Tangerine orange. It was hard, circumscribed, situated at
the axillary border of the gland; it had also been pro-
nounced to be scirrhous. But, suspecting from its elasticity
that it was cystic, I punctured it with an exploring trocar,
and drew off about ten drachms of clear fluid, causing the
immediate subsidence of the tumor.

Now here were three cases of simple cystic or fluid tumor
of the breast, which had erroneously been pronounced to
be solid, and which would have been submitted to ampu-
tation of the mamma if the mistake had not been discovered
in time. It is of very great consequence, therefore, to be
cautious in these cases in pronouncing a definite opinion,
and to neglect no means in perfecting your diagnosis.
How is this to be done? As I have already stated, the
history very often throws no light on the nature of these
cases. Cysts occur at the same age and among the same
class of people as cancer of the breast, but there is one cir-
sumstance of great importance to which you must always
attend, and that is the presence or absence of elasticity.
This last character may be said to be the great diagnostic
point between these tumors and cancer; and whenever you
feel, or even suspect, elasticity, you ought to introduce an
exploring trocar. If the tumor is cystic, the fluid escapes,
and you probably hear no more of the case. But if, on the
contrary, it is solid, a drop or two of blood only oozes out,
the puncture soon closes, and no harm is done. In making
this puncture, there is one little point to be attended to, and
that is, if you use an exploring needle, take care to push it
straight in, and not to make the puncture in any way valvu-
lar; for if you do, the fluid may not escape, and thus a se-
rious mistake may arise; it is, however, far better, in all
cases, to use the exploring trocar in preference to the
grooved needle.
If this little operation—tapping—does not procure the closure of the cyst, you must resort to other measures, such as injecting it with iodine, introducing a seton, or, if these fail, excision of a piece of the cyst-wall. But you will generally find that tapping and the subsequent use of iodine lotions will suffice to effect a cure.

The next kind of cyst—the multilocular—is more difficult to diagnose than the unilocular; firstly, because it is generally seated deeply in or beneath the gland, while the unilocular occurs chiefly at the border or anterior surface, and because there is not so much fluctuation, owing to the fluid being divided among several cysts. But yet there is that never-failing sign of cystic disease—elasticity. You will find, however, that there often exists a good deal of condensed fibrous matter round about these tumours, and hence the removal of the whole gland may be required, the extirpation of the cysts alone being impossible. One reason why cyst-tumors are often so difficult to diagnose as such, is that they are often associated with cancer. There great difficulty exists, especially in the early stage; and these cases are exceedingly liable to be confounded with cystic sarcoma, and indeed in some cases you cannot make your diagnosis until the tumor is removed, and then only by a careful microscopic examination.

A woman, aged 45, was admitted into this hospital with a tumor of the size of an orange, situated in the right mamma deeply over the pectoral muscle. It had existed for about five years, was not adherent to the skin, and there were several cysts of the size of plums. At the upper part of the mass, which could be felt through the lately mucous covering, the nipple was not retracted; there was only one slightly enlarged gland in the axilla. Now here were all the characters of a "cystic sarcoma"—slow growth, no adhesions, cysts, and no material glandular implication; and yet, after the removal of the breast, the microscope revealed the tumor to be distinctly and decidedly cancerous.

You will sometimes find that tumors of a fixed, possibly a semi-malignant character, occur with cysts, and give rise to great difficulty in the diagnosis of their exact nature, and render it impossible for you to pronounce with certainty whether they are benign or malignant. The following is a case of this kind.

An unmarried lady, 40 years of age, and in excellent health, was sent up to me by my friend, Mr. Tuxford, of
Boston, last November, with a tumor of the right breast, which, without assignable cause, had commenced growing about five years and a half ago; it increased slowly until it had attained the size of an orange about two years since, but afterwards much more rapidly, until at last it reached the size of an adult's head. The skin covering it was not reddened, and though thinned, was neither adherent nor infiltrated. There was no pain at night, or after handling it; and no enlarged glands could be felt in its neighborhood. The superficial veins were much enlarged over the tumor, and a good sized artery was felt to pulsate over its upper part. It was elastic, lobulated; and a large mass, of a cystic character, projected from its anterior surface. There were no adhesions between it and the pectorals, or to the skin. The operation was performed on November 10th. On removal, I found that the tumor weighed ninety-six ounces, and consisted of large encapsulated masses, of a dull grey or brown color. One section, it was solid in parts, and infiltrated with a gelatinous fluid; in others, there were large cysts, containing several ounces each of dark stringy mucoid fluid. Dr. Harley, who examined it, pronounced it to be colloid. There were also masses of fibroplastic deposit in some parts.

Now here was a case that approached closely to malignancy in its local characteristics, without any constitutional symptoms of cachexy; and which presents an appearance on examination that renders it doubtful whether it may or not yet recur.

The next class of cases to which I would direct your attention are the chronic mammary or adenoid tumors. These are of exceedingly common occurrence; and there are two or three coeditions with which they are often associated, the knowledge of which materially assists the surgeon in his diagnosis. 1. With regard to the age, they generally occur before the cancerous age, in early womanhood, between the ages of 18 and 25. 2. They are almost invariably slow in their progress. 3. They are lobulated, distinct, non-adherent to the skin or pectorals and circumserbed. 4. There is no cachexy or glandular enlargement; and, in fact, they appear to be quite local and benign. There is usually no cause to which they can be assigned; but I believe that they frequently occur in young women of nervous temperament, and are commonly associated with uterine disturbance of some kind. The chief diagnostic points are,
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therefore, the age of the patient, the slowness of growth of the tumor, and the perfect freedom from constitutional symptoms; but yet any one of these conditions may be present in cases of undoubted cancer of the mamma.

Scirrhus very rarely occurs at the early period at which the adenoid tumor is common; but yet it is occasionally met with in young women. Some years ago I removed in this hospital a tumor from the right breast of an unmarried female, aged 23. It was as large as a small flattened orange, was hard, nodulated, but not adherent to the skin. There was no retraction of the nipple, and it had been growing for about eight months. No cause could be assigned for its appearance, and it was supposed to be adenoid. However, on account of the large size of the tumor, as compared with that of the somewhat atrophied mamma, I removed the whole of the breast, together with the tumor; and it was well that I did so; for, on microscopic examination, it was found to be scirrhus. The patient subsequently married; and when I last heard of her, two years after the operation, she was in good health. Now here is a case in which cancer occurred within the period usually assigned to chronic mammary tumor; and hence you cannot rely altogether on the age of the patient as a means of diagnosis.

