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THE

MONTREAL MEDICAL JOURNAL.

VOL. XVIII. DECEMBER, 1889. No. 6.

Original Communications.

CURETTING THE UTERUS, AND THE METHODS OF TREATING THE CAVITY AFTERWARDS.

BY T. JOHNSON-ALLOWAY, M.D.,

Instructor in Gynæcology, McGill University; Assistant Surgeon to the Montreal General Hospital; Gynæcologist to the Montreal Dispensary.

Since specialists no longer regard curetting the uterine cavity with apprehension, when performed by an experienced operator, and under properly chosen circumstances, it is interesting to study the best methods of treating or dressing the wounded surface thus deprived of its endometrium. Included under this subject matter I place those cases of uterine disease which require the use of the sharp curette for the relief of abnormal hæmorrhages in all their protean forms, also in abortion cases where much manipulation has been necessitated, and the uterine contents have been removed with the curette and uterine forceps.

Before entering directly upon the subject it will be necessary to say a few words regarding the cases which generally require curetting, and the best kind of instrument to use.

Menorrhagia and metrorrhagia indicate local disease or change in the lining membrane of the uterine cavity. In certain zymotic diseases, when we have blood change, increased menstruation is not at all uncommon. This increase in the flow is due to increased stimulation of the sexual organs under the influence of these blood changes, and I have no doubt is often determined and made more pronounced by some pre-existing

local disease of the endometrium. Also such conditions as insufficiency of the cardiac valves or emphysema will cause an increase of flow in another and different way. Metrostaxis under such circumstances does not come within the range of our subject and only requires a passing notice. If, however, a menorrhagia should continue after the febrile attack has passed away, and in fact seem to date from it, the condition should be recognised as one for local treatment. This is self-evident because we know that vitiated conditions of the blood and disturbances in the circulation seldom or never cause prolonged menorrhagia except when associated with an already diseased local condition. The history of a patient will often point to a statement made to the effect that her menorrhagia began with some illness, and has continued more or less ever since. In such a case we have undoubtedly a local disease which only wanted the opportunity to set going an abnormal function in the organ involved.

Coming now to the *local conditions* which cause menorrhagia and metrorrhagia we may classify them as follows :—Those involving disease of the adnexa and parametral tissues, and those involving actual disease of the uterine tissues proper. Metrostaxis due to the former condition generally gives relief to pain, and will not, as a rule, return after the inflammatory lesion has disappeared. It is therefore better not to check it; the rest and associated treatment will be all that is necessary. It is better to wait until the condition begins to manifest a tendency to become chronic before resorting to the curette.

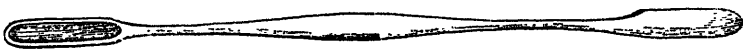
Myomatous tumors of the uterus seldom give rise to hæmorrhage unless they are so situated that the endometrium undergoes an extreme change in its vascularity. Tumors growing towards the cavity and not involving the outer uterine layers produce great increased vascularity and hyperplasia of the endometrium, while tumors which tend to grow outwards and become sub-peritoneal do not cause any vascular or nutritive changes in the endometrium whatever, and are therefore not accompanied with hæmorrhages. In all cases of uterine myoma, accompanied with excessive hæmorrhage, it is advisable to curette the cavity as a preliminary step, instead of wasting time and reputation with

palliative methods. A short time ago I removed a long finger-like mucous polyp from the uterine cavity of a patient the subject of a medium sized interstitial fibroid. The hæmorrhage ceased almost immediately, and gave no further trouble. In another similar case I removed a so-called placental polypus some three inches long. The patient in this instance expressed a desire to undergo the recent fashionable treatment by electricity to cure the hæmorrhage supposed to be due to the mural fibroid. It, however, occurred to me to explore the uterine cavity with the curette first and obtain a knowledge of its contents, if any. The result was sufficiently satisfactory to require no further treatment.

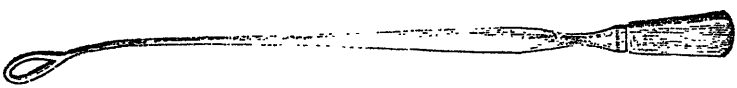
In cases of hæmorrhage from fibroids, I would advise in every case where it is possible, to explore the cavity and thoroughly curette the hyperplastic endometrium. I am of opinion that this should first be done before resorting to removal of the appendages or hysterectomy. In every case of chronic hyperplastic endometritis following abortion, cervical lacerations with sub-involution, gonorrhœal imflammations, and displacement with exhaustive menorrhagia and leucorrhœa, the cavity should be curetted of every vestige of diseased endometrium and the wounded surface treated as will be pointed out further on. It is understood that uterine discharge due to malignant disease will not be considered. I may however say in passing, that cancer is a common cause of metrorrhagia in women over thirty-five years of age, and I regret to acknowledge that there are still men high in the respect of their colleagues—especially in England—who regard menorrhagia at the time of the menopause as evidence of its normal approach. To my mind there is no more iniquitous teaching, or one fraught with more disaster to our reputation with the public. In my experience of such cases, I have never failed to find either malignant disease or fungus degeneration of the endometrium, and who can say but that the menorrhagia was, in fact, a warning note to remove the benign embryo that the destroying parent might not get vigorous life. Clinical examples have occurred to most of us wherein the microscope could not discover evidence of malignancy and yet these patients died of undoubted cancer. All physicians should therefore insist upon examination

of their patient under such circumstances and advise them accordingly.

A few words now about the kind of curette to be used. In cases of chronic endometritis there are three forms of curette from which we can take our choice—Martin's, Sims' and Hanks' (figured as below). Of these Martin's is the one



MARTIN'S CURETTE.



SIMS' CURETTE.

HANKS' CURETTE.

[CHAPMAN, Montreal, Instrument Dealer.]

I give the preference to and use most frequently. Sims' instrument is a good one, and Hanks' curette is also serviceable, though somewhat difficult to introduce should the cervix be not dilated sufficiently and the cavity not straight; also, the shank of the

instrument is too flexible and bends in the hand, which is a bad fault.

In regard to the operation I do not think it should ever be done without an anæsthetic. I have disregarded this provision many times myself, but must admit that there have been few occasions upon which I did not feel a regret that I had so acted. The operation is never so perfectly done, it is hurriedly done, and to say that the patient does not suffer pain is untrue. I have known them to suffer severely and the operation to be followed by a certain amount of shock. It is also unsafe to curette a uterus without first freely using the powerful steel dilators to at least 1 inch. This is done to ensure good drainage, and should be done whether the cervical canal seems sufficiently patent or not. The curetting should be continued until no more endometrium can be obtained, two to three minutes being ample in point of time. The cavity should now be irrigated with plain warm water, after which we must decide what form of dressing we are going to apply. The simplest form is to let the part alone and return the patient to bed; injection of iodized phenol, by means of a syringe made for the purpose, and containing 30 to 60 m. of the fluid. Churchill's tincture of iodine is sometimes used but it is much more painful and less effective than the iodized-phenol. Swabbing the cavity with pure carbolic acid is a very good method and has in my hands given good results. Packing the cavity with pledgets of cotton wool impregnated with iodoform is the method known as Vulliets'. It is, however, difficult to do, is clumsy, and if the cavity is packed too firmly, the procedure will give rise to severe uterine colic.

Of all the methods, however, of dressing the uterine cavity after curetting, which has proved most satisfactory, is that of filling it carefully with iodoform gauze, and leaving the end extruding from the external os. The pressure here exerted upon the uterine walls can be so beautifully and perfectly graded according to the judgment of the operator, that all hæmorrhage is at once arrested. Tags of unfinished shavings are compressed firmly against the denuded surface, and unite there. Under other circumstances these unfinished scrapings often

necrose, and the base of the shaving forms a little eddy for retention of discharges to decompose and set up trouble. The principal locality in which these spots of danger occur is just above the internal os. When iodized phenol or other cautery is applied, these jagged points are converted into little ulcerating pits from which septic absorption takes place, culminating in a sharp attack of pelvic inflammation. Every gynæcologist has experienced such unpleasant results after curetting when there previously existed no legitimate foundation for such a sequence, and may be accounted for in the manner I have described. This danger will always exist with the injection of fluid or the application of caustics to the interior of the uterus, and should not therefore be made a routine practice.

Now that we are cognizant of these dangers, we can see the great safety and therapeutic advantage of filling tightly the uterine cavity with a soft elastic and aseptic material prepared with iodoform suspended in parafin. This material, prepared by Dyer of Montreal, is in advance of every other for this purpose. It can be left in for four or five days, if necessary, without the least fear of having it undergo change. There is absolutely no drain so good, and by its side pressure on the uterine walls all remnants of undetached membrane re-unite, resulting in a perfectly smooth cavity surface. The cases which are generally met with in which this dressing is applicable are:—Curetting for hæmorrhagic endometritis; with Schrœder's trachelorrhaphy; in bleeding myomata; for removal of retained products after abortion, the method is especially satisfactory here. It arrests all bleeding at once, secures good drainage and induces contraction of the uterus, thus favoring rapid involution. In a case of this nature I saw recently in consultation with Dr. Gurd, I removed a large adherent placental mass. Pregnancy had ceased at about the fifth month, but the placenta continued to grow for some time afterwards. It was so firmly adherent that it became necessary to remove it in very small fragments with curette and forceps. I packed this uterus to a fair degree of pressure, and on the second day I found the gauze had all been expelled and the uterus reduced in size with firm contraction. The gauze

packing is often expelled, especially in abortion cases, but it can easily be removed on the third or fourth day by simply introducing the dressing forceps to the cervix along two fingers of left hand as a guide and gently withdrawing the gauze. No irrigations are required after its withdrawal as the vagina is still aseptic and will remain so if not interfered with.

A word in conclusion in regard to the use of the sharp curette. This instrument has been held in great awe for many years by a large section of practising physicians; and these gentlemen have always urged the use of Thomas' dull wire curette when an operation of this nature was about to be performed. This general professional impression having prevailed it seems apparent that there must have been some good cause for this strange aversion to the instrument. Those who have had experience with it, and have necessarily become skilled in its use will see that the cause of the above impression rests with two facts—first, carelessness or neglect in making the field of operation absolutely aseptic; second, unskillful use of the instrument due to want of constant experience. When we consider the important meaning of these facts, it is surprising the little harm the instrument has done.

A CASE OF NECROSIS FOLLOWING A COMPOUND FRACTURE.

Operation with Antiseptic Precautions—An Excellent Result.

By John Campbell, M.D., Seaforth, Ont.

(Prepared for the late meeting of the Canadian Medical Association at Banff.)

Mr. President and Gentlemen—We humbly submit the following report of a surgical case in practice, which we hope may be of some interest to the members of this Association, meeting here by the health-giving waters of Banff, in the shadow of the world's crest—the far-famed "Rocky Mountains."

History.—The patient, D. M. R., is a native of Canada, and 35 years of age. In December, 1881, while working in the lumber woods of Michigan, he met with an accident, resulting in a compound fracture of the right tibia. He said that the bones protruded through the skin in *four* places, while the doctor affirmed that the bone was broken in no fewer than *six places.*

He was over 100 miles from surgical aid. He was conveyed by the following means. He was carried five miles, taken in a waggon ten miles, and rode the rest of the journey in the van of a lumber train.

He was treated in St. Mary's Hospital, Saginaw. Seventeen days after the accident the limb was put up in a plaster bandage, and he was sent home to Whitby, in Canada, where Dr. Fields took off the cast and put the leg in a fracture box.

He was able to walk with crutches in 12 weeks from date of fracture, and in 6½ months resumed work. Nine months afterwards he was troubled with pain at seat of fracture, after which pus formed. In March, 1885, he was laid up four weeks with local pain accompanied with fever and formation of pus. In March, 1888, he jarred his leg, and was treated by Dr. Evans, who painted the part with collodion and wanted to lance it. In september, 1888, he suffered again, when the writer attended him. The part was painted with tr. iod. co., the limb was raised, and the part afterwards lanced down to the bone. After two weeks he partially recovered.

We proposed to make a long incision down to the bone, so as to enable us to examine it thoroughly, and, if necessary,

remove the diseased bone. The patient at last consented to the operation, which he agreed should be performed on the 1st of October, with the assistance of Dr. MacKid.

Full antiseptic precautions were taken. The leg was washed with soap and water, with the aid of a brush. The instruments were steeped in a solution of acid carbolic, 1 to 20. Our hands were thoroughly disinfected. After Dr. MacKid had put the patient thoroughly under the influence of Squibb's ether, I made an incision eight inches in length down to the bone, on the anterior aspect of the tibia. We found the shaft denuded of the periosteum and rough. It was bare for six inches over the region of the old fracture. We chisselled off the necrosed bone until we reached bone which bled freely.

At the point of the old fracture we found a softened condition of the bone. This we trephined with Langenbeck's bone trephine, but after going through the substance, had to use a gouge to remove all the decayed portion of bone. We packed the wound along the whole tract with iodoform gauze, over this, corrosive sublimate cotton, and over all, carbolic acid bandages. The wound was not opened until the third day. During this time there was no pain or any bad symptoms whatever.

On the fourth day he got feverish and pulse became rapid, when we opened the wound and irrigated it with weak carbolic lotion, and gave quin. sulph. in gr. x. doses repeated at proper intervals. In 24 hours the temperature became normal again. He had transacted a lot of business during the day, and he blamed that for the rise of temperature which took place the same evening. The only other drawback which took place was an attack of acute eczema which yielded promptly to ung. zinci oxidi.

In four weeks the granulations filled up the wound so that the parts could be brought into apposition. The bone was nicely covered with granulations.

We had to go through from $\frac{1}{8}$ to $\frac{1}{4}$ of an inch of necrosed, before we reached the sound bone. The patient has applied for no treatment since the operation, and has frequently remarked that he considers the leg in question nearly as sound as the other. He is attending to business every day. I was

taught in my college days that if we removed the periosteum the inevitable result would be death of the bone. In this case six or eight inches of the bone was denuded of its periosteum, and in a rough condition yet we had the most happy results, thanks to the recuperative powers of nature and the blessings of antiseptic surgery.

A RARE ANATOMICAL ABNORMALITY OF THE NASO-PHARYNX WITH REPORTS OF THREE OBSERVATIONS.

By George W. Major, B.A., M.D., &c.,

Specialist to the Department for Diseases of the Nose and Throat, Montreal General Hospital; Instructor in Laryngology and Diseases of the Throat, McGill University, Montreal, Canada.

(*Read before the Medico-Chirurical Society of Montreal, October 18th*, 1889.)

The naso-pharynx varies greatly in contour and in capacity, and extreme anomalies may exist without giving rise to discomfort. So long as the function of this part is properly performed any departure from normal conditions is likely to escape observation.

The relation of the plane of the choanæ to the horizontal plane offers a diversity of angles. The choanæ may look almost directly downwards, as was observed in a case of adenoid disease operated upon this month, and at which Dr. John A. Macdonald assisted. The antero-posterior and lateral diameters show constantly marked differences amongst themselves when a comparison is instituted. The cavity occupies a position in the skull by no means constant. It is occasionally situated so far back as to be reached with difficulty when examining with the finger or when operating. The posterior pharyngeal wall also affords examples of varying degrees of inclination, the integrity of the naso-pharyngeal cavity being sometimes seriously trespassed upon, so great is the obliquity. Prominent cervical vertebræ also project into the cavity and render posterior rhinoscopy difficult of performance. There are a number of other departures from the normal state, of which perhaps atresia or a disposition thereto is most commonly met with. The abnormality, however, to which I shall call your attention, and of which I report two examples, which

have come under my personal observation, is of very rare occurrence.

CASE No. I.—On May 6th, 1883, Miss B., aged 22 years, was referred to me by Dr. A. A. Browne. The young lady complained of difficult nasal respiration and its associated discomforts, as well as a temporary impairment of hearing. When suffering from an acute coryza she had occasionally been subject to similar attacks, but at other times, when in the enjoyment of her ordinary health, did not experience any great inconvenience or annoyance. On examination, the anterior nares were found free from any obstruction. I found in the naso-pharyngeal cavity, however, a well-developed septum running in an antero-posterior direction, continuous with the vomer, which divided the vault into two apparently equal and lateral halves.

On digital examination this partition gave to the finger the sensation of bone and was covered with soft, velvety mucous membrane. It was firmly adherent to the roof of the vault, and was fixed into the posterior superior wall at a point higher than its origin from the base of the vomer proper. The lower margin was sharply defined, and somewhat curved, presenting a slightly crescentic outline. A firm and steady pressure exerted in many directions failed to dislocate it, or, in fact, to produce any appreciable movement. The mucous lining of the region generally was much congested and swollen, accounting for the character of the symptoms. This case was reported in an article entitled "Buccal Breathing," read before the Canadian Medical Association on August 26th, 1884, and was subsequently published in the issue of the *New York Medical Record* of November 22nd, 1884.