Next, with regard to the slowness of growth; although it is an undeniable fact that benign tumors usually grow slowly, and that rapidity of growth is generally a sign of malignancy of action, yet this rule must also be taken with exceptions, as in the following case:

Last June, I was requested to see an unmarried lady, aged 40, of a nervous sanguineous temperament, who had been in bad health for many years, suffering from uterine disturbance, dyspepsia, and latterly from pulmonary symptoms. At the age of 18—that is, twenty-two years previous to my advice being sought—she noticed for the first time a small tumor in her left breast. This continued perfectly stationery, and about the size of a pigeon's egg, until last February, when it for the first time became painful, and began rapidly to enlarge. Being at this time in Italy for the benefit of her health, this lady saw two distinguished Roman surgeons, who, after careful examination and exploratory punctures, pronounced the tumor to be a "myeloid," and recommended extirpation of the mamma. The patient, however, preferred to return to England, and have the operation performed here. On her way home she saw
Velpeau in Paris, who with a great accuracy of diagnosis, pronounced the tumor to be benign, and gave her a written statement to that effect. When I saw her, on her return to this country, in June last, I found a tumor of the left mamma, perfectly mobile, firm, solid, inelastic: it had attained the size of an adult's head, and was rapidly increasing. There was no glandular enlargement in the axilla; the skin was thinned and reopened, but not adhered; the superficial vessels were much enlarged, a tortuous network of veins and one or two large arteries running over the tumor. There was no constitutional cachexy; but the patient's health and strength were at the lowest ebb, from general and long-standing constitutional derangement; and she could not sleep at night, not so much from pain (which, however, was constant, and at times very severe,) as from the constant anxiety of mind which the presence of the growth produced. Sir B. Brodie and Dr. Walshe, who saw the case in consultation with me, both agreed that it was probably benign, but that no operation was practicable until the patients state of health was improved. However, by attention to diet, and by being put on a proper plan of treatment this was so much ameliorated that in July last, I was enabled, with the assistance of Mr. Marshall and Dr. Cowan, of Glasgow, to perform the operation for its removal. This was attended by no difficulty, and by very little hemorrhage, notwithstanding the size of the tumor, which weighed rather more than five pounds. The patient made an excellent recovery, and was able to leave town in less than three weeks. On examination after removal, the tumor was found to be lobulated on its surface. The section showed it to be homogeneous, and of a uniform greyish color, with no soft points or cysts, but distinctly and firmly encephalous. Dr. Harley, who examined it microscopically, found it to be a specimen of the chronic mammary tumor of Sir Astley Cooper. In the plastic matter taken from different lobules, examples of the glandular tissue were found. Some of the blind tubes were remarkably distinct, and well filled with cells. There was no trace of cancer.

Now here was a tumor which, after remaining of small size and stationary for more than twenty years, suddenly, and without obvious cause, began rapidly to increase: so much so that in less than six months, it had increased in size from that of a pigeon's egg to the magnitude of a mass weighing more than four pounds. Here was extreme ra-
pidity of growth without malignancy of character. In fact, this extreme rapidity of growth resembled rather what is not unfrequently found in encephaloid disease, than what we expect to meet with in the chronic mammary tumor, and rendered the diagnosis not a little difficult; the more so, as it was possible that the chronic mammary tumor, which had existed for so many years in a stationary and passive condition, might have suddenly undergone malignant degeneration, and thus taken on rapid increase of bulk. This, however, was disproved by the careful microscopical examination made by Dr. Harley, who found that the tumor did not present a trace of malignant structure.

It is, however, important to bear in mind that cystic and adenoid tumors may remain for a long time in a benign and passive state, and then assume a malignant character. This happened in the case of a woman, aged 48, who was sent to the hospital by my friend, Mr. Adams, two years ago. At the age of 27, she had first observed a tumor in the left breast. This had slowly increased in size, until it had attained, at the end of fifteen or sixteen years, the size of the foetal head. When I first saw it, in January, 1858, one of the cysts of which it was composed, had ulcerated, and a thin sero-sanguineous discharge oozed out of the opening. The general health was good. There was no glandular enlargement in the axilla, or adhesions of the skin, except around the ulcerated parts. It was freely moveable on the pectorals. An operation for the removal of the tumor was proposed, but this the patient refused to consent to. At the end of six months, she returned with a large ulcerated cavity in the centre of the tumor, and fungating masses sprouting from the bottom of it. There was still no cachexia or enlarged glands in the axilla. The patient now consenting to an operation, I extirpated the whole mass with the mamma. On examining the tumor after its removal, it was found to be cystic. There were several large cysts, of the size of pigeons' eggs, containing turbid but light colored serous fluid. The central portion of the tumor, and that at the base of the fungus were solid, grey, and rapidly undergoing softening and disintegration. On squeezing the portion of the mass (the base of the fungus) a milky juice exuded; and Dr. Harley who examined the tumor, stated it to be encephaloid. The sarcomatous structure beyond this, constituting the general mass of the tumor, appeared to be adenoid. The surface of the fungus, when exposed and protruding beyond the cyst, was epitheliomatous.
Now here were cystic sarcoma, encephaloid and epithelioma, associated in one growth. The encephaloid was stated by Dr. Harley to be cellular, without fibres, showing rapid development. The epithelioma was confined to the surface of the fungus. The history of this case, the very lengthened period (more than twenty years) that the tumor had existed, the absence of all constitutional cachexy, of deep adhesions, or of glandular enlargement or other secondary deposits, and its appearance only six months previous to removal, all pointed to primary simple cystic disease of the mamma, in which, as the result of secondary changes, encephaloid had developed itself; being an instance of the conversion of a simple into a cancerous tumor of the breast. This patient died about a twelvemonth after the operation, of gangrene of the foot and disease of the heart. The cicatrix was quite sound; but in the substance of one of the ventricles a nodule was found, which was considered by those who examined it to be of a cancerous nature.—British Medical Journal, April 14, 1860, p. 279.
most entire ignorance of its habits. I do not, however, doubt the cure of favus. Soap and hot water, with abundant scrubbing, the hair being kept short, will commonly keep the yellow crusts indefinitely in abeyance; as will also, perhaps, more thoroughly and effectually, the simplest oil inunction. There seems no reason, therefore, to believe (though hospital physicians can but seldom hope to witness the result) that those simple means, long and perseveringly used, will not effect the cure of a disease which owes its origin and perpetuation to nothing else than want of cleanliness.

Under ordinary circumstances, what takes place after an apparent cure of favus, is this: So long as the hair is kept shaved, and an alternation of oily applications with soap and water is maintained, the disease does not reappear; but on neglecting these precautions for a few weeks, yellow dots begin to crop up, and these rapidly extend so as to become distinct favus crusts, which in no long time, if uninterfered with, will cover the whole head. I have repeatedly kept cases under observation after the head had been completely cleared, in order to observe the first beginnings of the eruption after the suspension in the treatment; and I have also employed a great variety of medicated ointments and lotions, including sulphurous acid, iodine and sulphur ointments, empyreumatic oils, mercurial ointments, and mixed medications of various kinds. After most of these, I have seen the disease reappear about as quickly as under the simpler treatment by oil and soap. If there is any of them in which I have faith more than another, it is in empyreumatic oils, as the juniper tar oil or common pitch ointment. But the inveteracy of the disease evidently depends, not on the difficulty of removing its visible traces, but on the complete infiltration (so to speak) of the scalp with the sporules of the fungus in all old standing cases; and no treatment will be of the slightest avail towards a radical cure that is not deliberately and carefully pursued until a complete growth of scarf skin has been obtained, perfectly free from all traces of the noxious germs. This must, of course, be the work of a considerable time; just as it is a work of time, and of unwearied attention to simple details, to rid a virgin soil of ragweeds and whins, or even of stones. No application of a specific can be expected to meet the one case any more than the other.

One point, not always observed by those who have writ-
ten on this subject, is, that favus is often, perhaps even in the majority of cases, implanted on the basis of a previous eruption; in other words, that the fungous crusts, or vegetable mould, are sown on a soil already the seat of impetigo, eczema, or some other variety of disease of the skin. Sometimes the original disease has died out when the favus first comes under treatment; at other times, it still persists and requires separate treatment. In the course of considerable and varied experience of true favus, however, I have not seen a single case that did not at once yield to local treatment, to the extent I have indicated above; and I am very far from believing that any constitutional disorder has to do with the production of the fungus, further than that favus and other diseases may arise simultaneously, under exposure to the same causes of filth, neglect and hygienic errors of every kind, in every variety of bodily constitution. — *Edin. Med. Journal, May, 1860. p. 1003.*

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**On Ulceration of the Lower Extremity of the Rectum: its Varieties, Diagnosis and Treatment.** By James Rouse, Esq., Assistant Surgeon to the Westminster Ophthalmic Hospital, &c.

Notwithstanding the numerous works published on diseases of the rectum during the last few years, there appears still to be great difference of opinion as to the best mode of treatment; more particularly with regard to those ulcerations situated on the mucous membrane lining the sphincter ani, and in the fossa immediately above that muscle.

There are three forms of ulceration of the lower extremity of the rectum, which gave rise to very acute suffering; and although they vary considerably in position, have nevertheless been described by most authors under the general head of fissure. It is proposed, in the present paper to point out that three distinct forms of ulceration occur in this region, which, by ordinary investigation may be distinguished from each other, and which require different modifications of treatment.

The most common form of ulcer found at the lower extremity of the rectum is that which is known as fissure of the anus. This disease does not seem confined to any particular period of life, though it rarely or ever exists until
after puberty. It is more particularly common among persons who lead a sedentary life, and for the same reason it is rather more frequent in women than men. The fissure appears to be caused by a tearing of the mucous membrane lining the sphincter ani, by the passage either of hardened feces, or of a foreign body contained therein. The following cases will, however, show that fissure of the anus may occasionally be the result of external violence:

Case 1.—A gentleman, aged 24, was riding a restive horse, when it suddenly bolted. He was thrown with some violence, on the hind part of the saddle before he recovered his seat. He felt some pain about the anus at the time, and, on changing his shirt, he noticed a few drops of blood. For the next few days he experienced a slight burning pain during the evacuation of the bowels, and in about a week the characteristic pain of fissure was established. On an examination being made, a small crack was perceived on the posterior surface of the sphincter; it commenced about two lines within the anus, and extended upwards for about half an inch. Various local means were tried without benefit, and an operation to be hereafter described, was had recourse to with perfect success.

Case 2.—A captain in the navy fell off a ladder, and came to the ground on his buttocks, with considerable force. He did not observe any particular pain until he went to stool the following morning, when he experienced considerable smarting, and noticed that he had passed a small amount of florid blood. About a week after the accident, he applied for advice. He then, after every evacuation of the bowels, had pain, which lasted for several hours. On examination, an ulcer was found on the posterior surface of the lining membrane of the sphincter; the edges were not indurated, and the surface was florid. An ointment, containing mercury, was applied twice a day; and in the course of a week a cure was effected.

Persons afflicted with this disease, in describing the origin of their suffering, frequently state that while straining violently at stool, they felt something give way, and on looking at their evacuations, they noticed a small quantity of blood. It has more than once occurred to me to be told by persons with fissure that the feces were so hard that it was necessary to remove them with the fingers from the anus.

This crack or fissure is almost invariably situated on the posterior surface of the sphincter. I have seen upwards of
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a hundred cases, and in only six did the position vary; in three of these the fissure was situated on the perineal surface of the muscle, and all occurred in women; in two it was situated on the left side; and in one on the right. It commences about three lines from the margin of the anus, and extends upwards in a straight line to the extent, usually, of half an inch, though sometimes as high as the superior margin of the sphincter. If the fissure be seen within a week or ten days of its occurrence, it presents the appearance of a bright red line with a sharply defined edge, and does not appear to extend through the thickness of the mucous membrane. A little later, if no treatment be adopted, one or two florid granulations may frequently be seen protruding above the margin; and it is during this stage that a small amount of blood is voided on going to stool. This appearance is very soon changed; the edges become everted, and more or less hard, and the surface of the ulcer itself looks excavated and pale, like any other indolent sore. The pain caused by this solution of continuity is at first trifling, and only exists while the motion is passing; but it soon becomes most severe. It usually commences about half an hour after the bowels are relieved (the sensation up to that time being only uneasiness) and continues for five or six hours. As the disease progresses, the pain becomes more continuous and easily excited, and even walking, or sneezing will bring it on. At this stage, the ulceration is found to have extended through the submucous cellular tissue into the fibres of the sphincter; there is a constant desire to pass urine, a serious addition to the other suffering, and this continues until relief is obtained by means of an operation.

This second form of ulceration is situated immediately in front of the os coccygis, and was first described by Sir B. Brodie, in a clinical lecture delivered at St. George's Hospital. This ulcer, which is almost invariably co-existent with an enlarged and varicose state of the veins about the rectum, does not, like the one just described, appear to be caused by a tearing of the mucous membrane. Mr. Quin states, in his recent work 'On the Diseases of the Rectum' that he has noticed a case in which, "the disease having been of no long duration, and the suffering comparatively slight, the membrane appeared to be thinned from beneath." The ulcer, once formed, soon increases in size, and usually remains quite superficial for a considerable time; but at
length, from the continual irritation, the edges become everted and hard. The surface, however, seldom becomes so indolent as in cases of ordinary fissure; and in this form of the disease the ulceration seldom, if ever, implicates the fibres of the sphincter ani. The pain which, as in fissure, is caused by the evacuation of the bowels is most intense; there is usually very little spasm of the sphincter, but the patient complains of severe lancinating pain, which gradually subsides into a sensation of burning, which continues for three or four hours.

The third form of ulcer is situated in the fossa which exists between the external and internal sphincters; it is by far the most painful and serious affection of the three. It appears to be caused either by the lodgment of a small portion of hardened feces, or by injury done to the mucous membrane in that situation by the passage of some foreign body, such as a fish-bone. Two cases are known to me where the presence of a polypus of the rectum (the extremity of which was pressed into this fossa every time the bowels were relieved) caused an ulcer in this position.

The ulcer, at first, is seldom more than the eighth of an inch in diameter, and it is generally somewhat deeply excavated. As the disease progresses, the ulceration extends into the substance of the sphincter ani; so that, when the finger is passed into the rectum, the end of it sinks into a small cup-like cavity, the inferior part of which is formed at the expense of the superior margin of the sphincter. Except in cases of long standing, the edges are not indurated, and the surface almost invariably remains florid. In this disease a certain amount of pus and blood is passed at each relief of the bowels. If this ulcer be not cured by means of an operation, it leads to a most troublesome form of stricture of the bowels. The constant irritation set up by the action of the bowels gives rise to inflammation of the submucous cellular tissue; this causes thickening and hardening, by which means the calibre of the outlet is seriously diminished.