CASE No. II.—On May 23rd, 1888, a boy aged five years, of feeble mind, was referred to me by Dr. George Ross. The child had previously been under the care of the late Dr. Howard, who had on several occasions communicated with me concerning the character of the case. The child was a confirmed mouth breather, and in the absence of a digital examination of the naso-pharynx, or, in fact, of any examination of the posterior nares, adenoid vegetations were considered to be the cause. The speech was "dead," but there was, in addition, an impediment that was of a central origin, and that no oper-

ation could in any way remove. In Dr. Ross' absence from the city, Dr. Browne administered æther. On passing my finger into the vault, I found a bony wall continuous with the vomer which divided the naso-pharyngeal space into two portions. This septum was covered with mucous membrane and was free from the vegetations which filled the spaces on either side. The width of the lateral halves was not more than a centimeter, and it was with difficulty that a very small ring knife could be introduced between the septum and the lateral naso-pharyngeal walls. After the removal of the growths a decided improvement took place in breathing, and the anæsthetic was notably much more easily administered.

Dr. Browne on examination was enabled to confirm the presence of the septum as described. In this case the septum was rather more dense and thicker through than in the case first referred to; it was also less deep from above downwards.

To Dr. John N. Mackenzie, of Johns Hopkins Hospital, Baltimore, belongs the honor of having first described this malformation, in a paper read before the Clinical Society of Maryland, on February 16th, 1883, and published in the Archives of Laryngology in July of the same year. My first observation was made May 6th, 1883, communicated August 26th, 1884, and published in November of that year.

The only other observation on record is that of Dr. Ph. D. Photiades, of Constantinople, which appeared in a work on "Nasal Pharyngeal and Laryngeal Diseases," published at Athens in 1884, and a notice of which, translated from the Greek into German, occurs in the *Centralblatt für Laryngologie* for December, 1885. Whether Dr. Photiades' case antedated my first one or not I am unable to say. Dr. Photiades claims that Dr. Mackenzie's case was the only one published prior to his own.

In answer to a number of letters sent to leading teratologists inquiring as to the frequency of such a deformity, I have not been able to add a single instance to the four already communicated to you. Dr. Harrison Allen, of Philadelphia, who has devoted much time and attention to the study of the deformities of the skull, writes me that he has never met with such a case in practice or in museums. In over 3,500 skulls examined by him, he has never seen even a tendency to such prolongation of the septum.

Post scriptum:

CASE No. III.—On the 23rd of October, 1889, while operating on a child of 13 months for the removal of adenoid vegetations I encountered my third case of this abnormality. In this patient respiration had been most difficult from birth, in fact, nasal breathing was impossible. On examination I found the naso-pharynx divided as before described. There was also a marked narrowing of the choanæ. Dr. F. W. Campbell, Dean of the Faculty of Medicine of Bishops College, after examining satisfied himself of the correctness of my diagnosis. Under æther the adenoid vegetations were thoroughly removed and nasal breathing quite restored. The infant made a good and satisfactory recovery.

VERTIGO, AN EYE AND EAR SYMPTOM.

BY J. W. STIRLING, M.B., &c.

(Read by title before the Canadian Medical Association at Banff, August, 1889.)

Vertigo is that condition in which there is a tendency to lose, or a complete loss of equilibrium.

It is a feeling of uncertainty with regard to our position relatively to surrounding objects.

I will give a short resumé of our more recent knowledge and advances in the subject, especially from an ocular and labyrinthine standpoint, and append notes of a few cases which have come under my own observation.

For the maintenance of equilibrium, we have three factors to consider.

1.—The source of the afferent impulses to the brain, three in number, namely, visual, labyrinthine and tactile.

2.—The co-ordinating reflex centre in the cerebellum.

3.—The efferent motor impulses.

As to the centre, that it certainly exists in the cerebellum has been undoubtedly proven by Ferrier and others, in their operations on animals, for on excising the cerebrum, equilibrium was still maintained, but on excising the cerebellum it was lost, although the cerebrum was retained. From this also we see that consciousness is not necessary for equilibration.

Further experiments showed that in time cerebral activity could gradually, though imperfectly, assume the lost function,

although at a considerable expenditure of nerve energy, fatigue rapidly ensuing. With this loss of motor co-ordination for the preservation of balance, there was, however, no diminution of muscular power.

Ferrier found on stimulating certain areas of the monkey's cerebellum with electricity, that movements of the eyes and marked loss of equilibrium in definite directions followed.

1st.—Stimulating the pyamid, either on right or left side, the eyes moved to the right or left.

2nd.—Stimulating the anterior part of the upper vermiform lobe in the middle line, the eyes turned directly up; if the electrode were placed to either side of the middle line, the eyes turned to the same side as well as upwards, but without any rotation.

3.—If electrode placed on posterior part of upper vermiform lobe in the middle line, eyes were turned directly down, and in addition to either side if electrode placed on one or other side of middle line.

4.—If lateral lobes stimulated, the eyes looked up, and upper end of vertical axis rotated towards side so stimulated.

5.—Stimulation of flocculus caused rotation on the antero-posterior axis.

The *movements* of *the head, eyes and body* coincided.

It was also found that on stimulating the lateral lobes there was a tendency to fall to the same side as that stimulated, associated with a rotation backwards. On stimulating the anterior portion of middle lobe, a tendency to fall backwards; on stimulating the posterior portion, a tendency to fall forwards.

On destruction of any of these areas, falling in the opposite direction ensued, *e.g.*, if lateral lobe destroyed, animal fell to opposite side, with a rotary movement backwards; if anterior part middle lobe, animal fell forwards; if posterior, backwards.

The stimulation of the mastoid in man by electrodes placed one on each mastoid, causes the head to be bent and the eyes directed towards the side on which the anode is placed; objects appear to be moving in the opposite direction, and there is a sensation as of loss of support on the opposite side of the body; hence the movement of the head and eyes to one side are compensatory to a feeling of falling to the opposite side.

Now, it is found that the movements of the head and eyes thus engendered, by placing the electrodes on the mastoid in

man, are exactly similar to those caused by directly stimulating the corresponding side of the cerebellum in the monkey; hence it may be inferred very justly that the other movements of the head, eyes and body, set up by stimulating the other areas of the cerebellum, correspond to a sensation of falling in the opposite direction, and are all compensatory to preserve equilibrium.

Next as to the afferent factors concerned in the preservation of equilibrium.

That the eyes play an important part in the maintenance of equilibrium hardly requires iteration, as we are all aware of the uncertainty of gait following the sudden occlusion of vision, although that it is not absolutely necessary is certain, as evidenced by the movements of the blind.

Our movements are first learnt by observing and copying others, calling our consciousness into constant requisition, with the result of early fatigue, until after a while the act is performed reflexly.

That consciousness even yet plays a part, although subordinate, is evidenced by the rapidity and certainty with which attention is attracted by anything unusual in the conditions appertaining to any movement, *e.g.*, movement of external objects, loss of sensation in limb, etc.

Hence, from our eyes, and by vision, by the muscular sense of accommodation or convergence, we gather experience of our position in space and relation to surroundings.

That all these assist in maintaining equilibrium is readily observed by the feeling of insecurity, giddiness and sometimes faintness which occurs if anything interferes with their normal action.

First, as to vision. We have referred to the sense of insecurity which follows its sudden suspension, this disappearing in time as the other two afferent factors, tactile and labyrinthine, partly take its place.

Let the whole field of vision be put in motion, as in watching a running stream, the eye in vain strives to fix our position in space, and take with this the very contradictoriness of impression of our stability, as obtained through the tactile and labyrinthine sources; then this disharmony of afferent impressions produces generally a feeling of insecurity, often of giddiness and faintness.

Secondly, let there be a lesion in the muscular sense, as occurs in paralysis of the ocular muscles. The field of vision is falsely projected, and the misinterpretation arising from the power of muscular impulse, and the small result obtained causes an apparent movement of objects looked at. This gives rise to uncertainty of gait, giddiness and even total loss of balance.

In certain paralyses this is more marked than in others, viz.: in oculo motor paralysis, as in this form the visual fields of the two eyes nowhere coincide, in abducens, supratrochlear, and separate muscle paralysis it is not so marked, for, in certain directions, the fields coincide.

Cases are very common, but I may be permitted to mention the following typical oculo motor paralysis:

J. McK., aged 45; came to me on account of double vision, which had suddenly appeared three days before.

History of Syphilis.—There existed marked oculo motor paralysis of left eye, with ptosis upper lid; there was crossed diplopia, the field of vision of the left eye being projected to the right. On getting him to walk rapidly toward a given point he made a wide detour to the right, and on suddenly trying to correct himself became quite giddy and fell.

Acquired nystagmus is also accompanied by giddiness from the false impression as to the relation of surroundings.

Thirdly, as to the influence of accommodation.

This is seen sometimes in the strain of the accommodation muscle in hyperopia, giddiness occurring, although mainly in the neurasthenic and in hyperopia of high degree with sudden weakening of accommodation. The vertigo is mainly due to the apparent changing in position and shape of objects, arising from the varying focussing of the eye, caused by irregular actions of the ciliary muscle, the contradictoriness of muscular impulse and result confusing one. It is certain that the centering of the attention on any one of the three afferent factors specially, gives rise to a feeling of confusion, and this is likely partly the cause here of the feeling of insecurity. Examples are too numerous to make it obligatory to give any.

The connection of the optic nerves with the cerebellar centre has not been absolutely proved, but a case of Mendel's throws considerable light on this point.

In this case the post mortem examination revealed a hemorrhage in the pulvinar of the left optic thalamus; there was atrophy of the left red nucleus and a tract of secondary degeneration in the right superior cerebellar peduncle, traceable as far as the nucleus dentatus.

It would show that each lateral lobe rules over eye of same side, the decussation first occurring at the chiasma, then back again at the decussation of superior cerebellar peduncles. The pupil contracts mainly in eye of same side as that of the stimulated lobe.

Lesions in the course of superior cerebellar peduncles, of optic lobes, or of connection between optic and oculo-motor nerves must cause disturbances of equilibrium.

Before leaving the subject of ocular afferent impressions, I may just mention the curious condition of agoraphobia, where a man as long as he is in the street or between two walls maintains his equilibrium, but as soon as he is in a field or open space loses his balance. I am inclined to think this is partly due to psychical disturbances, as well as to contradictoriness of sensation.

I will now pass on to the consideration of the labyrinthine factor.

Beyond mentioning the semi-circular canals, it is hardly necessary to dilate on their well-known anatomy.

Three in number, a superior vertical, which has a direction forwards and slightly outwards, a posterior vertical, and a horizontal, each having its ampulla, with its crista, hairs, otoliths, endolymph and perilymph.

Proofs of their function are numerous, a good one being a case of Ferrier's of labyrinthine vertigo without deafness.

The ampullæ are supplied by the anterior or motor part of the auditory nerve. Tracing it backwards, it joins the acoustic division at the cribriform plate, then back through the meatus auditorius internus, to the medulla oblongata, where the motor fibres can be traced to the restiform bodies or inferior cerebellar peduncles, and thence into cerebellum. The further central connections are obscure.

The two theories as to mode of stimulation are well known. Crum Brown holds stimulation occurs through varying pressure of endolymph on ampullary dilatations. Cyon denies this

as he could never experimentally prove it, but asserts stimulation arises from vibrations of otoliths, caused by variations in position of head and undulations of endolymph.

If it is pressure, inclination of the head to the right would cause endolymph to flow from the right to the left.

These symmetrical plus and minus variations would stimulate the ampullary nerves, and thereby excite the equilibration centres to set up muscular action appropriate to position of head and body.

Crum Brown has also shown that by the semicircular canals, independent of all other aid, we are able to detect any direction in which we may be rotated and the approximate rate of rotation.

This disappears after a time, and is due to the endolymph in virtue of its inertia not partaking of the same rate of rotation at first as the osseous canals.

Each canal has only one ampulla, hence the physical difference between rotation with ampulla first and ampulla last, and it is supposed that only one of these rotations, say with ampulla first, when endolymph flows into the canal, will stimulate nerve endings. On this supposition one canal can only give rise to sense of rotation in one direction, around one axis, and for sense of complete rotation in either direction, the canals must be in pairs parallel and with ampullæ at opposite ends, which is the case.

Vertigo could not be produced in pigeons with semicircular canals destroyed. In a large number of deaf mutes, and in cases where the labyrinth is destroyed by disease, vertigo could not be produced by rotation.

In lower animals of sluggish habits, as in reptilia, where equilibration is not called for specially, the semicircular canals are only slightly developed. However, as we occasionally see or hear of cases of necrosis of labyrinth, it is evident that the semicircular canals are not absolutely necessary for maintaining the upright position.

Now, as to the results of stimulation of the canals.

It frequently happens that from violent syringing or politzerizing, vertigo occurs. The stapes being violently driven in, alters the pressure of endolymph and stimulates ampullary nerve terminals; there is a feeling of loss of support

on the opposite side, and as a result the heads and eyes are directed toward the stimulated side, objects appear moving to the opposite side.

Cyon, Högyes and others have found that stimulation of the separate canals causes the same motor disturbances as the stimulation of certain cerebellar areas.

For example, section of the superior vertical canal causes falling forwards and outwards, which corresponds to destruction of anterior part of middle lobe; section of posterior canal causes tendency to rotate backwards round a transverse axis, as occurs in section of posterior part of middle lobe; section of horizontal canal gives rise to lateral rotary displacements, as in section of lateral cerebellar lobes.

Rotation backwards, according to Crum Brown, would correspond to irritation in ampullæ of superior vertical canal, rotation forwards to that of posterior canal, while the rotary would correspond to irritation of ampullæ of horizontal canals; section of auditory nerve gives same result as destruction of semicircular canals; further yet, section of restiform bodies gives same result.

From these facts, the function of the canals, the course of the fibres backward and the location of the centres for the reflex co-ordination necessary for equilibrium in the cerebellum are clear.

Meynert asserts that fibres of the auditory nerve pass by channels as yet undetermined from the cerebellum to the pedunculus cerebri, and ultimately to the cerebral cortex.

We know that movements of the head and body are accompanied by corresponding movements of the eyes, which strive to maintain their primary passive position with relation to external objects. It is found that section of the aqueduct of sylvius at the level of the corpora quadrigeniam, or of the floor of the fourth ventricle, or of the auditory nucleus, both acustici as well as destruction of both membranous labyrinths causes disappearance of these movements, while conversely stimulation of these parts is followed by bilateral associated movements of both eyeballs, afferent impulses from the ear to centre, thence to nuclei of 3, 4, 6 nerves.

The motor fibres from the cerebellum cross in the middle cerebellar peduncles, join the opposite pyramidal tracts, then

cross again at lower part of medulla, so the relationship of cerebellum is with the same side of body, while that of cerebrum is crossed, as proved by a very interesting case of Ferrier's of atrophy of the right lobe of the cerebellum, secondary to destruction of anterior motor region of left cerebral hemisphere, the pyramidal tract had undergone secondary degeneration, and with it the right middle cerebellar peduncle and right lateral lobe of cerebellum.

The blood supply of the labyrinth is from the basilar artery, a branch of which enters the meatus auditorius internus with the nerve. It thus can be easily seen how any variations of blood pressure may influence functions of the nerve deleteriously. The venous outlet is into the petrosal sinus for the vestibule, through the acqueductus vestibuli.

This acqueduct also contains the ductus endolymphaticus, the walls of which are supposed to secrete the endolymph: hence any venous congestion in this osseous canal must act injuriously by compressing the duct itself or hyper-exudation.

The perilymph escapes from the ear by the aqueductus cochlea into the fossa jugularis along with the vein from the cochlea which opens into the bulb of the jugular vein.

The endolymph reaches the subarachnoid space of the brain through the sheath of the nervus acusticus. Hence an intro-cranial tumour or other cause of increased intra-cranial pressure can injuriously affect hearing and equilibrium, although no direct implication of the cerebellar centre exists, just as in optic neuritis, either by descending inflammation or increase of fluid in sheath.

A good example of the effects of hyperæmia is the following:

J. B., aged 56. A few days before I saw him was going off fishing; it was a very hot day; he had to run part of the way to the station; he bought his ticket, and on bending down to pick up his basket he suddenly became very giddy and had just time to grasp a seat to prevent himself from falling; immediately noted loud noises in left ear and marked deafness. He had been deaf in right ear for many years.

When I saw him the giddiness had disappeared, although it had lasted for two days.

His hearing improved slightly under treatment and the tinnitus diminished.

Here the disturbance of hearing was not profound enough, nor the other symptoms severe enough for hemorrhage.

A very pretty example of the effect of anæmia on the middle ear came under my notice just before leaving England.

Hannah M., aged 40; married; was confined six weeks before I saw her; complained of giddiness, tinnitus and deafness whenever she is erect, these symptoms disappearing almost entirely on her assuming the horizontal posture. The woman was very anæmic, and gave a history of the same symptoms occurring with three previous labours.