The following case will illustrate this kind of termination:

Case 3.—Mrs. S., aged 23, complained of very severe pain before, during, and after the relief of her bowels. She had consulted a surgeon, who, on examination, found an ulcer immediately above the external sphincter. An incision was made through the ulcer into the tissue below; but this did not produce the slightest relief. Six months after
the operation, she noticed that the discharge was much increased in amount, and she found more difficulty in passing her motions, which were small and flattened. A year subsequently to the operation, I saw her, and, on examination, discovered an ulcer of considerable size situated on the posterior surface of the rectum, and involving the superior margin of the sphincter, and such extensive thickening of the submucous tissues that the finger could not be passed through. Subsequently, by means of bougies, considerable benefit was obtained.

In these cases, the pain complained of is most severe, and there is more spasm of the sphincter than in simple fissure: in some of these cases the amount of spasm is so great that the muscle increases considerably in size. The pain appears to commence some little time before the bowels are relieved, probably this is caused by the pressure of the loaded bowels upon the ulcer.

Diagnosis.—The diagnosis of these cases is by no means difficult. The peculiarity of the pain complained of, the fact of its coming on either during, or soon after, the action of the bowels, and the case with which these ulcers may be detected by the finger, when it can be introduced into the bowel, render a mistake almost impossible. There exist only two diseases with which these ulcers may be confounded: to wit, a syphilitic ulcer and spasmodic contraction of the sphincter. Neuralgia in the neighborhood of the sphincter has such well-marked symptoms of its own, that it can scarcely be mistaken. With regard to the syphilitic ulcer, its characteristic appearance, the class of persons affected, the existence of syphilitic ulceration about the vagina, remove all doubts as to the nature of the complaint. The diagnosis between spasmodic contraction of the sphincter and fissure is rather more difficult; in fact, it is only by a most careful examination that the surgeon can determine whether an ulcer exists or not. There are, however, a few points of difference which it would be well to remember. In spasmodic contraction of the sphincter, the muscle very rapidly increases in size; the anal orifice becomes so contracted that even a gum catheter cannot be introduced without producing extreme suffering. This amount of spasm is most rare in ulceration, and it is the pressure caused by the finger on the ulcer itself that produces the pain. Again, in ulceration, it matters little in which form, sooner or later, there is always discharge of pus and blood; in
spasmodic contraction, this never occurs. Lastly, the patient having been placed under the influence of chloroform, a careful examination of the bowel can be made (which it is impossible to do without producing insensibility) and, as in the following case, no ulcer is found to exist.

Case 4—George ——, aged 45, a man of spare habit, swallow complexion and depressed vital powers, complained of intense pain, which occurred during the time the bowels were acting, and for several hours after. The pain was not continuous, but came on in paroxysms every few minutes. The motions were very small and flattened; but there was no discharge or appearance of blood. On examination, the sphincter muscle appeared more developed than usual, and the anus was so contracted that it was impossible to introduce the finger. A speculum ani was employed, and the most careful examination failed to discover any ulcer. Under these circumstances, a small bougie, about six inches long, was introduced every other night. At first the pain caused was very great, and he was unable to retain it for more than three or four minutes; but he was soon able to bear it for a longer time. The size of the bougie was gradually increased, and he was ultimately cured.

Case 5.—A gentleman, aged 35, of spare habit and nervous temperament, had suffered with symptoms like those just described, for six months, and the pain had become so severe that he could not take exercise; he had tried various means to obtain relief without success. The most careful examination failed to discover any ulcer, but the sphincter was immensely hypertrophied. Bougies were employed for two weeks without producing the slightest relief, and the patient was so worn out and irritated by the pain he suffered, that he could not be induced to continue the use of them. It was therefore decided to divide the sphincter, and with the exception of the pain produced by the passage of the faeces through the wound, this patient never suffered any inconvenience afterwards.

I should not have insisted so strongly on the existence of this disease, but one of the most recent writers on diseases of the rectum doubts the existence of simple spasmodic constriction of the sphincter.

There is one other precaution necessary in these cases; and that is, to be quite certain that only one ulcer exists. It is not very unfrequent to find two; they may be either one above the other, or situated on opposite sides.
The treatment required for the ulcer in front of the os coccygis, and for fissure, varies according to the stage of the disease. If it be treated before it has become indolent, local applications, and attention to the state of the bowels, are all that is necessary. Grey oxide of mercury and spermaceri ointment, (half a drachm to the ounce) or a scruple of calomel to an ounce of lard, with ablutions night and morning, and after each relief of the bowels with yellow soap and water, will usually effect a cure. Great care must be taken in the choice of a laxative, the object being not to purge, but to render the faeces soft, so that as little stretching as possible of the ulcer should take place. Confection of senna or milk of sulphur generally produce the desired effect. A very common medicine in these cases is confection of pepper; this, combined with confection of senna, is very useful in cases of hemorrhoids, but it is apt in all cases of ulceration to produce considerable aggravation of the patient's suffering. When the ulcer has once become indolent, the best and only treatment (likely to prove beneficial) is by the knife. The operation is best performed in the following manner. The patient being placed on the right side, with the knees drawn up to the chin, the forefinger of the left hand is to be introduced into the rectum, and the knife passed up in front of it; the incision is then to be made, commencing a few lines above the superior margin of the ulcer, and to be carried through it down to the external skin, care being taken not to cut into the fibres of the sphincter, except in those cases where the disease has already involved that muscle. After the incision has been made, a small piece of oiled lint may be introduced into the wound. It is better not to allow any action of the bowels to take place for two or three days after the operation; this may be effected by giving a small dose of opium or a milk diet.

The treatment required for the ulcer situated above the sphincter is division of the muscle. Local remedies never appear to afford the slightest benefit, but only tend to wear out the patience and spirits of the sufferer. The operation is to be performed in the same way as for fissure; but, instead of merely making an incision into the submucous tissue, the sphincter must be divided by one cut, the wound is then to be dressed in either with oiled lint or silk.

It is of course always prudent to try local means before proceeding to an operation; and the best application is the
ointment of grey oxide of mercury, already mentioned. The most satisfactory method of applying the remedy is by means of a suppository tube. The tube should first be lubricated outside, and then filled with the ointment; it is then to be passed into the bowel to the extent of an inch or an inch and a half, and the piston then pushed down; by this means the entire surface of the mucous membrane lining the sphincter is covered by the ointment.

Some surgeons recommend the application of nitrate of silver for these forms of ulceration; but it seldom proves very beneficial, and the pain it causes is quite as severe as that of the division. If it be attempted, a speculum should be introduced into the bowel; by this means, the ulcer is brought into view, its surface should be dried by a piece of sponge or list, and the caustic freely applied.—*British Med. Journal*, May 12, 1830, p. 358.

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*On the Essential Nature of Asthma.* By Dr. H. Hyde Salter, F. R. S.

There are two ways (which I have not mentioned in my work) as indicated to be by my friend, Dr. Brown Sequard, in which bronchial spasm, when once established, may be kept up by the very conditions which it generates; one is, the power which carbonic acid gas possesses of producing contraction in smooth muscles. In asthma, the deficient standard at which respiration is carried on, and the diminished interchange of the gases, produces an accumulation, in the air locked up in the air passages, of carbonic acid to an unusual degree. This, by the action to which I have just referred, sets the bronchial muscles still further contracting, and thus increases the very condition which at first caused the accumulation of the effete gas. In this way, asthma keeps up asthma. The other way is by the bronchial spasm stimulating the afferent or perceptive nervous filaments, and thus giving rise to reflex muscular contraction; just as the stimulation of the sensitive roots of the spiral nerves produces reflex muscular phenomena in the parts to which the corresponding motor nerves are distributed. In this way, muscular spasm becomes a stimulus to muscular spasm.

But in both these, as in the other ways I have indicated in my book, the bronchial spasm is secondary to an antecedent nervous condition.—*British Medical Journal*, July 28, 1860, p. 589.
Reasons for regarding Gonorrhæal Rheumatism and Ophthalmia as simply Urethral Rheumatism or Ophthalmia, &c. By Dr. Elliotson.

"My first knowledge of the disease in question," says Elliotson, "was obtained from Sir Astley Cooper's lectures, which I attended at St. Thomas's Hospital in 1806-7, and 1807-8. How many years previous he had mentioned or seen it, I cannot say. He pretended to no merit of discovery, but related, in the most artless manner, the communication of the facts to him by a patient. 'An American gentleman,' he said, 'came to me with the clap, and I told him he might think himself well off to be so little affected.' 'Oh,' said he, 'a clap with me is a serious thing. When I had it before, I was attacked a few days after the infection with an obstinate inflammation of the eyes that was followed by rheumatism.'" "I thought," continued Sir Astley, "that he might have caught cold while taking mercury; but he said he had taken none. I therefore watched the disease, and in a few days his eyes became inflamed, and after that one of his knees swelled, and then the other became affected with chronic inflammation. He was attended by Dr. Relp, of Guy's Hospital, and myself, for many months. He left this country unsecured; but I heard that he got well on his voyage. Since this case I have seen a great many more such."

"It was very natural to suppose, before our experience became enlarged, that the disease was the result of gonorrhœal contagion, and that the appellation gonorrhœal rheumatism, given naturally to it from its alliance with gonorrhœa, must have increased the tendency to this view. We cannot, therefore, at Sir Astley Cooper's believing that the ophthalmia was produced, not indeed by the application of gonorrhœal secretion accidentally to the eye, as may happen with any careless patient, but still by the absorption of it into the system, and that the proper treatment of the rheumatism, produced to his view of course by the same poison, was the same as of gonorrhœa—half a drachm, according to him, gradually increased to a drachm, of copaiba, with spirits of turpentine three times a day. We have no specific remedy for gonorrhœa, any more than for measles, scarlatina, or small-pox; and those drugs must in many cases aggravate gonorrhœa; and they would aggravate many cases of the rheumatism. Copaiba, cubebs, and some analo-
gous drugs, are useful occasionally in gonorrhoea, but not
more so than in similar uncontagious affections of the geni-
tal passages, and possibly of some other mucous membranes.
If there is no reason to ascribe specific powers over gonorr-
hoea to them, neither is there any to conceive that they can
be remedies of the rheumatism bearing the distinction of
gonorrhœal. Nor are they.

"The belief now generally prevalent, of the rheumatism
in question—rheumatism with urethral discharge—and in-
deed of the ophthalmia, being really the product of gonor-
rhoeal poison, is, I am satisfied, as unfounded as previous
generally prevalent disbelief that rheumatism and ophthal-
mia are ever connected with gonorrhoea. It was long be-
fore this struck me; for I had always read of these forms of
disease, and heard them spoken of; with the epithet gonor-
rhoeal; and had not seen them except in gonorrhœal patients.
After a time I received the assurance of one or two patients
that the affection of their genitals could not have arisen
from infection; but it made no impression upon me, be-
cause I am familiar with the untruths which are often told
upon these subjects, and because patients do really some-
times fondly deceive themselves as to the character of those
with whom they intrigue. But, as years passed on, more
instances of the alleged impossibility of infection presented
themselves to me and some such patients, I felt certain,
could have no reason to deceive me, were too much endowed
with self-respect to stoop to an untruth, and were too acute
to be themselves in error. Some have told me this, long
afterwards, when they had ceased to incur the possibility of
catching any disease of the genital organs. I knew no one
inclined to this view till five years ago, when, accidently
meeting with a surgeon, a married man and a father, who
had consulted Sir Astley Cooper and myself twenty years
at least previously for what we had all termed gonorrhœal
rheumatism, and since which time I had not heard of him,
I was told by him that, before he married, he had again
suffered a few attacks of rheumatism and urethral discharge,
on which occasion the idea of infection was altogether out
of the question, as he had not been exposed to the possi-
bility of risk. At this period he had no inducement to de-
ceive me as to his former life; and formerly he had always
been candid when suffering for irregularities. He added,
that since his marriage he had occasionally suffered in the
same twofold manner as when he was irregular and single.
I was much pleased, and I communicated to him that my convictions of these affections being improperly termed gonorrhæal was as strong as his own.

Farther experience, up to the present moment, has set the question completely at rest in my mind. Indeed, although the circumstance is not noticed by the profession, some writers clearly entertain this opinion, and state facts which establish it, and yet lay no stress upon its difference from the commonly received views. I have just found that Sir Benjamin Brodie, in his Pathological and Surgical Observations on Disease of the Joints, published in London in 1818, gives five cases of the disease witnessed by himself; and remarks that in one the patient could not ascribe the discharge to infection, and in another patient suffered from strictures in the urethra, and, although rheumatism took place twice with gonorrhœa, it took place twice also when there was no gonorrhœa, but the urethra was in a state of irritation and discharge through the mere introduction of bougies employed on account of the strictures. He therefore says it may occur without infection. Brandes also considers that the rheumatism may be re-excited after all gonorrhœa has ceased, if the urethra is irritated by any common cause; and speaks of this rheumatism as blenorrhagique (gonorrhœal) and traumatique (such as from the introduction of a foreign body into the urethra.) Marechal gives a case of rheumatism, that had followed an urethral discharge produced by nothing but the immoderate use of new beer, and such as had never occurred in the man before.