Woakes considers that the inferior cervical ganglion of the sympathetic is at the bottom of much of the tinnitus, vertigo and nausea, as it controls the vertebral arteries and labyrinthine circulation, so determining aural symptoms, and by its connection with the vagus, causes the gastric symptoms. He bases his therapeutic treatment on the fact that this ganglion is functionally depressed by quinine and tobacco and stimulated by hydrobromic acid.

I might mention here that Ferrier holds there is direct communication between cerebellum and the viscera by the direct cerebellar tracts, which connect with Clarke's vesicular columns, and, as Gaskill has pointed out, Clarke's columns are confined to those regions of the central nervous system, which give origin to the rami viscerales.

Aural vertigo from middle ear lesions are frequent; in all there is ankylosis of the stapes or obliteration of the round windows. Now these fenestræ act as safety valves. Hence in ankylosis or obliteration of them any movement, even vibratory, of the labyrinth gives an injurious shock, and giddiness ensues.

We must also note the state of reflex hyper-excitability of the acoustic nerve, due to the repetition of local and functional irritations.

Vertigo is common from irritation, foreign bodies, wax, &c., in meatus, not generally excessive, and disappears with removal of cause.

Vertigo with the accompanying nausea tinnitus, deafness is more intense if cause is in middle ear. Syncope sometimes occurs if nausea is excessive, but loss of consciousness extremely rare, so differs from apoplexy and epilepsy.

Finally, just a word as to the abuse of the term Menière's disease, which has been indiscriminately applied to all forms of aural vertigo.

Only vertigo of labyrinthine origin associated with profound deafness, which is permanent, the onset acute in a previously healthy ear, these and only these symptoms are characteristic of Menière's disease.

All forms of aural vertigo, according to Burnett, are paroxysmal, excepting those due to a foreign body in the outer ear pressing on the drum, or to a tumour on or in acoustic nerve.

I will close by giving a few notes of a rare case which came under my charge during my last year at the Royal Edinburgh Infirmary.

J. McK., aged 63; three years before I saw him was at a volunteer review, slipped, fell and struck the back of his head; was unconscious for fifteen hours; had a nasty scalp wound on back of head, three inches by half an inch; just after accident blood escaped from both ears and the next day from the pharynx. On regaining consciousness was very deaf, his deafness becoming more profound until in ten days he was stone deaf. On attempting to rise he was so giddy that he had to give up the attempt. This symptom gradually diminished. When I saw him, three years later, he was stone deaf, his voice had the monotonous intonation peculiar to the absolutely deaf. He was very unsteady in his gait, with a tendency to fall backwards. His mind was clear and muscularity good; special senses normal, except hearing. On trying his sense of rotation it was found to be entirely gone. He could not detect the direction in which he was rotated, nor did it give rise to any sense of vertigo. He could not walk along a line foot over foot; his balance very easily lost, a slight push sending him over.

Here was a fracture of the base, involving both labyrinths. The eyes and sense of touch had assumed the duties of the semicircular canals, although imperfectly.

In this paper I have only referred to the tactile factor, having, as I mentioned at the beginning, dealt with vertigo, mainly from the ocular and labyrinthine standpoint.

As a last word, I may just mention the course of the sensory afferent fibres through the posterior column, through the

olivary and restiform bodies to the cerebellum. Bechtereus section of the olivary bodies produced disturbances of equilibrium.

Retrospect Department.

QUARTERLY RETROSPECT OF SURGERY

By Francis J. Shepherd, M.D., C.M., M.R.C.S., Eng.

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The Treatment of Scrofulous Glands.—With the advent of aseptic surgery and improved surgical methods, the treatment of scrofulous glands has undergone a great change. Where formerly glands were left to nature to effect a cure, they are now removed before they have broken down and before the surrounding tissues are infiltrated with inflammatory products. Formerly the disease lasted for years, ugly sinuses continued discharging, and the scars left were most unsightly. Now, even if sinuses exist, they are opened up, the remains of the altered glands tissue, which is their cause, scraped out with sharp spoons, and the result as a rule is most favorable. Still, in some cases, when the general health of the patient is poor, and where glands rapidly break down, favorable results do not always follow, the infection spreads from gland to gland, and unless the operation be most complete and radical, the last condition of the patient is worse than the first. Of late much attention has been directed to this subject.

There are still surgeons who support the let alone treatment, others favor erasion, while others again say that the knife is the only method whereby the disease may be entirely and permanently got rid of.

Mr. Fred Treves formerly advocated cautery puncture and rest by means of a stiff neck splint; now he has discarded the cautery puncture, and resorts entirely to the knife when practicable, using the short spoon for the treatment of old sinuses and cavities, which, of course, cannot be

excised. The cautery puncture he has entirely discarded, except to open suppurating glands (*Lancet*, Sept. 21, 1889). It is most important to remember when speaking of the surgical treatment of tuberculous glands of the neck, that so slight an operation as erasion and scraping out of a gland may be followed by a general infection. Not a few surgeons who have treated scrofulous glands of the neck will be able to record cases of the kind. It is also well to remember that some cases of tuberculous disease of the glands cannot be treated to a successful conclusion by surgical methods alone. In some cases the general system must be improved by hygienic means, good food, sea air, &c. Drugs seem to have but little effect, though many practitioners seem to rely almost entirely on syrup of the iodide of iron. Whilst treating the glands it is well to look at the original cause, such as a tonsillitis, carious teeth, eczema, nasal trouble, &c.

In the *Lancet* for September 28th and October 5th, Mr. W. Knight Treves has an excellent article on the "*Diagnosis and Treatment of Scrofulous Glands.*" After giving the diagnostic points between simple adenitis, lymphadenoma and scrofulous glands, he goes on to describe the various physical conditions in which scrofulous glands may be found, such as soft elastic gland growth without inflammatory action, hard glands with degenerated tissue, generally caseous; suppurating glands, calcareous degeneration, &c. They may be movable or attached; in fact, scrofulous glands afford infinite variety in their form, course and duration, no two cases being alike. Two requirements are necessary, viz., to establish the general health and to remove thoroughly and completely the local disease. To establish the general health, the patient should be out in all weathers, have the benefit of the sea air, generous diet, wine, iron, cod liver oil, quinine, no worry or fatigue, should sleep in large airy rooms, and wear light warm woollen underclothing. Sea bathing is also advised. As regards drugs, Mr. Treves has no faith in them; he has seen perchloride of mercury in small doses produce a temporary improvement by reducing surrounding inflammatory deposit and no other drug has done as much. He holds that the local disease can only be got rid of in one way, and that is by

mechanical means. The first indication in local treatment is to remove all sources of local irritation, excise tonsils if enlarged, extract decayed teeth, etc.

Local treatment to be successful must be thorough. It is a mistake to meddle with scrofulous glands unless we can get the whole thing away. The knife is the only instrument with which diseased glands can be completely removed.

Mr. Treves says scooping is chiefly applicable to two conditions of disease, viz., limited superficial gland enlargements, which have uniformly softened, and old fistulous tracts kept open by withered caseated glands. It is also useful in scraping away rotten skin, old inflammatory deposits and cleaning up generally. In removing glands, the skin incisions should be free and generally over the mass. If glands are enlarged beneath the sterno mastoid, an anterior and posterior incision in the line of the muscle is needed, and sometimes two incisions, if the glands be adherent to the vessels. Nothing is more dangerous than trying to extract glands through an insufficient incision. By perseverance, masses of caseous glands can be separated from vessels to which they are adherent. The author does not advocate sewing up the incisions, he prefers to keep the flaps together by sponges or antiseptic wool. Absolute rest must follow the operation; the head must be fixed by sand-bags, and there must be no mastication.

For years Mr. Treves has operated on scrofulous glands, sometimes removing as many as one hundred at a sitting, in others excising a mass of glands so large as to threaten suffocation, and yet he has never lost a case. He attributes this success to never having prematurely closed the wound.

The Treatment of Surgical Tuberculosis.—Since the discovery of the bacillus of tubercle by Koch, tuberculosis has been classed amongst the infective diseases. The fact that certain individuals are more predisposed to the attacks of bacillus than others does not alter the case, for under certain conditions persons not predisposed may yield to the attack of this microbe. At the Paris Congress of 1888, strong resolutions were passed relative to the destruction of all flesh belonging to tuberculous

animals, and it expressed a wish that tuberculosis be includad in the sanitary laws of all countries in the world amongst the contagious diseases, requiring special prophylactic measures.

In the human being when tuberculosis exists, it is important to get rid of it, and so prevent a general infection of the body. In the recent lectures (*Lancet*, July 27, 1889), by Mr. Howard Marsh, he says that so long as tubercle was regarded as a constitutional affection with local manifestations, treatment was directed mainly to the constitution, as it was regarded as useless to remove a mere local manifestation if the essential disease were left behind. With the discovery of the infective nature of tuberculosis and the danger of a limited caseous deposit being a source of total infection for distant organs or for the whole body was impressed on surgeons, and the expediency of the removal of tubercular deposits was discussed. Now, everything was said to depend on micro-organisms, and perhaps this doctrine was carried to greater extent than was warranted by clinical experience. Mr. Howard Marsh, in speaking of hip joint disease, does not believe in the early removal of the tubercular focus, but would limit operative interference to the opening of abscesses, and trusts to prolonged rest with extension and fixation and general hygienic precautions. He gives statistics to show that the danger of general and distal tubercular affection from bone and joint disease has been exaggerated, and that it is known to occur in only about five per cent. of all cases of hip disease. Mr. Marsh thinks the tendency of tubercular disease of bone is to be self-limited and to undergo recovery, suppuration must not be regarded as destructive, but as nature's method of getting rid of dead tubercular matter. The mortality in the operation, he says, is twenty per cent., whereas if the joints are left alone it is only five per cent. I think Mr. Marsh has placed the mortality (20 p c.) rather too high. In the hands of skillful antiseptic men it is certainly not, as far as my experience goes, as great as one in five. If we hold these tubercular processes to be due to a distinct micro-organism and that they are infective, it seems to be more logical to remove the focus of infection than to wait for nature to

effect a cure. The utility of operative interference in cases where patients cannot afford a prolonged treatment (such cases as those seen in hospital practice), in my opinion does not admit of a doubt. In knee joint affections and affections of the ankle, the results of operative interference have been brilliant. Of course, we must bear in mind that the later the case is left the more serious is the operation necessary for the removal of the disease and the greater the after deformity.

Immediate and Remote Results of Operations for Local Tubercular Disease.—At the recent Congress of French Surgeons, held in Paris during October last (*La Semaine Médicale*), M. Guyon read a paper on the above subject. He recorded three cases of tubercular disease of the bladder on which he had operated. One patient had suffered from vesical tubercular disease for two years. After operation he made a good recovery, and has had no recurrence. The second case operated on in April, 1887, died two years after, in July, 1889, of suppurative nephritis; at the autopsy the left kidney was completely destroyed and the right was deeply involved, but no tubercular growths could be found. The third case was operated on in 1888 for vesical mischief, dating back nine months; his kidneys were evidently diseased, but, as the patient had painful micturition as many as 100 times during the night, he decided to operate. He operated by the supra-pubic method, scraped and cauterized the ulcer, and greatly relieved the symptoms, so that the patient lived in comfort for a year afterwards. At the autopsy there was not the slightest trace of any return of the tubercular matter. Dr. Guyon said he thought the supra-pubic operation was much the safer. The only case cured was the first, but he believes that he would have cured the others had not the kidney lesion existed. Tubercular disease of the bladder has a very superficial origin (in the mucous membrane) and scraping and application of cautery removes completely the disease.

The Treatment of Erysipelas.—According to the *Therapeutische Monatsch*, Sept. 1889, the treatment of erysipelas by germicides is growing in favor. Carbolic acid is too irritating.

Koch, of Vienna, uses creolin, his formula is one part of creolin, four of iodoform and ten of lanolin. This is spread on the erysipelatous area, and an inch or two beyond its boundaries, and covered with gutta percha tissue. The theory is that iodine is set free in the combination, and that it, as well as creolin, acts as a germicide; the results appear to be good.—(*Vienna Klin. Woch.*, 1889, No. 27.)

Mechanical Treatment of Erysipelas.—Dr. Wölflers, in an article lately published (*Wiener Klin. Woch.*, June 6th, 1889) reports two cases in which the mechanical treatment was unsuccessful, and three in which it was successful. His treatment is to outline the area of the disease with strips of sticking plaster. He has found that the disease will not pass over these limits. Care should be taken that the strips be closely applied to the skin and the hair should be shaven from the skin. In facial erysipelas it is advisable to shave over the scalp. In a case of erysipelas following ulcer of the arm 7 strips of plaster were placed about the wrist, and as the axillary glands seemed already affected, the second strip was placed over the shoulder and along the sides of the thorax, and the limits were completed by a third strip at the waist. The disease progressed, accompanied by fever, until it reached the sticking plaster, but went no further, the fever ceased and rapid healing followed. Another case of erysipelas following ulcer of the leg. The bands of plaster were placed around the thigh. The disease quickly extended to the first band, and a very slight inflammation extended beyond it, but did not reach the second band; fever now disappeared, and the ulcer healed. The third case was one of facial erysipelas. A strip of plaster around the neck quickly checked the progress of the disease. The two unsuccessful cases consisted of one of gangrenous erysipelas of the thigh and pelvis, death in twenty-four hours; and a case of erysipelas of the chest, following an operation for empyema, death in three days. In the same journal for June 14th, Wölflers records seven additional cases, all of which resulted favorably.

At a meeting of the Suffolk District Medical Society, Dr. J. C. White said that he could get control over erysipelas generally

in three days by simple treatment. Of 100 cases of ordinary facial erysipelas, perhaps three would not yield within three days by simple antiseptic treatment. Dr. White applies, during alternate hours of the day and evening, a mild solution of carbolic acid and alcohol as an evaporating lotion. It is in only very exceptional circumstances that the disease is not under control or has disappeared within forty-eight hours, but it would astonish him if every vestige of the disease had not disappeared in three days. He has treated erysipelas in this way for many years, and has never known it to fail. He speaks of ordinary cutaneous erysipelas only, not the phlegmonous variety. He uses a formula of acid carbolic crystals, 3p., alcohol and water 3iv.—(*Boston Medical and Surgical Journal*, June 13th, 1889.)

In an article on the "*Surgical Treatment of Erysipelas in Children*," Dr. A Siebert (*N. Y. Medical Journal*, Oct. 19th, 1889), says that to open inflamed skin by numerous incisions made all over the diseased surface, and then to cover the part with antiseptic lotion, has been practised for some time with moderate success. So has also the injection, hypodermically, of a 2 per cent. solution of acid carbolic into the healthy skin surrounding the inflamed part. Kraske's method was the first step in the right direction. He made regular incisions in the border of the erysipelas extending into the healthy skin, and he crossed these diagonally with others. The object was to give a good chance to the cocci to get to the surface and come in contact with the antiseptic fluid which was applied to the skin; the dressing was constantly moistened with the antiseptic fluid for a few days. The results were excellent. Riedel and Lauenstein (*Deutsch Med. Woch*, for Oct. 19th, 1889) proposed to improve Kraske's method by locating the incisions entirely in the healthy tissue, about one to two inches away from the border of the erysipelas. This was to avoid possible infection of the aseptic tissue. This modification has given better results than any other method. The patients were usually put under an anæsthetic, and the whole operation performed antiseptically. Dr. Siebert has used this method in three cases in children, with the

result of limiting the spread of the affection. He does not put the patient under ether, but uses the "vaccination harrow," and so does away with objections parents have to the employment of anæsthetics.

Physiological Resistance of the Peritoneum to Infection.—During the past year Rinne (*Archiv für Klin. Chir.*, 1889) has made some most interesting experiments in surgical pathology. Practically and clinically it has been demonstrated that the peritoneal cavity, under certain unknown circumstances, has the power of taking care of a vast amount of filth. Rinne has found that large quantities of septic material and pure cultures of pyogenic bacteria were absorbed although injected daily into the peritoneal cavity of animals, provided the peritoneal surface was uninjured. The injections produced only mild symptoms in direct proportion to the quantity of septic material used, and in no case was there more than a moderate rise of temperature. The results were very different when there were coincident defects in the peritoneum exposing the sub-peritoneal tissue to infection. Then there invariably appeared progressive suppurative peritonitis going out from the infected connective tissue, which usually terminated fatally. The practical import of these experiments can hardly be over-estimated. They explain why the escape of pus into the peritoneal cavity, from the rupture of a pyosalpinx, is not necessarily fatal if the tube is promptly extirpated and the wound and stump properly treated. They point out that the incision is the point of general danger in all abdominal operations, and they indicate that too great care cannot be exercised in bringing accurately together the peritoneal edges of the wound. They explain why the removal of abdominal tumors is so much more dangerous after adhesions have taken place, because the resulting denuded spots offer less resistance to the invasion of septic bacteria. They explain the success of those operators who disregard the dictation of scientific bacteriology, and also the recovery of patients after abdominal section by horned animals. They teach us to consider cautiously the evidence presented by statistics of operators and await the demonstration of more exact methods as to the import

of their results. They warn us that clinical evidence is inadequate to overthrow the deductions of experimental physiology and pathology, and that our time is provided with methods of precision which are yet imperfectly improved. The resisting and absorptive power of the peritoneum is beyond that of any other serous cavity (*Journal of the American Medical Association*, Oct. 17th, 1889).