"My own experience, extending through so many years, renders it impossible for me to doubt that specific and contagious nature is unnecessary to the urethral irritation which in certain persons gives rise to rheumatism and to ophthalmia also in others—that the mere irritation is sufficient, and in fact is the cause, and that the gonorrhœal, contagious, character is incidental only. The combination of the cases of other writers with my own will, I hope, settle the question. The single case of syphilitic infection of a lady by secondary symptoms in the hand of her maid recorded by me in the Medical Times of September 4th, 1858, removed all possibility of further doubt respecting the occurrence of infection from secondary sores. The determination of the production of rheumatism by simple urethral irritation is effected by the repeated experience of many of us continued through a large number of years. The in-
pediment to the perfect knowledge of what is known as gonorrhoeal rheumatism was its extremely rare occurrence among the instances of rheumatism at large on account of the comparatively small number of persons affected with irritation of the urethra, and the still smaller number of persons among these that have the unfortunate peculiarity of liability to rheumatism from it. The impediment to the knowledge of simple irritation of the urethra being the cause was still greater on account both of the great rarity of simple compared with gonorrhoeal irritation of the urethra, and of very few individuals indeed being the subjects of both simple urethral irritation and liability to rheumatism from irritation of the urethra. Those who, from habit, regard this kind of rheumatism and ophthalmia when allied with gonorrhoea as, therefore, gonorrhoeal, must remember that in every case of gonorrhoea there are two circumstances united—the irritation of the urethra and the specific nature—and that the latter cannot exist without the former may exist without the latter. Consequently, no case of gonorrhoeal rheumatism or ophthalmia depends upon the specific—the gonorrhoeal—nature of the urethral affection, and not upon the irritation irrespective of specific nature.

"A little experience of this rheumatism impressed me, as it has done many others, with certain characteristics, and I detailed them in clinical lectures above twenty years ago.

1. I saw and see it so frequently in the feet that whenever a rheumatic man has walked into my library lame from rheumatism of his feet, I have startled him with the question how long he had been suffering under gonorrhoea. It not unfrequently affects the hands, perhaps, as I once saw, a single joint only; the wrists and elbows; but the lower extremities most frequently, the knees as well as the feet; the lips also. It may affect any joints, and several at one time or in succession; the loins also and back of the neck. I saw it once in the joint of the jaw.

2. Its obstinacy and extreme duration are remarkable. The longest case I ever saw was the jaw, and after two or three attacks imperfect rigidity, I believe, became prominent.

3. I am not aware of ever having seen it in a female. But gonorrhoea is comparatively rare in women, as one loose female contaminates scores of men, and, however great the number of loose women, the number of men who have been
4. But the most important and perhaps an invariable point in its character, is its inflammatory nature at first, and for a very considerable time. This struck me before I had seen many instances of the disease, and I did not find that it had been noticed. But Sir Benjamin Brodie, whose book upon diseases of the joints I had never seen, had possibly made the same remark; for previously, in fact above twelve years before I was aware of witnessing the disease, he had written that colchicum was the best remedy for it; and the great utility of this medicine against rheumatism I believe to be in the inflammatory form. Not only is the disease, but its inflammatory nature, disposed to continue very long. Yet at length, and after a long period, the time may arrive when the iodide of potassium, tonics, and general and topical stimulants are the suitable means; and forcible extension of the joint may be proper. Till that time arrives, the treatment should consist of patient abstinence from fermented and distilled liquids and flesh food, the removal of external stimulants, rest, and a position which favors the presence of as little blood as possible in the affected part or parts, the discreet use of colchicum and other purgatives, and the repeated application of leeches. The same kind of treatment is suitable to the ophthalmia, which, however, is seldom so obstinate. I believe that the rheumatism occurs in general earlier than the ophthalmia; it often occurs alone, and and there may be differences in these two particulars in the same individual in different attacks.

5. These two affections bear no relation to the intensity of the urethral. The smallest discharge will produce the rheumatism, and perhaps the ophthalmia likewise, in the predisposed; nor is the intensity of duration of these in proportion to the degree of the urethral; and they, or one of them may continue after the urethral.

6. I have known several persons suffer from gonorrhœa more than once without either of these consequences, and then become subject to them; but only one individual escape an attack of rheumatism after every occurrence of gonorrhœa when once rheumatism had followed the appearance of urethral discharge. I have seen the predisposition to this urethral rheumatism in several men of the same family, whether the irritated state of the urethra was gonorrhœal or not.
"The predisposition is a great misfortune, because, as soon as the urethral affection begin, the patient feels certain of an attack of chronic rheumatism; and though it may take place in a few days, it may not for a considerable time, but is sure to come; and the mildness of the urethral affection does not foretell a mild attack.

"I will finish by relating two cases—one illustrating the benefit of employing the living hand in treating urethral rheumatism, the other the power of rigid abstinence in diet to prevent it.

"Mr. C——, aged 29, a married man with a young family, living at 25, C——— G———, got wet while affected with gonorrhoea, and was seized suddenly out of doors with rheumatism. He became crippled, and could walk only with two sticks, for the parts attacked were his hips, knees, and soles of the feet. His eyes become inflamed. He took a large quantity of medicine, and the medical attendant honestly told him that drugs would do him no good. When he had thus suffered for four months from rheumatism, the eyes having recovered, it was resolved to try the effect of merely drawing a hand very lightly, slowly, and straight, along the affected parts for half an hour daily. This treatment was commenced on September 24th. In a fortnight his pain was lessened; in another fortnight so great was the improvement that he could walk a considerable distance; in another he declared himself nearly cured, and before the end of another he was well and able to work. Without this treatment he, no doubt, would have been crippled till at least the end of the year.

"Although the disease was excited by cold and wet, yet, as the man was laboring under gonorrhoea at the time, he will henceforth probably be attacked with rheumatism whenever he catches gonorrhoea. The case is interesting as affording an example of urethral rheumatism originating from ordinary exciting causes during the urethral affection, for in general these have not been noticed in the first attack and certainly are not requisite for the production of subsequent ones.

"The other case is most important. A married gentleman had labored under very obstinate rheumatism of the feet, from his last two contractions of gonorrhoea. I had no doubt that this would occur now as often as he caught a gonorrhoea, and I begged him to let me see him as soon as ever he found he had contracted it again. He did so a
1861.]  

**Short-Sight.**

year ago, and I immediately prevailed upon him to abstain entirely from all fermented and distilled fluids and every description of flesh food. He strictly obeyed my injunctions for several months, and has perfectly escaped rheumatism, although the urethral discharge continued slightly all the time in spite of injections weak and strong and of all kinds, for, although he lived low, it was not in his power to refrain from walking."

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**On the Surgical treatment of Short-Sight.** By Mr. J. V. Solomon, Surgeon to the Birmingham Eye Infirmary.

Mr. Solomon appears to have hit upon an operation by which the focal range of short-sighted persons whose corneae are not conical, may be doubled in length. He has found the plan especially successful, whether the eyes are prominent or small, the aqueous chambers deep or shallow. He has tested the operation on cases varying from the age of twelve to forty-five years. A man of the latter age, who had worn double concave glasses of immense depth (No. 16) for a great number of years, and, unaided by lenses, could see with clearness the features of a person to know them at a distance of nine feet only, obtained at once by the operation an increase of seven feet in his focal range. In a child of twelve years of age, the operation increased the reading distance from four to eight inches, and the power of identifying persons' features from twenty to forty yards; and in one sixteen years of age, the effect was still more remarkable.

These results have been obtained by dividing in a transverse direction some fibres of the muscles of the lens—the ciliary muscle. Mr. Solomon does not consider it material which part of the muscle is selected for division, but generally prefers either the upper or the lower part of the circle. Supposing the latter situation to be selected, and the patient to be seated in a chair, the operator stands behind, and fixes the globe with the left fingers, as in extraction, holding a cataract knife in his right hand, with the flat of the blade directed upwards, he pushes the point in succession through the corneo-sclerotic union, the pillars of the iris, and the ciliary muscle. The direction given to the instrument is obliquely downward and outwards. Care is taken that the incision in the muscle is of the same length as the
puncture of entrance, namely, about two lines or two lines and a half in diameter. In some cases Mr. Solomon has found that the power of adapting the eye to distant objects has been increased by practice and lapse of time.

In a young man who had been myopic from his childhood, and had suffered for the last three years from congestion of the retina, the visual power and focus have been so much increased that the outlines of large buildings at a distance of a mile and a half can now (six weeks after the operation) be distinctly made out; whereas before the ciliary muscles were divided they appeared as mist.

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**A new method for the reduction of Strangulated Hernia.** By

Mr. Walter Jessop, Surgeon to the General Hospital and Dispensary, Cheltenham.

In May last, Mr. Jessop was called to a case of strangulated hernia (left oblique inguinal), in a man aged fifty-two years. The accident had occurred some thirty-six hours previously. The taxis, opium, chloroform, hot baths—in short, all the ordinary modes of treatment, had been perseveringly applied, without success.

At the time of his visit, he found his patient in a partial state of collapse, in a profuse cold perspiration, with great tension of the abdomen, and symptoms of hiccough and nausea coming on. The patient complained bitterly on his lightly attempting an examination; indeed, the part seemed so exquisitely painful as at once to negative all hope of success from further direct efforts at reduction. An immediate operation was proposed, but firmly declined by the patient and his friends.Desiring them to seek further advice, Mr. Jessop left the room, but was immediately recalled with a request that he would permit an hour's delay. Agreeable to this, and while waiting in the house, a thought struck him that it might occasionally be possible to relieve a patient under such circumstances without having recourse to the knife. On explaining this to the patient and his friends, they at once consented to a trial of the means proposed.

Calling a male attendant into the room, he directed his patient, still lying on his back, to the edge of the bed, and with assistance, separated his legs, placing one over each shoulder of the attendant, who, facing the bed, stooped to receive them; and, in this position, by passing his hands
round the fore part of the thighs, was enabled to obtain sufficient purchase to permit of his raising him on to his head and shoulders on the bed, thus throwing the intestines back upon the diaphragm, and to some extent necessarily making traction behind and directly from the seat of strangulation. After two or three minutes' manipulation of the abdominal parietes, he found the tumor become less tense, and drawing forward the integuments round the point of rupture, he made lateral upward, and downward movements—jerking as it were, occasionally, the parts immediately contiguous to the structure. This seemed to excite but little suffering; in fact, the patient, so far from uttering complaint declared himself, after the first two or three minutes, decidedly relieved—that "the dead sickening weight that killed his groin," as he termed it, was better. Continuing these efforts, and varying them as they seemed to occasion distress, he presently felt a slight gurgling under his head, and almost immediately had the satisfaction of finding the hernia reduced, and his patient in a comparatively safe state.

The whole proceeding did not occupy ten minutes. Slight peritoneal tenderness existed for some days, but the man eventually did well.

The rationale of the proposed plan is simple. A mass, large or small, of displaced intestine or omentum must assuredly be more readily withdrawn from its point of incarceration or strangulation by traction from behind, than by the best directed efforts of the taxis. Any one, for illustration, taking the trouble to put a fold or two of his handkerchief in a ring formed by his finger and thumb, and lightly strangulating it, will, on attempting to return it by pushing or kneading from before backwards, find indefinitely greater difficulty in effecting his purpose than if he were to make traction from behind. In short, the employment of the taxis is at the best a clumsy and most uncertain mode of proceeding, and in future the author intends to make it merely supplementary to the plan he now advocates.

"One swallow fails to make a summer," and it may be said that the practice of turning patients a posteriori upwards is opposed to all orthodox notions of propriety. Admit all this. Others, with greater opportunities, may happily be enabled to add to this single case; and granting that the position of the patient may be accused of positive inelegance, it may, at any rate, contrast favorably with our proceedings in lethotomy, and in many other operations on the perineal region.
New operation for Phimosis. By M. Ridreau.

The well-known operation for phimosis, practised by M. Ricord, leaves scarcely anything to be desired under ordinary circumstances, at least in the opinion of the majority. Some, however, object to the permanent exposure of the glans which so extensive a removal of the foreskin entails. To meet the views of surgeons holding this opinion, we quote the description of an operation, designed and successfully practised by M. Ridreau, a French military Surgeon.

"Stretch the prepuce by drawing the mucous membrane forward, and the skin back, so as to lay bare the orifice of the foreskin; introduce a slender cylindrico-conic wooden rod into the aperture of the prepuce; perform a circular incision at about half a line from the mucous margin, dividing the skin only, which immediately shrinks backward on the glans; maintain the mucous lining upon the wooden rod, and remove circularly a sufficient quantity of it to give free play to the glans in the aperture resulting from the operation. Join the edges of the wound of the skin and of the mucous membrane by a few small needles and twisted suture. If a vessel bleeds, apply one of the sutures on that spot."

The wounds heals in a few days with water dressing, and then the condition of the organ is perfectly normal, the glans being covered or exposed at will. Examination of the anatomy of the parts explains the success of this operation. The constriction is seated in the mucous membrane, and this is removed. Moreover, the skin of the penis unites with the mucous membrane, not by a diminution of its substance, but by accommodating itself by numerous wrinkles (in the usual manner of skin surrounding the sphincters) to the destined aperture; accordingly, the moment it is divided circularly, it may, without difficulty, be drawn back upon the penis. This operation possesses advantages peculiar to itself; a very limited portion of the texture is removed, a covering for the glans is retained; no deformity results; the cicatrix is linear, so imperceptible as to be mistaken for the natural junction of the skin and mucous membrane, and is entirely concealed when the prepuce is drawn forward upon the glans; the portion of mucous membrane removed being replaced by integuments.
We have received recently, from authors and publishers, quite a number valuable works; some of which are the following:—Researches upon the Venom of the Rattlesnake with an Investigation of the Anatomy and Physiology of the Organs concerned, by S. Wier Mitchell, M. D., Lecturer on Physiology in the Philadelphia Medical Association. This thorough and elaborate Essay is a publication of the Smithsonian Institution, and is presented in 145 pages 4to. When we can devote time to its examination we feel assured that its condensation and review will be of much interest to our readers.


Also, by the same author, A Course of Lectures on the Physiology and Pathology of the General Nervous System, delivered at the Royal College of Surgeons of England, in May, 1858, published in this country in 1860, pp. 265, with beautiful illustrations.