Surgery of the Liver.—Mr. Lawson Tait has a very interesting paper on the above subject (*Edinburgh Medical Journal*, October and November, 1889), in which, in his characteristic and forcible way, he gives the history of this branch of surgery, and details his own experience, which consists in seventeen cases of exploratory incision with one death; seventeen cases of hepatotomy with two deaths, and fifty-five cases of cholecystotomy with three deaths—a remarkable record. Petit was the first to describe the operation of cholecystotomy as now performed, yet his description of the operation was unnoticed for 150 years until Marion Sims put it into actual practice in 1878. The result in this case was fatal. In 1879 Mr. Tait successfully performed the operation on a woman aged 40. The patient is still alive. Of the fifty-five cases performed by him, fifty-two were successful, one old woman died of a suffocative catarrh some weeks after the wound was healed, two others died of cancer of the liver, which was, in all probability, the cause of the distended gall bladder, for no gall stones were found. In not a single instance did a patient die from the operation. All the other patients, with one exception, were in perfect health at the time the article was written. Mr. Tait's method of performing the operation of cholecystotomy is well known. He stitches the distended bladder to the abdominal wound and then incises it, evacuates the fluid, and removes the stones, leaving a drainage tube in the gall bladder. He condemns the practice advocated by Sir Spencer Wells, of opening the gall bladder, removing the calculi, and then closing the wound in the gall-bladder by continuous suture without attaching it to the abdominal wall. As far as Mr. Tait knows, the method has been fatal in every instance where it has been tried.

Mr. Tait says it is generally supposed that gall stones form in the gall bladder, but this is not true, for the nuclei of gall-stones are found in the streams of bile as they flow through the substance of the liver. In fact he has cut gall-stones out of abscesses in the substance of the liver. Gall–stone is not a disease of the gall-bladder at all. Mr. Tait says that if this be true there is no justification for the removal of the gall-bladder, except in cases where it is greatly thickened and suppurating, and that these are the very cases where it is an impossible operation. The one argument against cholecystotomy, viz., that biliary fistulæ remain occasionally and permanently, is an argument of much greater force against the removal of the gall-bladder, and the so-called operation of cholecystectomy, for such a fistula, after cholecystotomy, must be due to the fact that the operation had been performed at a time when a gall-stone or gall-stones had become impacted in the common duct. In several of such cases Mr. Tait has crushed this obstructing gall-stone, and has thus succeeded in clearing the common duct. In one case (the exception alluded to above) he succeeded in crushing one stone. At the post-mortem held seven years after, both cystic and common ducts were found obstructed from one end to the other, and the result was the patient had a permanent fistula. She lived comfortably four or five years, and finally died of phthisis. In such a case the removal of the gall-bladder would have been the very worst proceeding possible.

Mr. Mayo Robson has recently been successful in making a connection between the gall-bladder and adjacent coil of intestine, and in this way the trouble of a biliary fistula was avoided. However, most of these cases may be avoided by the operation of cholelithotrity, that is, make a fresh opening in the abdomen and crush the stone outside the walls of the duct by means of padded forceps.

Tait divides gall-stones into two varieties, viz , " solitary " gall stones and " numerous" gall stones. The "solitary" is not always quite solitary, but it has rarely more than one companion. The "numerous" gall-stones are practically indefinite in number, are usually uniform and not of large size. Several interesting

cases are detailed. In one the abdomen was opened for a supposed par-ovarian cyst. The cyst was opened and found to be a distended gall-bladder; the opening was enlarged, the hand introduced, and a large gall-stone, which was imparted in the neck of the bladder, removed; the opening in the gall-bladder was stitched to the abdominal walls, and a drainage tube inserted; bile began to flow on the morning of the third day. The woman made a perfect recovery.

Disappearance of Tumours after Exploratory Incision.—In the second article on the surgery of the liver, Mr. Tait begins by saying that there are certain diseases, in some instances unknown, which seem to yield to surgical treatment applied to them by accident. He says that he has, on more than one occasion, drawn attention to the astonishing disappearance of tumours, often of large size, after a mere exploratory incision. The absolute silence with which these statements have been received by the profession has surprised Mr. Tait. They are true enough, and the experience of others in the future will substantiate them. The cases in which he has seen tumours disappear in this way are chiefly cases of diseases of the liver, spleen and head of the pancreas. He has seen others where the exact site of the origin of the growths could not be accurately ascertained. Mr. Tait is satisfied, from the number of these cases seen by him, that the disappearance is not a mere co-incidence; he is convinced that the mere opening of the peritoneal cavity has a direct influence in setting up the process of absorption of the tumour, and this conviction has increased his confidence in the principle of exploration. That some physiological change is at once set up by opening the peritoneal cavity is clearly indicated by the uniform onset of a most distressing thirst, which lasts for days, and is not seen so markedly after any other operation. In operations down to the serous cavity this thirst does not occur, but let the serous cavity be opened but a finger's breadth and the result is marked.

A number of remarkable cases of exploratory incision for tumours, &c., of the abdomen are narrated, in which the tumours disappeared, although apparently of a malignant nature. One

very remarkable case was that of a lady aged 54, who was the subject of symptoms strongly pointing to the possibility of gall-stones; Mr. Tait's own impression, however, was that she was suffering from cancer of the liver. An exploratory incision was made; the liver was found scattered with large hard nodules, one of which closely imitated the lump which had led to the diagnosis of distended gall bladder. No doubt was expressed at the time of operation that this was a case of cancer of the liver. At all events, the patient was cured and is at the present time perfectly well.

Four times Mr. Tait has opened the abdomen for the purpose of removing enlarged spleens, and in every case he has been deterred from proceeding with the operation by reason of the hopelessness of the outlook for the patient. Strange to say, in three of the four cases the tumour has disappeared, and they are now in perfect health. The fourth succumbed to the exploratory incision.

In another case he explored a tumour which appeared to be in the position of the head of the pancreas, in a lady who had become much emaciated, and was supposed to be suffering from cancer. The exploratory incision resulted in the complete disappearance of the tumour in five or six weeks, and restoration to former state of health.

Abscesses and Hydatids of the Liver.—Mr. Tait thinks modern surgery is to be congratulated upon the distinct advance it has made in the treatment of abscesses of the liver, and hydatid tumours of that organ. Mr. Tait has on seventeen occasions deliberately attacked these two diseases by abdominal section, and in fifteen cases he was completely successful. He was the first to remove hydatid tumour by opening the tissue of the liver, and reports his first case operated on in 1879. The patient recovered without a bad symptom. His method is to incise the liver and stitch its edges to the abdominal wound and put in a drainage tube.

Mr. Tait is perfectly sure that there are two varieties of hydatid cysts. The more common is the large single cyst, formed of gelatinous layers easily stripped from one another, the

fluid is limpid and free; these are the cysts that are sometimes cured by tapping. The other variety is the multiple variety, where the cysts are numerous, and vary in size from a pin's point to that of a cocoanut; they lie packed together in a cavity of the liver, which is not lined by a sac, and in the wall of each of these cysts there are fastened to the base enormous numbers of scolices of another tape worm. In this class of cases the liver ruptures and the hydatids are poured out loose into the cavity of the peritoneum, and then they penetrate the tissues in all directions.

When the author first attacked the liver by surgical operation he was in terror of hemorrhage, for he thought that if an incision opened a large sinus, the arrest of hemorrhage would be a matter of considerable difficulty, but he once, while performing ovariotomy, accidentally tore the edge of the liver and free hemorrhage took place, which was immediately checked by the application of a small piece of solid perchloride of iron. In another case where he incised a large sinus in the liver, he passed a thread down one side of it and up the other, and tied the sinus, thus completely and easily arresting the hemorrhage.

In his operation upon abscesses of the liver all the cases have recovered, with one exception. He treats these cases of abscess like any other cyst. He sutures the edges of the liver to the abdominal wound and drains; the stitches always hold well, and he thinks there is no need of procuring adhesion between the peritoneal surface of the abdominal wall and the wall surface of the liver, and that operations may be done at one sitting with as great readiness upon the liver as upon any other organ in the abdomen.

Lumbar Cholecystotomy.—In the last volume of *The Transactions of the American Surgical Association,* Dr. Mears, of Philadelphia, reports the case of a woman, aged 29, who was admitted to the hospital for the operation of nephrorraphy, or fixation of the kidney. She had a rounded tumor about the size of the kidney lying a little to the right of the median line at the junction of the hypogastric and umbilical regions. The tumor was freely movable in all directions. A vertical lumbar incision

was made, the right kidney exposed, its capsule divided and stitched to the edge of the wound. The tumor was uninfluenced by this procedure. In pressing it towards the loin it was made to bulge in the wound covered by peritoneum; the peritoneum was divided, when the tumor was found to be a distended gall-bladder. The fundus was incised and a gall-stone was found in the cystic duct. As it was impossible to extract it, it was crushed *in situ* and the fragments pushed on into the intestines. The patient made a perfect recovery. The case is interesting rather as a warning than as a guide.

Surgery of the Gall Bladder.—At the 18th Surgical Congress, held in Berlin, June 1st, 1889, Prof. Credé, of Dresden, spoke on this subject. His observations were based on five cases. All had suffered from gall-stones for years. In case 1 no tumour could be felt, but in others the swelling was evident. In cases where there was degeneration of the gall bladder, and there was no chance of restoring the function of the gall-bladder, extirpation was demanded. He had removed the gall-bladder successfully in one case. In the discussion which followed, some surgeons who had extirpated the gall-bladder stated that a bile fistula persisted. Langenbuch had extirpated the gall-bladder 24 times. The more experience he had, the more need he felt of collecting further information. Cholecystotomy was an operation that well deserved recognition, although its results were not so favorable as represented. Out of 75 cases of operation there had been two relapses, 11 deaths, and 16 cases of fistula. He himself had only lost two out of 22 cases. In cases in which he found the common duct filled with calculi, he would not operate at all, or with the greatest caution.

At a meeting of the Clinical Society of London, held October 25th, 1889, Mr. Mayo Robson, of Leeds, communicated a paper on 15 cases of cholecystotomy which he had performed, eleven were for gall-stones, one for empyema of the gall bladder, two for distended gall-bladder, due in one case to cancer of the head of the pancreas, and the other to cancer of the bile duct. All the patients operated on for gall-stones recovered. The case of cancer of the head of the pancreas died on the eighth day. Mr.

Robson spoke of the difficulty of operation in those cases where the gall-bladder was shrunken, and where it could not be attached to the abdominal wall. In one case he sutured a piece of omentum, on the one hand to the gall-bladder, and on the other to the parietal peritoneum, thus shutting off the general peritoneal cavity. This method of omental grafting was suggested by the operations of Dr. Senn.

Mr. Robson said that, with due care, he thought the operation of cholecystotomy was attended with comparatively little danger, provided there was no malignant disease.

Mr. Knowsley Thornton said it was not always easy to distinguish between a distended gall-bladder and a tumor of the kidney, and cases where there were thick adhesions around the gall-bladder, with suppuration, were difficult to diagnose. If the gall-bladder was distinct, the operation was easy. If the stone had passed into the cystic duct, the operation was difficult. It was a good plan in such cases to break up the stone by needling it. In one case he had slit up the common duct, removed the stone, then stitched up the duct; the patient recovered. He considered artificial connection of the gall-bladder with the intestine a radically wrong procedure, inasmuch as the opening in the bowel wall was likely soon to close.

Mr. Thornton agrees with the German surgeons and, notwithstanding the opinion of Mr. Tait, thinks that cholecystectomy is the operation of the future. It causes no more risk to the patient and effectually prevents another stone from blocking up the cystic duct.

Mr. Barker mentioned a case where he had operated and had only found a distended gall-bladder with some hardening of the head of the pancreas; he had closed the wound, and the patient was quickly better and recovered perfectly.

Sir Joseph Lister's New Antiseptic Dressing.—At a meeting of the Medical Society of London, held November 4th, 1889, Sir Joseph Lister delivered an important address on a new antiseptic dressing (*Lancet*, Nov. 9th and 16th, 1889). The author described his laborious and painstaking search for a new and more reliable surgical dressing. The address is characteristic

of the man, and the story it tells is a revelation of scientific acumen, perseverance and minute attention to detail, which are required for such work; it also displays a wide and practical knowledge of chemistry. This subject has engaged the illustrious surgeon during the last five years, the last report he made was about his bi-chloride of mercury, when he showed that it formed a compound with mercury, which was soluble in blood serum, and he brought forward a serum sublimate gauze. This not proving entirely satisfactory, Sir Joseph sought for new agents, and experimented with the double chloride of ammonium and mercury, called sal alembroth. This was a good antiseptic, and less irritating than bi-chloride, but again objections cropped up, for the compound was soluble not only in water, but in serum, so another series of experiments was made with cyanide of mercury. This was found high as to inhibitory, but low in germicidal, power; it was also irritating and very soluble. The double cyanides were next tried. Mr. Martindale suggested one of the insoluble double cyanides of mercury and zinc, and this compound has proved superior to all substances hitherto used. There are several of these double cyanides; there seems to be some doubt as to the precise compound which exists in the preparation of cyanide of mercury and zinc, but it is certain that the mercury in it is an important, though not in quantity a large, factor. The very ingenious method by which, after many trials, the substance was incorporated with starch, with which it forms a kind of combination whereby it can be affixed to gauze so neatly that in the dry state it does not dust off and in the wet state it does not wash away. Sir Joseph looks upon the gauze as a perfect success; it is antiseptic, porous, permanent and non-irritating. The double cyanide of zinc and mercury was not at first successful, and some early difficulties caused it to be abandoned. Then iodide of mercury was tried, because it was an antiseptic and sparingly soluble in water. It is more soluble in blood serum, but then it is very irritating, and difficult to fix in the gauze; the latter objection was removed by the starch, then used for the first time. Here, as with the double cyanide, a loose kind of molecular combination seems to

take place and the iodide does not dust off, but the experiment was not satisfactory so he went back to the double cyanides.

In wounds about the head or hairy parts, the cyanide moistened with a weak solution of corrosive sublimate may be rubbed into the hairy parts, when it will convert the hairs into an antiseptic dressing. In conclusion, the author says that there are those who still believe that the use of antiseptic substances in surgical practice is always useless, if not injurious. The germ theory of septic diseases is indeed now happily established incontrovertibly. All now admit that septic mischief in our wounds depends on the development of micro-organisms in them derived from without. But the gentlemen to whom Sir Joseph refers are disposed to trust everything to the antiseptic powers of human tissues. Sir Joseph was the first to direct attention to the antiseptic properties of living structures; without it surgery in former days would have been absolutely impossible. Still he knows too well from experience that it cannot always be trusted, and that the use of antiseptic adjuncts is in the highest degree important. He again says, "I have the satisfaction of knowing that there is among you a constantly increasing number who, when they have operated on unbroken skin with a fair field around for the application of their dressings, if they see septic inflammation occurring in the wound with its attendant dangers, know that it is their fault or the fault of the antiseptic dressings at their disposal. To those among you who are impressed with this conviction, I offer the dressing which I have described as the most satisfactory that I have hitherto met with."

The Construction of a New Bladder after Excision.—At the Surgical Congress recently held at Bologna, Professor G. Tizzoni, of the University of Bologna, and A. Poggi, gave an account of some experiments they had made on dogs, with a view of ascertaining whether the bladder could be removed and an efficient substitute constructed by operation. First of all laparotomy was performed, and a loop of small intestine about 7 centimetres in length, with its mesentery attached, was isolated by two transverse cuts, washed out with a carbolized

solution and tied at both ends, one extremity being fixed in front of the neck of the bladder. The two ends of the divided gut were then stitched accurately together by circular sutures. The dog soon recovered from the operation, and a month later the second stage of the operation was performed. The ureters were separated from the bladder and the latter was completely removed. The loop of intestine destined to be the new bladder was then cut across at the lower end and then stitched to the neck of the bladder. The ureters were then turned into the artificial bladder. A slender elastic drainage tube was placed in the urethra to carry off the urine during the first few days. The animal recovered perfectly, and gradually acquired control over its new bladder, and when shown to the congress two months later showed no signs of incontinence. The operation has been repeated with success on several animals, and Drs. Tizzoni and Poggi are hopeful it may be applicable to the human subject.—(*London Medical Recorder*).

Trephining the Sacro-Iliac Joint.—Mr. Mayo Collier, (*Lancet*, Oct. 19, 1889), reports a case of sacro-iliac disease successfully treated by trephining. The case was a lady aged 34, who had suffered for some four years from pains in and about the right hip and lameness. She was treated for ovarian irritation by massage, etc. Mr. Collier diagnosed the affection; the patient had a tuberculous family history; pain was complained of on walking or sitting on right tuber ischii, pain on coughing, on deep iliac pressure, and when the ilia were pressed together; pain was also marked on pressing immediately over the joint behind. Thomas' splint did not relieve the case, so Mr. Collier decided to trephine the joint from outside. A curved incision eight inches long parallel with and an inch below the posterior third of the crest of the ilium and descending vertically over the joint, exposed the bone sufficiently. The bone was next denuded with the elevator, and now was seen to be distinctly swollen and inflamed. A line being drawn from the anterior superior spinous process to the posterior, two inches were measured from this posteriorly. The pin of the trephine was placed on the line so that the edge of the circle

should be on the two inch line. The joint was rapidly penetrated. It was found denuded of cartilage and the bone was eroded. The diseased structures were removed with gouge and mallet and the joint swabbed with chloride of zinc (40 grs. to the ounce); a large drain was introduced. The patient rapidly recovered and in six months was able to return to her home in South Africa.

Healing of Aseptic Bone Cavities.—Dr. N. Senn, (*American Journal of the Medical Sciences*, September, 1889), has a most interesting article on the healing of bone cavities. Neuber, of Kiel, some years ago introduced a method of implantation of skin flaps, after chiselling or gouging the bone sufficiently to allow the soft parts to be brought into contact with the floor of the cavity. These flaps were fastened securely into position with bone nails and in many cases primary union resulted. Schede and others also attempted to secure healing under aseptic moist bloodclot, and good results have been obtained, but also there have been many failures. Dr. Senn substitutes for the bloodclot aseptic decalcified bone chips; they are absorbable, firm, and form a good scaffold upon which granulations can be supported. He made a number of experiments on dogs before applying the method to man. The results have been apparently satisfactory. In operations on the skull he fits an aseptic bone-disk into the trephine opening; this arrests hemorrhage from the bone and prevents adhesions between the dura mater and external parts, it is gradually absorbed, a mass of granulations takes it place, and the defect is closed by dense cicatricial tissue or by bone. The disk is perforated for the purpose of drainage and to allow the granulations to penetrate easily. For the healing of bone cavities, chips of decalcified bone are used, after thorough disinfection of the cavity and dusting the bone chips and cavity with iodoform, the decalcified bone is rendered thoroughly aseptic and antiseptic by keeping it immersed in sublimate alchohol (1-500). The wound is completely closed with the exception of the lower angle where a capillary drain of a few threads of catgut is introduced. Rapid healing takes place in one or two dressings, with entire restoration of the continuity of the bone.

His conclusions are,—

(1). Antiseptic decalcified bone is the best substitute for living bone grafts in the restoration of a loss of substance in bone.

(2). Implantation of a bone disk into a trephine hole may be relied on as a hemostatic measure in arresting hemorrhage from the vessels of the diploe, and is a good temporary substitute for the lost portion of cranium.

(3). The packing of an aseptic bone cavity with antiseptic bone chips guards against unnecessary loss of blood and prevents infection by pus microbes.

(4). Capilliary drainage should be established after implantation to remove the accumulation of more blood in the wound than is necessary to form a temporary cement between the bone chips and surrounding tissues.

(5). Packing by bone chips acts as an antiseptic tampon.

6). Secondary implantation can be successfully carried out in treating a suppurating bone cavity after suppuration has ceased, and the cavity can be transformed into the same favourable conditions for healing as an aseptic wound.

Hospital Reports.

MONTREAL GENERAL HOSPITAL.

Condensed Reports of Cases in Dr. MacDonnell's Wards.*

October 4th.—The session has opened with an unusual number of instructive cases in the clinical wards. During the fortnight previous to the opening of the session, five of the beds were occupied by cases of pleurisy with effusion. In four, early aspiration was resorted to and with satisfactory results. One of the cases, that of a man of 30, was interesting from the fact of the fluid having escaped notice for a long time, and from the length of time the patient went about with one side of his chest completely full of fluid and his heart apex displaced to the right of the sternum. Another patient in a similar condition walked to the hospital from the end of St. Antoine street. In one case the fluid partially disappeared spontaneously.

On the 30th September a very interesting case of pleurisy was brought in. Here the cause was traumatic, the patient having had a large stone fall upon his chest some six weeks ago. The distension of the right pleural cavity was extreme. The heart beat two inches beyond the nipple line, and the liver could be felt two inches beyond the costal border. Dyspnœa was very urgent. The temperature was slightly raised. Aspiration showed the presence of pus, and, accordingly, resection of a rib was performed by Dr. James Bell.

The internal treatment of these cases of pleurisy with effusion has consisted of the administration of iodide of potash three times a day, and of concentrated doses of sulphate of magnesia in the morning.

Typhoid Fever.

The cases this year have been of much greater severity than those we have been accustomed to meet, and the mortality has been high. The following notes may prove interesting:—

High Temperature.—A very severe case, occurring in a strong, healthy servant maid, showed a tendency to hyperpyrexia. The thermometer registered 104½° to 105½° for the

* I am indebted for the reports from which the following are condensed to Drs. England and Campbell, house-physicians, and to my clinical clerks Messrs. Adams, Hamilton, Bowes, Murray, McKechnie and Inksetter.

first four days, and neither antipyrin nor antifebrin had any effect whatever. After the first week in hospital the fever abated. There were three distinct rigors on the twentieth day, for which no cause could be found. The patient eventually recovered.

Meteorism.—In the case of a strong man of thirty, who was brought to the hospital in about the middle of the fever, delirium having been very severe before admission, meteorism developed to an extraordinary degree. The abdomen became greatly distended, and brought such pressure upon the chest as to increase the respirations to 56 and to displace the heart and liver. The passage of a long rubber tube brought away a quantity of gas and gave temporary relief. We found it a good plan to leave the long tube in the bowel. However, we failed to avert the fatal result. The autopsy showed that death was the result of typhoid fever without any perforation or peritonitis.

Delirium Ferox.—A Hungarian, aged 35, was brought to hospital in a state of wild delirium, and became so unmanageable that it was necessary to lodge him in the padded room. The diagnosis was very doubtful, but after a few days the high temperature and the character of the evacuations enabled us to decide upon the nature of the case. Murchison mentions just such another case. He was called in to see a German gentleman, who was supposed to be mad. After four days of slight malaise, which had attracted little notice, he passed suddenly into a state of acute maniacal delirium, requiring two men to hold him down in bed. He was thought to be suffering from an attack of insanity, but with these symptoms there was pyrexia, quick pulse, temp. 102°, dry tongue, diarrhœa, but no spots.

Profuse Rash.—The case of a workman from Lachine is notable from the profuseness of the rash. Upon the chest and abdomen the general appearance reminds one of measles. The symptoms were very severe, the system being apparently overwhelmed by the intensity of the poison. There was deep stupor and incontinence of urine and fæces. At the time of death the rash was distributed over all the body.

Syncopal Attacks.—A female patient, one of those from Point St. Charles, suffered in the beginning of the fever from several

attacks of fainting. Stimulants were freely used and recovery from the fever took place, though very slowly. I lost a patient some years ago from sudden and unexpected syncope in the course of typhoid fever. This mode of death has been reported as occurring in acute pneumonia, and in diphtheria it is a common occurrence.

Anterior Poliomyelitis Acuta.

An interesting case of this disease was that of Maggie L., aged 14, who was admitted on the 14th July with sudden loss of power in the left leg. The family history was somewhat neurotic, a sister having suffered greatly from chorea. Six days before admission she was obliged to give up work, owing to a great sense of fatigue. Twenty-four hours afterwards, after walking a short distance, her left leg became quite powerless. She had to be carried home, and has been unable to walk since. There was no loss of consciousness and no pain.

State on Admission.—Marked anæmia; slight pyrexia, the evening temperature running not higher than 100° for the first few nights; slight headache and loss of appetite. There was double vision on the day before the first attack. Pain was never present. All four limbs were enfeebled, as well as the muscles of the back, but in a different degree. The left leg was completely paralysed and its knee reflex abolished, but sensation was unimpaired. The right leg could be feebly moved, and its knee reflex was not quite absent. Superficial reflexes are absent in both lower extremities; no ankle clonus. At the time of admission the hospital batteries were undergoing repair, so that electrical tests could not be applied. However, shortly afterwards it was found that there was no response to the faradic current and a feeble one to the constant in all but the left leg. The weakness extended from the left leg to the right leg, to the left arm and hand, then to the right arm and hand. Lastly, the neck and back muscles became affected. The sphincters and muscles supplied by cranial nerves were never affected.

October 7th.—The patient has now been in hospital over two months, and there is considerable improvement. The anæmia has diminished, general nutrition is improved, and the para-

lysis has disappeared, the change for the better being most noticeable in the muscles of the back, which seem to have been the first to recover, but in the left leg there is no change. There is at present no muscular atrophy, but probably this may be deceptive, owing to the fatness of the patient.

Uræmia.

October 9th.—There are three cases of uræmia in ward 11, each showing prominently a special feature of that condition. On the evening of the 7th of October a man, aged apparently about 50, was brought to the hospital by the police in a state of profound coma. The breath was not alcoholic. The small quantity of urine which was withdrawn by the catheter was heavily loaded with albumen. He was well purged with croton oil, and put into a hot air bath. Subsequently, pilocarpin was given by hypodermic injection (gr. 1-6) with a very good result. Convulsions had occurred also. In twenty-four hours the coma had disappeared, but he was still in a very stupid condition, unable to speak and breathing noisily, owing to the flapping of his lips. To-day, *i.e.*, 48 hours after admission, there is still great mental confusion, though he is able to say his name. At the clinic it was noticed that the respiration, which had previously been noted as slow, had now a rhythmic character, and was inclined to be of the Cheyne-Stokes variety.

October 10th.—The improvement was but transient, the convulsions recurred with increased violence and death ensued.

It was confidently expected that marked renal changes would be found at the autopsy, but such was not the case. No cause of death was found, unless the kidneys were diseased to an extent merely recognizable with the microscope. The symptoms present, the convulsions, the coma, the scanty urine loaded with albumen, rendered any other diagnosis than that of uræmia highly improbable. The body being unclaimed, it was injected with preservative fluid before the kidneys were removed, and consequently their finer structure could not be examined, but they were of normal size and appearance.

What was the cause of the convulsions and the coma? 1. There is a slight chance of its being due to early renal changes. 2. A poison, e. g., alcohol or opium,—against this

interpretation is the fact of his complete recovery from the original coma and the recurrence of the convulsions.

The second case showed evidences of uræmia in a milder degree. The patient had had evidences of chronic Bright's disease for some years, dating from an acute nephritis nine years ago, which directly followed an attack of erysipelas. At present there are albuminuria, hyaline casts, and general dropsy, but the most important symptoms are the persistent frontal headache and the attacks of vomiting to which he is subject.

The third case, that of a baker, aged 34, was also one of chronic uræmia, and its principal manifestation was extreme dyspnœa. At first there was orthopnœa, but after a few days treatment this subsided. There was no dropsy. The patient for a long period had regarded himself as an asthmatic. It was difficult to determine whether these attacks were due to true asthma or were merely evidences of uræmia.

Progressive Muscular Atrophy.

Two cases have been in hospital lately. The first case, that of a woman long past middle life, illustrates two points in connection with the etiology of the disease, its origin in fright, and its occurrence in members of the same family. The wasting began two years ago, immediately after she had experienced a shipwreck on the Atlantic. Eight years ago she had been under my treatment at the Montreal Dispensary for ulceration about the knee, which was thought to be syphilitic. The family history is interesting. The father died from the effects of an accident; the mother, an uncle and an aunt all died of "paralytic strokes." Two sisters of the patient died at the ages of 47 and 50, having suffered from a disease said to be exactly similar to that of the patient.

The occurrence of progressive muscular atrophy in families has been reported. Recently, the following notices of this point have fallen under my observation. In the last number of the *Revue des Sciences Médicales*, Lichtheim reports the history of a family of four brothers, three of whom suffered from progressive muscular atrophy; and in the same journal there are two other histories of families—in one two sisters developed the disease shortly after puberty. In a history

reported by Herringham in *Brain*, the family tree, representing five generations, shows that 19 male members were atrophic; the remainder, to the number of forty-six, including all the women of the family, entirely escaped.

An interesting family tree will be found in a paper by Dr. Osler in *Seguin's Archives* for 1881.

The second case did not show such marked symptoms. The wasting and the loss of power began after an illness, which was characterized by pain in the stomach and vomiting. The wasting was very rapid. The patient was a street car driver, and suffered much hardship in the spring from the exposure to cold and wet incidental to his calling. He had been three months ill previously to admission. The right arm and shoulder first became weak, and there were such sensations as pricking, tingling and formication, and the symptoms extended to the forearm and hand. Within two days the left arm and hand became similarly affected. In two weeks the legs became affected, but to a much less degree. There was considerable pain and tenderness on pressure in the calves of the legs and the inner side of the thighs. The upper extremities are much wasted, the lower less so. There is dull pain in the arm and shoulder on both sides and exaggerated tenderness of the muscles of the arm and forearm. The extensors of the fingers and thumb are wasted, but there is no wrist drop. Patellar reflexes are normal. Fibrillar tremors are elicited by percussion over the shoulder muscles.

After a month's residence in hospital there was marked improvement.

Nov. 5th.—The progress of this case is such that a diagnosis of progressive muscular atrophy cannot be entertained. Improvement is distinct. Most probably it is a sub-acute poliomyelitis, and the sharpness of the attack at the outset rather favours that view.

Aortic Aneurism.—In the case of a man aged 50, a lumberman, there are well-marked evidences of the presence of an aneurysm of the ascending and transverse arch. The patient applied first to Dr. Major, the laryngologist, for the relief of his hoarseness, and was by him referred to me. The left vocal cord was paralysed. An interesting point in the case is the presence, in a very marked degree, of the sign on

palpation of tracheal tugging, an evidence that the tumour is in contact with the trachea or one of the large bronchi, and also that consolidation of the contents of the sac has not far advanced. The clanging cough and the dyspnœa have been much relieved since he began the iodide of potassium treatment.

Acute Spinal Meningitis.—Bridget M., aged 10, caught a severe cold on the 11th of August, 1889. Hitherto she had been in very good health. The father is a drunkard, but there is no history of nervous disease in the family. Four days afterwards she had refused to eat her meals, had a severe attack of vomiting, which was followed by constipation and severe headache. For the next three or four days she was very feverish and was said to be delirious. She then seemed to improve slightly, but the gait was staggering and the articulation became thick and indistinct. The mother states that on one occasion she observed that the child was squinting. The patient was admitted to hospital on the 21st August, when she appeared to be in very great suffering. The body was held continually in one position on the side, with the back stiff and the head well retracted. The abdomen was hard and scaphoid. Meningeal streaks were readily obtained. Pressure on the legs caused great pain. Reflex action generally increased; bowels very constipated, but there is no disturbance in the function of urination; pulse, 120–140. Respiration (20–24) is somewhat irregular at times, but is not of the Cheyne-Stokes character; no dyspnœa. During the 85 days of illness the symptoms varied slightly. Emaciation and debility increased. Pupils varied in size at different periods. The fundus, which at first was quite normal, showed optic neuritis a few weeks before death. There were no signs of paralysis. Death occurred before the irritative stage was passed. Patellar reflex disappeared as the disease advanced. There was no continuous vomiting, general headache or paralysis of cranial nerves, hence it was thought that the disease was seated in the spinal and not in the cerebral meninges.

Of the clinical features of the case, the most remarkable is the range of temperature, which appears in rhythmic waves. The first fifty-six days in hospital might, by the chart, be divided into sections of four days each, and on the evening of the first

day of each section the temperature ran to 101° or 102°; then on the three remaining days it went down to a lower degree, until on the fourth night it was normal; then a rise to 102° and a gradual fall in the next three days. The pulse was frequent (120) during the period of elevated temperature, but fell to 90 and 100 when the temperature fell to normal.

The following abstract of the post-mortem changes is furnished by Dr. Wyatt Johnston, pathologist of the hospital: "Emaciation extreme. Cerebral ventricles are distended and contain seven ounces of fluid. Slight turbidity and œdema of pia at base of brain, not extending along the sylvian fissure. No lymph. No tubercles found in microscopic examination of the vessels of the perforated spaces, arteria profunda cerebri, sylvian arteries, or choroid plexus. No cerebral pachymeningitis, or disease of the bones of the skull. Slight optic neuritis. A severe and extensive pachymeningitis throughout entire spinal canal, involving sheaths of spinal nerve roots. Abundant fibrinous exudation between dura and bones, which has partly organized. Spinal pia œdematous. Spinal cord normal, except for slight grey degeneration in postero-internal tracts. Peripheral nerves (sciatic, ant crural and brachial plexus) in both sides normal. No disease of bones of vertebral column. Localized emphysema of left lung, with recent pneumothorax. No tubercle anywhere. Cause of pachymeningitis not detected."