From same: Diphtheria, Its Nature and Treatment, with an account of the history of its prevalence in various countries, by Daniel Denson Slade, M. D., being the dissertation to which the Fisk Fund Prize was awarded July 11th, 1860, pp. 85, octavo, with illustrations.

All of the above works have been transmitted to us through Messrs. Thomas Richards & Son, of this place, at whose store they will be found by purchasers in this section.

Volume 13th of the Transactions of the American Medical Association has also come to hand, which, together with the other valuable works above noticed, shall receive careful attention at our hands at a future time.
Miscellaneous. [March,

Tartro-Citric Lemonade.—Prof. J. Lawrence Smith expresses (American Journal of Pharmacy, September, 1860) his surprise that the tartrate of Soda should have given place as a purgative to the citrate of magnesia, a preparation which he very justly considers as obnoxious to very many objections. Among these he enumerates "the not unfrequent irregularity of its operation, sometimes not acting as promptly as desired, at other times with too great and continued energy, requiring anodynes to arrest its operation. Again, owing to the manner in which it is made, and the want of uniformity in the composition of the commercial carbonate and calcined magnesia, the amount of free acid in the solution varies much when made at different times by different lots of materials. There being sometimes two or three drachms of free acid present in a bottle, and besides, under all circumstances, the mixture must be quite acid in order to retain for any length of time the citrate of magnesia in solution. Mitscherlich and Benee Jones have both made experiments on citric acid, and they consider it a poison analogous to oxalic acid.

"Yet another objection to citrate of magnesia is the certainty of its undergoing decomposition, resulting in the deposition of an insoluble citrate of magnesia, a change that takes place very rapidly when the bottle is opened.

"With these facts before me, I compounded a preparation of tartrate of soda with lemon syrup and water (at first I introduced a small portion of citric acid, calling the mixture tartro-citric acid lemonade.)

"It is free from the objections of the citrate of magnesia, is a prompt and certain purgative, without excessive action, and uniform in composition, does not undergo decomposition even after the bottle is opened, even more agreeable to the taste and less costly than citrate of magnesia."

"Sal soda 21 lbs. 14 oz. avoirdupois.
Tartaric acid 15 " 
Sugar (white) 24 " 
Water to make 25 gals. 

"It is then put into strong twelve ounce bottles, and thirty-five grains of bi-carbonate of soda added to each bottle, and immediately corked and fastened with twine or wire.

"This preparation has been used in Louisville for about six years, and is gradually extending over various parts of the west and south."

Banquet to M. Ricord.—The banquet given to M. Ricord by his confreres came off on Thursday evening, December, 20th, at the Hôtel du Louvre. The great dining room of this establishment, itself one of the lions of Paris, afforded hospitality to about two hundred members of the medical profession, who assembled for the double purpose of doing homage to the great syphilograph and justice to a very copious and recherche dinner. Great Britain, Germany, Sweeden, Russia, Greece, Italy, the United States and South American Republics were all duly represented on the occasion.—London Lancet.
Strychnine in Typhoid Fever.—In a clinical lecture, delivered at the Mercy Hospital, and reported for and published in the Chicago Medical Examiner, Prof. N. S. Davis remarks upon the treatment of a bad case of typhoid fever. Quinin, alcohol, turpentine, &c., had been used and yet the patient continued to sink. At this juncture, in connection with the turpentine, a tea-spoonful of the following admixture was given, and directed to be repeated every four hours:

R—Strychin, i. gr.
Nitric Acid, 3 ij.
Tinct. Opii, 3 ij.
Water, 3 ij.

From this date the patient improved rapidly. In reference to the use of strychnin in continued fever, the doctor remarked, that in many cases between the fifth and fifteenth days, the impulse of the heart becomes weak, the voluntary muscles unsteady, the capillary circulation feeble, with an evident tendency to passive congestions in some of the internal viscera; and in such, he had seldom failed to find a remedy strikingly beneficial.

In a review of Dr. Reeves' work on Enteric Fever, and published in the Monthly for September, 1859, we made use of the following language:

"There is one agent that Dr. Reeves has not alluded to, which, because of its peculiar adaptation to certain conditions frequently present in enteric fever, should not be passed over in silence. When there is subsultus tendinum, low muttering delirium, and the evacuations are involuntarily discharged, all showing a complete prostration of the nervous system, there is probably no combination of medicines equal to strychnin which may be beneficially combined with small doses of opium."

So far as we know, we were the first to use and advise strychnin in typhoid fever, and we are glad to see that so able an authority and judicious an observer as Prof. Davis should coincide with us in opinion.—


Deaths of Distinguished Physicians.—We find noticed in the recent foreign journals the deaths of Dr. Edward Rigby, President of the Obstetrical Society of London, at the age of 56; Sir Henry Marsh, M.D., of Dublin; Dr. Andrews, of Birmingham, Professor of Physiology in Queen's College; and Dr. Francis Broussais, last surviving son of the celebrated Broussais, and himself an author of many valuable articles in the medical journals.

We regret to record the decease of the distinguished Dr. John W Francis, of New York, which took place last week. Dr. Francis has been for a long time at the head of the profession in his adopted city, and his death will be widely lamented.
Sulphate of Quinia and Ferrocyanuret of Iron in Rheumatic Dysmenorrhea.—Dr. J. B. Snelson states (St. Joseph Medical and Surgical Journal, November, 1860) that he has employed the sulphate of quinia with the ferrocyanuret of iron, for several years in rheumatic dysmenorrhea, with very satisfactory results. He commences the treatment by emptying the alimentary canal by purgatives; during the menstrual period he uses the warm bath, and gives opium combined with camphor and ipecac to relieve the pain. After the period has passed, he commences with a pill composed of two grains of sulphate of quinia and an equal portion of ferrocyanuret of iron, to be taken morning, noon and night. These are to be continued during the intermenstrual period.

Frequency of Accidents or Irregularities during first Labour.—Dr. Richard McSherry states (Maryland and Virginia Medical Journal, October 1860) that, in looking over his notes, he could not but observe, with some surprise, to how great an extent primipare are more liable to accidents than multipare. In his own practice he has had notable irregularities or disturbances to contend with in more than 33 per cent. of his primipare, while in multipare this has happened in only 10 per cent.

The Stereoscope.—It is said that Sir David Brewster, in inquiring into the history of the stereoscope, finds its fundamental principle was well known even to Euclid; that it was distinctly described by Galen 1500 years ago; and that Gambatista Porta had in 1599 given such a complete drawing of the two separate pictures as seen by each eye, and of the combined picture placed between them, that we recognize in it not only the principle, but the construction of the stereoscope.—Chemist and Digest.

Ague.—M. Eissen states that quinio ether, when inhaled during paroxysm of ague, arrests the attack, and prevents the recurrence of future attacks. This, however, is open to doubt, as the ether only contains kinic acid, which is known not to possess the tonic and antiperiodic properties of quinine.

Homæopathic College.—The Hahnemann Medical College, of Chicago, has closed for want of support. The concern matriculated three students on credit. Hahnemann taught, the smaller the dose the better the result, a statement singularly verified in this instance.