The pneumothorax, I take it, must have immediately brought about the end, because it is unreasonable to suppose that in the state of extreme debility in which she passed the last three weeks of her life, she could have stood the shock of the sudden entry of air into the pleura.

Diseases of the Stomach.

Gastric Ulcer (Oct. 31st).—A well defined case of gastric ulcer, and two of cancer of the stomach, have lately been in the wards.

The case of ulcer occurred in a young married woman, aged 23, who entered on the 28th August, with epigastric pain, aggravated to an intense degree by food, and relieved

by free vomiting. The ejected matter consists of partly digested food and a quantity of slimy mucus, with here and there streaks of blood. These symptoms have been present for the last seven months, and are thought to result from the debility which followed a difficult labour a year ago. There had been one sharp attack of hæmatemesis. In the middle of the epigastrium there is a spot of exquisite tenderness.

She left the hospital almost free from any gastric symptoms on the 3rd October. The treatment consisted of physical and physiological rest, a diet of milk with soda water exclusively, and at first a mixture of carbonate of bismuth, carbonate of soda and tincture of belladonna. When improvement had well set in, Fowler's solution in five minim doses was administered.

Cancer of the Liver (probably) Secondary to Cancer of the Stomach.—F. O., carpenter, aged 55, admitted August 29th, 1889; no distinct family history of cancer. For some years had been liable to slight attacks of dyspepsia, but with this exception had enjoyed good health until four months before admission, when he began to suffer from pain at the epigastrium and upper part of the abdomen, flatulent distension after food, and vomiting, the latter presenting the following characters: it was not present every day; there were intervals of several days when he was entirely free from it; the vomiting followed at a considerable interval after the taking of food, and the quantity ejected at a time was stated to be as much as several pints; the vomited matter consisted of a sour smelling, sometimes watery, sometimes slimy fluid. On several occasions before admission it was noticed to be of a dark brown color with a sediment ("coffee ground"). The pain was never in any way affected by the vomiting. The bowels have been obstinately constipated. These symptoms increased rapidly in severity, and soon the patient lost appetite for food and became rapidly emaciated. In June last he first noticed that the upper part of the abdomen was prominent and hard. There has never been any jaundice nor have the legs been at any time swollen.

On admission patient was very thin; weighed 129 lbs (former weight 167 lbs). The skin is somewhat lemon-coloured, but

there is no jaundice. The liver is enlarged in the right mammary line, measuring eight inches, and extending quite four inches beyond the margin of the ribs. In the middle line the edge of the liver reaches to within two inches of the umbilicus. There is marked tenderness on pressure over the liver, the surface of which is smooth, but just in the upper line a small nodule can be felt. Percussion over the left hypochondrium gives an unduly tympanitic note. The abdominal veins are not dilated. There is no ascites whatever. Splenic dulness is not increased. Tongue large, flabby and coated. Suffers continuously from pain, mainly in left hypogastrium, which is increased by food and not relieved by vomiting. The attacks of vomiting occur at intervals of two or three days, and are of the characters above mentioned. Since his admission there has not been any "coffee-ground" appearance of the vomited matters.

October 31*st*.—Since admsssion there has been very severe pain in the upper part of the abdomen and recurrent attacks of vomiting. There has not been any loss of weight. The ejected matter does not contain hydrochloric acid.

Salol Test.—Dr. England reports that he found the salicylic re-action in the urine two hours and a half after he had administered twenty grains of salol by the mouth.

Cancer of the Pylorus; Very Rapid Progress; Death; Autopsy.—Alexander E., a sailor, aged 57; admitted October 15th, complaining of severe abdominal pain, frequent vomiting and obstinate constipation. He states that he was in good health until about three weeks before admission, when the bowels became very constipated, and at that time he noticed that there was a painful lump in the epigastrium. A dose of castor oil freely moved the bowels, and after that the lump is said to have disappeared, but quickly to have returned. It was only fifteen days ago that he began to vomit, and he noticed that as soon as the vomiting set in the pain became very much worse. The bowels moved freely for about five days after the vomiting occurred, and then remained closed for the last ten days. Vomiting occurs usually about four hours after food. The ejected matter is liquid and the quantity got rid of is very great. He

states that his usual weight is 150 lbs. His present weight is 112½ lbs. No family history of cancer.

Emaciation is extreme; no jaundice, but complexion is very sallow; suffers extremely from pain in the epigastrium, which is markedly prominent and very tender on pressure, especially at a point about two inches from the umbilicus and one and a half inches from the middle line, where a hard nodule can be felt. The liver is of normal dimensions in the right lobe, but the left extends to within two inches of the umbilicus. The liver surface is smooth and its edge sharply defined.

October 30th (37th day of illness).—Vomiting has been continuously present and is very distressing. It occurs whenever anything is taken into the stomach, and consists of a large quantity of watery matter, which contains no hydrochloric acid. When salol (20 grains) is given by the mouth there is no evidence of the presence of salicylic acid in the urine for six hours, corroborating the evidence already stated as to the motor insufficiency of the stomach. The bowels are obstinately constipated, but can with great difficulty be made to move by castor oil and by enemata; tongue coated; constant desire to take food. Emaciation has been very rapid. In ten days he has lost fourteen pounds. Within the last twenty-four hours he has been in a moribund condition; very delirious, evidently dying by starvation.

Autopsy.—"Great distension of stomach. A zone of ulceration extending around the entire circumference of the pylorus. On section the gastric wall in its entire structure is infiltrated with scirrhus, which has also extended into neighboring organs, the right kidney and supra renal capsule, the glands about the pylorus, the retro-peritoneal and retro-thoracic glands at the level of the diaphragm. The œsophagus at the cardia and bile ducts are slightly pressed upon by these enlarged glands. The growth has directly extended to the capsule of the liver beneath the left lobe, but no secondary nodules occur in the liver substance." (Dr. Johnston's report.)

Herpes Zoster in Connection with Disease of the Spine.—A

woman past middle life was admitted, complaining of pain in the lower part of the lumbar region. No cause could be discovered in the abdomen. but there was found a prominence of the spine of the dorsal vertebræ, in the neighborhood of which there was very marked tenderness upon percussion. After being two days in hospital, there appeared an eruption of herpes zoster, which began at the prominent spine and ran down the side of the chest and abdomen in the direction of the umbilicus.

Recurring Tonsillitis as an Evidence of the Rheumatic Diathesis.—In the case of a young man who had his first attack of rheumatism (with endocarditis) there was a history of five distinct attacks of acute suppurative tonsillitis.

Pneumonia.—Nov. 9th, 1889. Three cases have been in my wards during the last week. The first of left apex pneumonia resolving rapidly, the second a more serious case, one of right apex and left base, which ran a more protracted course,* and in the third, a fatal case, the disease involved the whole of the left lung except the apex, and the middle lobe of the right lung as well. The respirations were very rapid, 80 and 90 on the day after admission. Death occurred the day after the crisis from œdema of the lungs.. Loud mucous rales pervaded both sides of the chest. There was throughout no expectoration. The most interesting point in the autopsy, the discovery that a fibrinous exudation, distinctly croupous, occupied the trachea, in fact, a membraneous tracheitis existed. There was commencing acute tubular nephritis on one side. There had been albumen in the urine.

Cirrhosis of the Liver.—A woman aged 63 died in 24 ward of the effects of portal obstruction. She had entered the hospital on July 26th. A history of spirit drinking; venous stigmata; a moderate amount of fluid in the peritonæum; extent of liver, dulness in right mammary line, 2½ inches; the splenic dulness had increased to four inches in the axillary line. Had suffered from bronchitis and shortness of breath upon exertion for the last seven years, as well as from pain in the left inguinal region.

* Dec. 5th, 1889. The consolidation never underwent any resolution. The patient, aged 44, an alcoholic, died in the fourth week, from the results, apparently, of the concomitant bronchitis.

After some weeks residence in hospitals he went home, but returned in a fortnight much worse. It was now noticed that at about two inches below the costal margin a firm body could distinctly be made out upon palpation, and this was thought to be the edge of a large liver. Contact of the finger caused no pain. Appetite bad; much thirst, and latterly vomiting. Jaundice appeared about three weeks before death, but was transient. A week before death there was wandering, and at the end she was comatose.

Autopsy.—Peritonæum contained 330 ounces of fluid. The liver was typically cirrhotic (wt. 1100 grammes*). It is probable that a quantity of serum must have collected between diaphragm and upper surface of the liver.† There is no other explanation of the fact that the edge of the liver had been felt not only by me, but by many of the members of the class, extending a good three inches below the ribs. The spleen was enlarged (wt. 460 grammes*). Emphysema of the lungs and small spots of pulmonary hæmorrhage. A pedunculated ovarian cyst, as large as a fœtal head, was found at the brim of the pelvis. Kidneys large; veins full.

Supposed Syphilitic Gumma on the Cortex of the Brain.—A man aged 25 was admitted with sore throat on 1st September, 1889, and it was found that he was just recovering from a chancre of the glans, and that a few weeks previously he had had a swelling in the groin. The primary sore made its first appearance in July, 1889, and on the 7th October he was seized with a "fit," which began with a twitching and up drawing of the left angle of the mouth, and afterwards he lost consciousness and was taken to the hospital in the ambulance, but soon discharged. On the following day, while resuming his occupation (an hotel servant), a similar seizure took place. Recovery was rapid, for I saw him a few minutes after the occurrence, and he had recovered himself completely. The bystanders told me that there was "working" of the face, that he had suddenly turned

* Normal weight of liver is 1490 to 1700 grammes, and that of the spleen is 140 to 200 grammes.

† Vide Murchison on Diseases of the Liver, third edition, p. 333.

round several times and had fallen to the ground. There did not appear to be any loss of consciousness.

On admission, on the 16th October, the tongue was found recently bitten; mental functions obtuse; severe pain on right side of head, from the centre of forehead to as far back as the right ear, throbbing and hammerlike, and much worse at night: tenderness on pressure and great pain on percussion; no optic neuritis. Ordered inunctions of blue ointment. In three days the pain in the head was nearly gone, and he was enabled to sleep all night, but tenderness remained some days after the pain had disappeared. He remained in hospital until the 9th November, and during that period there were clonic spasms of the right arm on several occasions, and it was once noticed that these slight clonic spasms affected the leg. No twitching of muscle was noticed after the 27th October.

Reviews and Notices of Books.

Chemistry, General, Medical and Pharmaceutical. By JOHN ATTFIELD, F.R.S. Twelfth Edition. Philadelphia: Lea Brothers & Co. 1889.

Attfield's is probably the best reference book on chemistry for the general practitioner and druggist that is written in English. It is so well and favorably known that an extended notice is scarcely necessary. This twelfth edition contains briefly the chemistry of the British and United States pharmacies arranged so as, at the same time, to illustrate and teach the general principles of the science. It excludes all reference to compounds which are as yet of interest only to the scientific chemist, but contains more or less of the chemistry of substances recognized officially, or in general practice as remedial agents. The present edition contains such alterations and additions as the advances in principles of chemistry and its application to pharmacy demand. A new feature is a more extended section on organic chemistry; these compounds are classified on the modern system, and, like the rest of the book, are chiefly those of interest

to the followers of medicine and pharmacy. The volume closes with a very comprehensive index, containing no less than nine thousand references, which enhances greatly its value for consultation in the course of business or professional practice.

A Manual of Chemistry for the Use of Medical Students. By Broudrette Symonds, A.M., M.D. Philadelphia: P. Blakiston, Son & Co.

This little book is designed to contain, as the preface states, parts of general chemistry which it is necessary for medical students to know who are going up for the United States Government Medical Service or for their degrees in medicine. The whole subject of chemistry is briefly summarized, special chapters being devoted to water, air and urine, these being more fully dealt with. It is a book intended to float a slow student over the slight impediment offered by a badly conducted examination, or to be used by one who, having had a thorough training in chemistry, wishes to refresh his memory on the facts of chemistry.

Notwithstanding that every one of the 150 pages of this book is bristling with facts and figures, its utility as a manual for medical students is very questionable from the teacher's standpoint.

That there should be such a demand for text-books like Dr. Symond's manual, shows something radically wrong both in the requirements of the examiners and the method of imparting a knowledge of chemistry in medical schools.

Medical students should be required to show at an examination that they have a sufficiently broad grasp of the science to enable them to apply its principles and facts to the practice of medicine and surgery, and they should be taught those theories and useful facts in a way that tends to develop to the greatest possible extent their powers of accurate observation, and at the same time to give them scientific habits of thought. Chemistry, well taught, can do this far better than any other subject in the students' curriculum.

As a rule, however, medical students are badly taught and

equally badly examined in this subject, so it becomes what it never should be, viz., a severe tax on the memory; the natural result follows—cram books and hard reading before examination and a lifelong blissful, ignorance of chemistry after.

Twentieth Annual Report of the State Board of Health of Massachusetts. Boston, 1889.

The State of Massachusetts has always taken the lead in sanitary matters. The past efforts of her Board of Health have yielded most valuable results. The present volume is quite up to the high standard of its predecessors. The work of the board seems to have been admirably carried out, and the papers contributed to the publication are of the highest scientific value.

During the year ending Sept. 30th, 1888, but thirty-two cases of small-pox came under the notice of the board. Several of these occurred in paper mill towns, and were probably connected with the importation of rags.

Some interesting investigations on food adulteration have been carried on under the auspices of the Board. The cruel analyst has made several of our old friends to appear under very different faces. "Pure" or "strictly pure" Vermont maple sugar is not produced in the maple groves of that lovely state, but has its principal origin in certain mixing houses in and about Boston. Of forty-six samples of honey, more than half were adulterated with corn glucose, twenty-one genuine and twenty-five adulterated. One specimen, which bore no label and was almost wholly glucose syrup, contained the dead body of a honey bee, inserted doubtless to lend an air of genuineness. In nineteen colored candies and four colored sugars no poisonous material was found.

The patent medicines come in for their share of criticism, and especially the kind of remedy advertised as tonic and nerve stimulant. When Artemus Ward, long ago, spoke of "a vegetable tonic on a broad whiskey basis," he was not far from the truth. "Whiskol," a non-alcoholic cure for the drink habit, contained on analysis 28·2 p.c., by volume, of alcohol. Harriet Hubbard Ayer's Vita Nuova consisted of a strongly fortified

wine *plus* cocain, while the Recamier Cream Balm and Lotion, prepared by the same philanthropist, was found to contain mercury, probably in the form of corrosive sublimate.

Visitors to Boston who have been attracted by the shop of the seven Sutherland sisters, the hair of each of which reaches the ground, the extraordinary result of the use of the Seven Sutherland Sisters' Hair and Scalp Cleaner, also their Hair Grower, will be interested in knowing that the cleaner is simply a mixture of borax and soap, and the grower a diluted mixture of bay rum, and possibly some hamamelis and Spanish flies.

A very valuable paper on "The Micro-organisms in the Air of the Boston City Hospital," is the work of Mr. G. R. Tucker. In our limited space we cannot do more than commend to our readers its careful perusal.

A volume such as that of the Massachusetts Board reflects credit upon those who have accomplished the work no less than upon the Government who have carried out the undertaking.

A Treatise on the Science and Practise of Midwifery. By W. S. Playfair, M.D., LL.D., F.R.C.P. Fifth American from the Seventh English Edition. Edited with Notes and Additions by Robert P. Harris, M.D. Philadelphia: Lea Brothers & Co. 1889.

Since the appearance of the fourth American edition, four years ago, a decided advance has been made in the practise of midwifery. Antisepsis is no longer on its trial, but the gospel of cleanliness has prevailed, and puerperal mortality has been considerably reduced. The improved Cesarian section operation is yielding magnificent results, and rapidly narrowing the field of craniotomy, so that it really seems as if some day the dream of Tyler Smith might come true and craniotomy be no more. Dr. Harris has rendered good service in bringing the statistical records of the various section operations down to the close of 1888. In four years the mortality of Porro's operation has fallen from fifty-eight per cent. to less than twenty per cent., and that of Cesarian section from forty-five per cent. to twenty per cent. In Germany Cesarian section shows a mortality of twelve per cent. The

notes and additions by Dr. Harris are copious and enhance the value of the work, especially for American readers. In most English works the subject of abdominal palpation does not receive the attention it deserves; the same fault exists in Playfair's book, and it is to be hoped that in subsequent editions it will be remedied. On the whole, this edition is brought well up to date, and can be confidently recommended as a reliable text-book.

The Physicians' Visiting List (Lindsay & Blakiston's) for 1890. Thirty-ninth year of its publication. Philadelphia: P. Blakiston, Son & Co.

This well-known visiting list contains a large amount of useful information. Concise and accurate chapters are devoted to poisons and their antidotes, new remedies, aids to the diagnosis and treatment of diseases of the eye, disinfectants, incompatibles, examination of the urine, etc., etc. In addition, there are blank leaves for visits, consultations, obstetric and vaccination engagements.

The Medical News Visiting List. Philadelphia: Lea Bros. & Co. 1890.

This well known and much appreciated list comes to hand for the year 1890. It contains a great amount of useful information, in addition to the blank leaves for visits and previous engagements. There are tables of weights and comparative scales, lists of new remedies, table of doses, incompatibles, poisons and their antidotes, directions for the performance of artificial respiration, and for tying arteries, &c., &c.

Society Proceedings.

MEDICO-CHIRURGICAL SOCIETY OF MONTREAL.

Stated Meeting, November 1st, 1889.

DR. SHEPHERD, FIRST VICE-PRESIDENT, IN THE CHAIR.

Dr. JOHNSTON exhibited a pathological specimen from a case of chronic suppurative otitis media, in which there was, on the anterior surface of the right petrous bone, posterior to the edge of the semi-circular canal, and anterior to the region of the mastoid cells, a perforation a quarter of an inch in diameter, with thickened rounded edges. At the edges, slight adhesions exist between the petrous bone and the corresponding portion of the dura mater; but the dura mater is readily removed, and is intact. The superior petrosal sinus is plugged with a recent thrombus; the right lateral sinus is filled with greyish-brown, fetid fluid, extending half way up to the torcular herophyli. The inferior petrosal sinus and the internal jugular vein are filled with a similar material, their walls thickened, rough, and, in places, necrotic. On the external aspect of the inferior petrosal sinus the bone is exposed. On sawing into the temporal bone, the cavities of the middle and internal ear are found filled with a cheesy, fetid mass, which consists microscopically of leucocytes, crystalline fatty acids and bacteria; the drum membrane represented only by a few fibrous bands holding the ossicles in place. The tympanic cavity, the Eustachian tube, obstructed by granulations, and its surfaces, in places, have become adherent. Near the mastoid process the soft parts are free from œdema and infiltration. The external auditory meatus shows no obstruction. The results of further examination of the organs of the body are as follows: Heart contains very little blood; organ anæmic but muscular; substance and valves normal; right lung partially consolidated at lower lobe behind; left lung crepitant throughout; pulmonary vessels free, no infarcts; spleen greatly enlarged, measures eight inches by four and a half; weight, 520 grammes; organ very soft; the anterior border shows several infarcts each with thrombosed vessels at its apex; splenic artery and

vein free from clot; kidneys in a state of parenchymatous nephritis; brain itself shows nothing beyond a single small white spot of infiltration, the size of a bean, in right optic thalamus, half an inch posterior to its anterior extremity. The rest of the P.M gave negative results.

The history of the case in brief is as follows: Patient, male, aged 28 years; admitted into the General Hospital 15th October, complaining of headache, pain in the back, and sore throat. These symptoms set in one week ago, and continued about the same until time of admission, when the headache seemed to increase, and at times so severe as to prevent sleep; no vomiting; temperature, 104; pulse, 110. Examination of heart: apex but one inch below and one inch inside the nipple line; superficial dulness from lower border of third rib downwards to extent of four inches; laterally, from mid-sternum to the left, to extent of three inches; slight blowing systolic murmur both at apex and pulmonary area; second sound slightly accentuated. Splenic dulness from eighth rib to extent of four inches downwards; swelling and redness of fauces, tenderness on pressure at angles of jaw. Examination of the rest of the organs negative. Ears not examined. Two days after admission patient became slightly delirious; had severe chill; temperature 101½° in the evening. Ten days after admission, examination of the heart showed a slight increase in the area of superficial dulness from that found on patient's admission; the murmurs at the base became louder and harsher. A few purpuric spots made their appearance on the extremities; delirium still continued; had chills each day; temperature fluctuating between 98° and 104½° in the morning, and 99° to 106° in the evening, and on the eleventh day after admission into the hospital, patient died.

Dr. MILLS inquired whether there was any P.M. appearances to explain the heart murmurs heard during life?

Dr. JOHNSTON replied negatively.

Dr. MILLS thought that the explanation of murmurs in such cases, especially as they increased towards death, was dilatation, with possibly weakness of action. The dilatation was due probably to defective nutrition, leading to a loss of elasticity. He

had noticed this tendency to dilation in the hearts of dying animals on which he had experimented.

Dr. BELL mentioned an analogous case of septicæmia following perityphlitis, in which cardiac murmurs developed under observation, and became very marked before death. No valvular or other cardiac lesion being found on P.M. examination.

Dr. JAMES STEWART saw the patient 24 hours before death, and coincided with the view expressed by the physician in attendance that the case was one of ulcerative endocarditis. There was a loud systolic murmur at the base not propagated into the vessels of the neck. The heart's dulness was increased and the apex displaced downwards and outwards. All the signs pointed to dilatation of the heart. It appears to me highly probable that such dilatation can easily be accounted for by the fever and anæmia.

Dr. BULLER said: I notice the aperture leading from the antrum into the cranial cavity is a pretty large one, and has probably been formed quite gradually, as the edges are smooth and rounded. I would like to know what was the nature of the contents of the tympanic antrum and the aperture in question. I ask this question because it appears to me that this may have been a case of cholesteatoma, such as we sometimes meet with in chronic suppurative-otitis media. This collection of epithelial scales, pus cells, cholesterine and fatty detritus, tends to cause erosion of the bone, and it occurs to me that the aperture might have been formed by the action of such an accumulation.

Dr. BROWN said the heart must have been dilated, from the fact that the beat was considerably displaced beyond the nipple line. The patient had never at any time complained of any symptom of ear disease.

Dr. JOHNSTON replied that the heart, at the autopsy, was not dilated nor displaced to the left. The displacement of the apex beat might have been caused by pressure of the enlarged spleen, which might possibly also have influenced the murmurs. The cheesy material filling the tympanic cavity contained no epithelial cells nor cholesterine crystals. There was no doubt of the bone disease being chronic.

Dr. ALLOWAY exhibited (1) a specimen of a large multilocular ovarian cystoma, weighing forty-five pounds, which he had removed some weeks ago from a patient forty-eight years old. The adhesions were extensive and the drainage tube used. Recovery was uninterrupted.

(2) Two cystic ovaries with their tubes. The case was one of recurrent pelvic inflammation. The chief symptoms caused by this condition were constant vomiting, headache and pelvic pain. All other methods of treatment had been tried unsuccessfully. It is now three months since the operation, and there has been no return of symptoms.

Dr. ENGLAND gave a history and exhibited specimens of a case in practice. The history is as follows: Patient aged 26 years; married; menstruated regularly until January, 1889, and from this time until three months later ceased to do so, when suddenly seized with a severe attack of metrorrhagia, which, under suitable treatment, soon ceased. Nothing unusual occurred until 18th October, when Dr. England was called to attend this patient, who thought herself about to give birth to a child. The patient was and had been for several hours suffering severe pains, apparently expulsive in their nature. Upon examination, Dr. England was surprised to find an empty vagina; a small, firm, fixed and retroverted uterus; the cervix very slightly dilated; no abdominal tumor or change in the breasts could be made out. The patient was only relieved of her pains some hours later by the removal of what proved to be an imperfectly developed ovum.

Dr. JOHNSTON said the specimen showed distinct traces of amnion and chorionic villi at an advanced stage. This would probably be recognized by microscopic examination. No fœtus was present. The intense pain might be accounted for by the supposition that if the case were one of missed abortion the condition of the uterine mucosa might be similar to that in membranous dysmenorrhœa.

Dr. ALLOWAY said that the case was most probably one of missed abortion; that pregnancy ceased about the third month, and that the uterus did not expel its contents for several months

afterwards. The retroplaced uterus incarcerated in the pelvis might have accounted for the delay in expulsion. This would also account for the very severe pain experienced. He (Dr. Alloway) had reported a similar case to the society some three years ago, and he thought, under the circumstances, that Dr. England had adopted the proper treatment, but would advise in another similar case that every effort be made to replace the uterus before the induction was resorted to. As a rule, the uterus in such cases is not absolutely fixed by adhesions at the fundus; it is simply impacted in the pelvic cavity, otherwise sterility would more than likely have been absolute.

Dr. McConnell related a case of a somewhat similar nature. Mrs. S., aged 42, has large family; six months previous to my seeing her the menstrual flow had not come on, nor did it come the following month; but a week or so after, she had pains and a profuse flow, and she supposed she had had an abortion. She was regular at the next four periods, when I was again called to see her; pains and flowing had continued for some days and she became alarmed. I found, on examination, a membraneous sac projecting from os, which was easily removed; it was about the size of an egg; a bladder-like sac filled with fluid, and a small fœtus floating in it. The fœtus had perished at the time of supposed complete abortion, and although menstrual periods had come on regularly after (there had been more lost than usual) it had remained four months after.

Dr. Roddick exhibited a mass of tuberculous glands removed from the neck of a young girl. Both sides of the neck were engaged in the disease, and were operated upon simultaneously, upwards of eighty glands being removed through the two incisions. The patient was discharged well on the eleventh day after the operation. There was no evidence of tubercular disease elsewhere. Her maternal uncle died of phthisis.

Dr. Mills exhibited a dozen small calculi, of the size of very small peas, several like duck shot, taken from the urethra of a dog after death. They had been diagnosed during life by the catheter. Operation not being permitted, the dog died comatose. Bladder greatly distended.

Dr. Ruttan here mentioned that the examination of Dr. Roddick's specimen of vesical calculus exhibited at the last meeting proved that it was purely cystine.

Selections.

The Moods of the Sane.—It has been said that, "speaking scientifically, we cannot affirm that anybody is perfectly healthy." If the pathologist can detect the symptoms of disease in the most apparently healthy body, no less certainly can the neurologist indicate subtle manifestations in the mental states of the sanest amongst us, which serve to warn us how perilously near we may all come at times to mental derangement. Just as it is impossible to set up a standard of bodily health of universal application, so is it with the mind; one man's measure of mental health cannot be taken as that of another. "Health" and "whole" are both derived from the Anglo-Saxon term, *hâl*, and no one man has the completeness of either bodily or mental soundness at any one time. We may be sane (safe, sound), but at best only relatively, and the varying moods may often be strangely like the true persistent phases of the acknowledged alien. There are few of us who have not moments of depression or abnormal excitement, which, if unduly prolonged, would make us the objects of unpleasant attentions at the hands of our friends, and not one of us can say at any time that we shall never find those unhappy moods persist. Apart, however, from any such painful forebodings, it is an interesting subject to consider some of those mental attitudes of the perfectly sane, and trace their causes to their actual source. There is a posthumous paper in the recent number of the *Neurologist*, by Dr. Milner Fothergill, which deals—in the pleasant and instructive manner for which its distinguished writer was so celebrated—with this interesting question. If we would rightly know the workings of the human mind in their varied conditions, we must study them, as the brilliant author tells us, in the insane asylum. What angry man amongst us may not find food for reflection, and learn the habits of self-control from the incoherent frenzy? What garrulous, self-centred man may not be rebuked when he sees his infirmity a little magnified in the flow of the talkative maniac?

The delusions of the over-sanguine, the groundless fancies of the visionary, the baseless conceptions of the jealous, the morbid religiosity of the despondent man, all find their legitimate projections in some fixed condition common enough in the dread abode of the insane, and all have lessons for us. The asylum held up the mirror to the observant eye of Dr. Milner Fothergill, showing him our natural and healthy moods when perverted by disease, mismanagement or neglect, into forms of mental disorder. A bad habit or the dominance of an unfortunate predilection may disturb the balance of an otherwise healthy mind, as effectually as the touch of a magnet on the balance wheel of an exquisite watch will impede its regular motion.

How easily is our mental balance disturbed! A single serious reverse may blight a man's hopes for life, yet with another and a sterner habit of thought the advancing phthisis of a Richard Jeffreys will not have the least ill effect. What a variety of moods are caused by food alone! A hungry man can scarcely be termed quite sane in comparison with one who is comfortably digesting the dinner of one of the "city companies."

A cynic might turn upon us, and declare that the man who has just dined well evidences his cerebral disturbance by the ease with which a liberal subscription can be obtained from him, and that his less replete moments are his prudent and normal ones. When the Church desired to reduce us to a proper sense of our deserts and shortcomings, she bade us fast, and as fasting has always been associated with penitence, it might be argued by a theologian that we are more truly our real selves when hungry than full. Andrew Boorde, the monk-physician, in his quaint book, *The Dyetary of Health*, rather inclines to the "city company" idea of sanity, when he advises his readers to "Fyrste lyne out of syn, and folowe Christes doctrine, and then vse honest myrth and honest company, and vse to eate good meate, and drynke moderatly."

Shakespeare thought that the "lean and hungry" looking Cassius must naturally be dangerous, and the general testimony of English writers at any rate is to the close connection between fat folk and good temper. Dr. Fothergill was a grand example

in himself, and we can picture the relish with which he wrote, "When the brain is well fed it has a sense of well being; when it is ill-supplied with blood, it is irritable, miserable and despondent." But alas! the very process of feeding the brain and making general contentment in the body too often vitiates the blood, and, as the old writers would say, "disturb the humors." The good feeder gives a standing invitation to the gout, and the gouty material in the blood makes a man "choleric," that is to say, hasty and irritable. The over-fat, amiable man has fits of "the blues," he often descends to the melancholy mood, and then, as old Burton says, "he is the cream of human adversity, the quintessence, and upshot." A disordered liver has made many a one think he has sinned the unpardonable sin, and a good purge has often lifted a burden from the conscience as heavy as that of Bunyan's Pilgrim. Dr. Fothergill thought that the atmospheric conditions of Bath and Bournemouth are distinctly answerable for their religious tone, whilst the tonic effects of Clifton have much to do with its intellectual activity. It would be interesting to compare Margate and Brighton with the special moods of their visitors; but these theories may easily be pushed too far, and we might find ourselves inquiring what are the characteristics of Monte Carlo which foster the gambling spirit, and what makes the Neapolitans so light-hearted and frivolous. Perhaps the diet has even more to do with the moods of the sane than atmospheric conditions. An old adage says that, "he who drinks beer thinks beer," but there is beer and beer. The German philosopher stimulates his brain to the highest intellectual exercises on beer, while our working classes deaden their not over active cerebral organization on something called by the same name. Whether we are as sane as we might be in creating any sort of mood by alcohol, is extremely doubtful, for most competent observers agree that the best sorts of intellectual, as of other work, cannot be done under its influence. "The accursed hag dyspepsia," as Carlyle called it, has been answerable for a good deal of the gloomier theology of the past and present. What a victim must have been that monk who wrote *Hell Opened to Christians*, with its appalling pictures of

demons driving bolts into men's sculls, and toasting them on great forks! The author of *The Imitation of Christ*, on the other hand, must have been blessed with a good digestion, and a liver which gave him no "moods." His biographers say he was "a placid, kindly, fresh-colored old man;" and, indeed, his books reveal all that. Probably our best methods are always tinged with a shade of melancholy. Montaigne says, "the most profound joy has more of gravity than gaiety in it;" and Dr. Fothergill wrote of the mental attitude of "feeling delightfully low-spirited." "The rainbow of our thought life," as the author of *Thorndale* so beautifully expresses it, "is made of joy and tears, the light and storm." The dark and the bright threads of our life are so interwoven, that our healthiest attitude cannot be called unalloyed joy. The highest music, painting and poetry most truly express the sanest moods of man when they exhibit joy chastened by the "sadness which is most akin to pain."

The lesson which we should endeavor to learn from a study of the moods which so easily possess us is the importance of a firm will control acting like the inhibitory nerves. If our mental states are so often caused by pathological conditions, it is no less true that the mind can control the body; and the man or woman who, in popular phraseology, "gives way" to his moods, runs imminent risk of becoming their slave.—Editorial in *Br. Med. Jour.*

The Hygienic Uses of the Imagination.—In a recent editorial entitled "Considerate Judgment," we endeavored to emphasize the necessity of basing conclusions on well ascertained facts, and stated that only those theories which could be thus substantiated would be found enduring. But in the attainment of truth we are by no means debarred the full and free play of a well disciplined imagination; indeed, it often points the way to undiscovered truths; it is by no means infallible; its suggestions always need verification; but imaginations verified become with us accepted facts. Under the above heading, at the recent meeting of the British Medical Association, Sir James Crichton

Browne presented a very able address which is reported in the *British Medical Journal* of August 24, and from which we make the following abstract:

The cultivation of the imagination, then—and it can be cultivated and disciplined to agility and steadiness of action—is of high importance to us as medical men; for it can be serviceable to us in collecting materials, in solving difficult problems, and, by the analogies it suggests, in guiding us in our life-long search after truth. The precise character which medicine is happily assuming, as its several departments merge into the exact sciences, and which demands of its cultivators a physico-mathematical and chemical training of ever increasing stringency, does not in any degree abrogate the necessity for the employment of the imagination. On the physical side of medicine that still holds its own, and on its psychical side it is indispensable in dealing with phenomena that are beyond the province of physical and chemical research. Medical men and medical students, then, need not fear that they are altogether wasting their time when they turn aside now and then from their professional tasks to ramble for a little in the green pastures of literature, or climb the pinnacles of art. True, their imagination may be fully trained for its professional duty, as it is exercised, in conjunction with observation and judgment, in the scientific sphere; but it will be braced, invigorated, and have its resourses multiplied, by recreating occasionally in its native air. Even if imaginative pursuits did not strengthen the hands of medical men in grappling with disease, or quicken their scientific vision, these would still be commendable, because of the refreshment they bring to jaded brains. To turn from the fatigue and anxieties of practice into realms where rivalry is no more and night bells never ring is to plunge into one of the most soothing and depurative of "tired Nature's" baths. Members of our profession are, I suspect, generally aware of this, and resort to imaginative literature, music, and art more than any other class of professional men, except, of course, artists and men of letters, and to an extent that is remarkable, considering the engrossing claims made on their time and the scant leisure they enjoy.

The contributions of medical men to the departments of imaginative work have been far from insignificant. At least four eminent members of our profession now living might be named who have found leisure, amidst absorbing occupation, so to use the pencil and brush as to gratify not only their private circles but the public, and a list of medical poets would be a long and goodly one, including such names as Akenside (the gifted singer of the pleasures of that imagination whose usefulness I am attempting to extol), Garth, Blackmore, Goldsmith, Smollet, Armstrong, Erasmus Darwin, Crabbe, Moir (better known as Delta, John Brown, whose *Rab and His Friends* is idyllic), and Oliver Wendell Holmes. Nay, even one or two of the greatest names in poetical literature might not improperly be added to such a list. Keats was apprenticed to a surgeon at Edmonton, and afterwards attended St. Thomas' Hospital. It has been argued, I am afraid not very convincingly, that Shakespeare's extensive medical knowledge proves him to have been engaged in the study of medicine during one or two of those years that are unaccounted for, but it is indisputable that Dante was enrolled amongst the *medici è speziali* (leeches and druggists) of Florence, and that he attended their council meetings for several years. But it is not as producers but as consumers of poetry and imaginative literature that medical men derive from them their restorative influence, and as consumers they are, I feel sure, amongst the bookseller's best friends. Sydenham, when asked by Sir Richard Blackmore what course of study he would recommend for a medical student, replied, "Let him read *Don Quixote*, it is a very good book; I read it still." Connolly, the apostle of that non-restraint system to which we owe everything that is most excellent in the treatment of the insane in this country, and with which I trust professional opinion and public sentiment will permit no tampering—Connolly told me in his latter years that he took ever renewed delight in *Gulliver's Travels*. I know hard-working doctors in town and country who hold habitual converse with some of our great imaginative writers. Two of the most distinguished and busiest physicians of this day are, to my knowledge, inveterate novel readers. I have heard one of our great surgeons deliver an address betraying a deep study of the poetry

of Keats; and another of our great surgeons, present at this meeting, told me recently that on his way to and from every serious operation he dips into Shelley.

But it may be objected that the imagination, if sometimes stimulating and restorative in its influence, is often morbid in its tendencies, and that its indulgence is to be guarded against by those who desire to possess well regulated minds. "No habit can be more opposed to a healthy condition of the mental powers," says Abercrombie, "than that which permits the mind to wander in a mere vision or waking dream from scene to scene, unrestrained by reason, probability or truth;" and the answer to Abercrombie is supplied by Tyndall, who says that those who have denounced the imagination because they have seen its disastrous effect on weak vessels, "might with equal justice point to exploded boilers as an argument against the use of steam." But the weak vessels wrecked by imagination are really fewer than is commonly supposed. Now and again some erratic genius, of highly strung nervous temperament, gives himself up to pleasures of imagination till he becomes intoxicated with them, and staggers over the boundary of sanity. Now and again an intensely imaginative child, like Jerome Cardan or Hartley Coleridge, so indulges in day dreams that his fancies grow into phantoms that haunt him; but I do not hesitate to say that for one case of insanity caused by excess of imagination, there are a dozen caused by want of it. Apathetic dullness and torpor of mind are apt to deepen into dementia; and those entirely given up to "the care of this life and the deceitfulness of riches" are more likely to be choked by them than those who can surmount them, and breathe the free and ample air of æsthetical emotion. A vulgar error as to the nature of insanity has perhaps conduced to exaggeration as to the dangers of imagination. Visitors to asylums invariably arrive expecting to find growths of morbid invention and belief, wild, tangled, and luxuriant as a tropical forest, and leave much disappointed by the barrenness of the land, for the insane are the least imaginative of beings. At rare intervals a madman is encountered —a Blake or a Swedenborg—whom two intrepid doctors have certified, who dazzles all around him by the meteoric brilliancy of his conceptions; but, as a rule, the lunatic is as dull

as a stone. He is the victim of a fixed idea, or his delusions pursue a treadmill round, or occur in groups so unvarying that, if you have ascertained one of them, you can predict all the rest. His mind is a blank or a blurred and unreadable page, or his fancies, if they come thick in the tumult of mania, are so disjointed or huddled together as to defy recognition. Idiocy is the absolute negation of imagination, and insanity undermines and destroys or enfeebles it more or less, and, when we try to drive out insanity, the first thing we do is to invoke imagination's aid, for moral treatment consists mainly in appeals to this faculty, and fully acknowledges its hygienic uses. The first recorded cure of melancholia was by the harp of David, and to-day in every lunatic hospital worth the name persistent efforts are being made by music, by pictures, by poetry and the drama to stimulate the imagination, and thus "cleanse the stuffed bosom of that perilous stuff that weighs upon the heart."

Imagination seems to have a trophic influence on the brain. When it is absent tardy growth goes on; when it is more or less in abeyance, weakness exists; when it is active, there is vigorous development; and the immediate effects of imagination in causing exhileration and preventing sleep when it is excessively indulged almost suggest that the states of the cortex which accompany it have some control over metabolic changes in the body. We now know that, besides alkaloids exercising a poisonous effect, which owe their formation to microbes, and are called ptomaines, there are others which are produced by the cells of the living organism themselves in breaking down albuminous matter, and which are called leucomaines. Now Bouchard has shown that the alkaloids of the latter kind formed during sleep have a stimulating action, so that, when they accumulate to a certain amount, they excite the nerve centres and cause awakeniug, while those formed during waking hours have a depressing action and tend to induce sleep. And it is just possible that in the formation of leucomaines of different classes, under varying conditions of the supreme nerve centres, a key may be found to the curious fact that certain emotional moods, after having persisted for a time, tend to induce their opposites—excitement, depression; appetite, disgust—and also to the influence of imagina-

tion, when very active, in causing exhileration and wakefulness. It is just possible that under such circumstances it may arrest the formation of those leucomaines, usually manufactured during waking hours, which are depressing and lead up to sleep, or so modify decomposition that other leucomaines of a stimulating character are produced. There can be no question that, in insanity, certain states of the highest nerve centres are accompanied by rapid disintegration of the tissues and emaciation, while in other states of these centres metabolism is reduced to a minimum, so that prolonged starvation may be sustained with comparatively little wasting.

But it is only an inordinate indulgence of the imagination that produces excitement and interferes with natural slumber; its reasonable and regulated use causing only a certain buoyancy of spirits with which a sense of soothing is associated. Imagination, indeed, legitimately used, combines to some extent the pleasureable effects of both morphine and caffeine, without any disagreeable after-consequences, such as headaches, despondency, or confusion of thought. On the one hand, it may heighten happiness, and on the other afford solace in suffering and sorrow. It may give zest to appetite and allay the pangs of hunger, brace to exertion, or lessen the sense of fatigue. It would not be wrong to speak of it, when rightly used, as a true physiological stimulant and analgesic, capable in some degree of taking the place of those crude agents drawn from herbs and trees, with which in all quarters of the globe mankind has sought to mitigate the dullness or assuage the pains of life. Moreover, its massive pleasures have a distinctly sedative effect in connection with those petty but exasperating animosities and jealousies that are the thorns of social intercourse, and fret and fray fine-textured brains. Lifting us above the turmoils and worries of the moment and opening up wide and distant prospects, they promote altruistic feeling, lull to rest our wounded sensibilities, and allay feverish excitement.—*Journal of the Amer. Med. Association.*

THE

Montreal Medical Journal.

VOL. XVIII. DECEMBER, 1889. No. 6.

CLINICAL TEACHING IN ASYLUMS.

Asylums for the insane, located within easily accessible distances of medical schools, can and ought to be made of great use in clinical teaching. The great majority of graduates of English, American and Canadian medical schools have only a very superficial knowledge of insanity. This is a great misfortune, as they are not infrequently called upon to attend such cases in general practice, and not uncommonly the unfortunate patients have to suffer as the result of this ignorance. Clinical instruction in asylums would not only benefit the afflicted and the students, but also the physicians in charge of the asylum.

It is a well recognized fact that an hospital in which clinical instruction is carried on is greatly superior to an hospital in which no teaching is done. The clinical hospital confers its benefits on its patients, on its students, and on its physicians and surgeons. Such an hospital always attracts the best men, and, in consequence, in it the best temporary and permanent work is done. It is in clinical hospitals that, with very few exceptions, the great advances in modern medicine and surgery have been worked out.

What is true of general hospitals is also true of hospitals for the insane.

All the leading German universities have clinics for mental diseases connected with them, and under the direction of men whose names are household words in the scientific world. In Vienna the clinic for mental diseases is under the direction of Meynert, who mainly through taking advantage of his unrivalled

opportunities for the study and teaching of insanity, is now recognized as one of the leading authorities in the world in this department.

The paucity of scientific work emanating from asylum physicians on this side of the Atlantic is, in part, attributable to the want of that stimulating influence which the presence of students infuses, and in part also to the fact that they are burdened with the multifarious duties pertaining to the necessary ways and means of their establishments.

Not until the time arrives when we will only require asylum physicians to attend the scientific part of their work, will we have attained that high level long ago reached by Germany.

As things are at present, let the asylum physician's scientific capacity and enthusiasm be of the highest order, he will be a non-producer, because he is required to attend to duties which are antagonistic to the highest mental work.

THE TREATMENT OF THE INSANE IN CANADA.

It is expected that within a few months the Protestant Hospital for the Insane in this city will be open for the reception and treatment of patients.

As yet no appointment has been made to the position of medical superintendent. The future success of this institution will, in a great measure, depend on the wisdom displayed by the governors in making this appointment. The first and essential requirement for this position is experience in the management and treatment of the insane. Unfortunately, in this country it is not the custom to appoint men to these positions because from experience and special education they are fitted for the work. In most of the provinces, the first, and, in fact, the only qualification is the reputation of being an energetic machine politician. The credentials of the candidates do not consist of what they know and what they have seen of insanity, but what they have done for their "party." To be a rejected parliamentary candidate is a qualification which rarely fails in securing the desired position.

The nature and treatment of the diseases of the mind is, beyond all doubt, the most profound and difficult department of medicine. In no specialty is it so necessary that there should be special training as in psychiatry, and yet we find men willing to undertake these very onerous duties without any special knowledge.

We believe that several eminently qualified physicians are ready to make application for the medical superintendency of the Protestant Hospital for the Insane, and we hear also that several physicians in no way qualified for the position are anxious for the appointment. It will be easy for wise and competent men to separate the eminently qualified from those entirely unfitted for the position. It will, however, be more difficult to decide who among the former will best fill the important position.

It does not appear to be generally known that the insane of the North-West Territories are housed, not in an asylum, but in the Manitoba Penitentiary. Formerly, by an agreement with the Provincial Government of Manitoba, the care of the insane from the territories was entrusted to the Superintendent of the Manitoba Asylum at Selkirk. This arrangement, which we believe worked satisfactorily, fell through from the inability of the Dominion and Provincial Governments to come to terms as to the price to be paid by the former.

If the treatment of the insane in this Province is highly unsatisfactory, it is due to causes beyond the reach of our profession, but the case is otherwise with the insane in the North-West. A representation from the Canadian Medical Association of the injury done to the insane by their retention in a convict establishment would, we have no doubt, induce the Dominion Government to build a proper asylum in the territories or continue the arrangement previously in force.

We have had occasion repeatedly to call attention to the pernicious system of dealing with the insane in the Province of Quebec. This state of matters still continues, and there is little hope that it will ever be different until the day comes when

the mass of the population will be educated, and until the time comes when politicians will dare to do what is right. As neither of these events are likely to occur during the present generation of men, the unrighteous method of hiring out the insane now in force will be continued.

THE TREATMENT OF FUNCTIONAL NERVOUS DISEASES BY CORRECTION OF OCULAR DEFECTS.

The Commission appointed by the New York Neurological Society to enquire into the results of the correction of ocular defects, in the treatment of epilepsy and chorea, have reported, on the whole, unfavorably towards this proceedure. They examined into fourteen cases, and report six improved but none cured. The result of this enquiry affords an additional proof of the folly of rushing into print, and claiming at once for new methods results which can only be determined by prolonged and careful investigation. That six cases were improved may be considered as saying much in favor of this operation by some, while by others it will be looked upon simply as a happy coincidence. The latter can, no doubt, bring forward abundant proof that almost any treatment would be followed by similar results. That such a proceedure should be curative in any case of essential epilepsy or chronic chorea, appears to us, on purely physiological grounds, to be highly improbable.

Correspondence.

PROVINCIAL MEDICAL BOARDS.

To the Editors of THE MONTREAL MEDICAL JOURNAL.

SIRS:—In the admirable introductory address delivered by my friend Dr. MacDonnell, and published in your last issue, I subscribe to everything except to his remarks on the subject of "Provincial Medical Boards." I had hoped that the day of antagonism to them was past, but I regret to see that the spirit of opposition is not yet dead, and still more that it should be evinced by one of the younger generation. I am bold to say that if in the Provinces of Ontario and Quebec a higher standard of general medical education exists to-day, than on any other part of this Continent, it is because for forty years or more the medical boards have sought for uniformity in the qualification to practise—a uniformity which the public has a right to expect, but which it certainly cannot obtain from irresponsible medical schools. Unrestricted competition between the colleges without state supervision leads to the chaos which is seen on this side of the line; and that the same state does not exist in Canada, is not owing to any virtue on the part of the schools—far from it—but is due solely to the wisdom of the men who organized and have supported the medical boards. We must remember that it is a new thing for the university degree to carry with it the license to practise, and it has only crept in in the case of the Doctorate in Medicine. It is a function of the state to determine whether a man is fit to be entrusted with the lives and limbs of citizens; and to carry out this function through an organised profession, by its representatives, is a thoroughly Anglo-Saxon way, certainly preferable to the arbitrary Teutonic plan in which the *Staats-examen* is conducted by nominees of the Crown.

I freely concede the difficulty to which Dr. MacDonnell refers, in having to comply with regulations inconsistent with modern ideas of education; but we must have patience. The schools are not themselves quite ready for a thoroughly advanced system of teaching, though now with the compulsory four years and

the addition of a summer session, the didactic and the practical work could easily be re-arranged. Certainly the time has come for dividing absolutely the work of the different years. Fewer didactic lectures; increased laboratory instruction, particularly in the dissecting-room; junior and senior classes in the Hospital, practical examinations in all departments—these are the changes to which boards and schools must alike look forward.

Yours, etc., WILLIAM OSLER.

JOHNS HOPKINS HOSPITAL,
Baltimore, Dec. 2, 1889.

Medical Items.

—Dr. W. H. Gaskell has been awarded a medal by the Royal Society for his researches in the anatomy and physiology of the sympathetic nervous system.

—Prof. Eulenburg, of Berlin, the editor of the *Real-Encyclopædiae der Gesammten Heilkunde*, has recently celebrated his silver jubilee as a medical teacher.

—The late Professor Ricord has bequeathed the sum of 10,000 francs to the Academy of Medicine, the interest of which is to be devoted bi-annually for a prize in any subject the Academy may determine.

OBITUARY.—Through the death of Gaetano La Loggia, Italy has lost a distinguished citizen, and medicine one of her ablest students. For many years he held the chair of physiology in the University of Palermo, and for some time the chair of biology in the University of Turin. He, however, not only taught physiology with effect, but also taught the Italian youth the priceless value of civil and religious liberty. His part in the regeneration of Italy was a prominent one. For a number of years previous to his death he was director of the Palermo Asylum, and devoted his great energies to the elucidation of scientific questions relating to his special department.

PARIS EXHIBITION.—W. R. Warner & Co. have received a silver medal at the Paris World's Fair, being the highest of its kind, in recognition of the following claims: 1st. W. R. Warner & Co.'s Pills, quick solubility and accuracy. 2nd. Reliability and permanency unsurpassed. 3rd. Perfection in coating, thorough composition and accurate subdivision. 4th. Excellence in solubility of the finished product in from four to six minutes. 5th. Quinine Pills, for accuracy in weight and purity of material. Also for Warner & Co.'s Effervescent Salts. 1st. Superior effervescing properties. 2nd. General elegance and excellence. 3rd. Stability of the effervescing quality sustained by critical examination.