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R. ZIMMERMAN, M.D., L.R.C.P., London, *171 Church Street Toronto, Corresponding Editor.*

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Selections: Medicine.

PULMONARY PHTHISIS.

BY WM PEPPER, M.D.,

One of the Physicians to the Philadelphia Hospital, and Professor of Clinical Medicine in the University of Pennsylvania.

GENTLEMEN—To-day I wish to ask your attention to catarrhal phthisis, which is the outcome of catarrhal pneumonia, and depends upon the fact that the exudation, instead of being gradually removed by a process of softening and expectoration, passes more or less entirely into a state of cheesy change, that this has crumbled down, that the walls of the air vesicles have become involved, and thus the destructive process has been established in the lung. The first division that we must make of catarrhal phthisis is into the acute and chronic forms, and this depends upon two elements or chief reasons: first, upon the violence and extent of the original attack; and secondly, upon a weakness of the individual constitution, by which it yields more or less readily to the attack of disease. Thus, for instance, we have a form of catarrhal phthisis which, fortunately, is not very common, popularly termed galloping consumption, which is in reality a general catarrhal pneumonia, rapidly passing into a state of cheesy degeneration. In speaking thus of acute catarrhal phthisis, I do not refer at all to acute miliary tuberculosis.

This latter disease is a very rare affection. It has altogether a very peculiar history and course. It is much more like one of the acute infectious zymotic diseases in its course than it is like a local affection. It has a peculiar temperature curve, a peculiar state of the nervous system and of blood intoxication, while the local signs in the lung are comparatively slight and obscure. It runs its course in from seven to fourteen days, terminating invariably in death. As a rule, it comes from the absorption of some infectious matter, from a previously existing centre of cheesy degeneration, although, in a few cases, it has exploded in an individual who has no such centre, but who has inherited a virulent degree of the tuberculous diathesis. Generally, in such cases, the disease appears early in life.

Acute catarrhal phthisis is, as I have said, the outcome of an acute catarrhal pneumonia, and runs a course whose length is dependent upon the severity of the attack and upon individual peculiarities. This affection is not recognized as constantly as it should be. This is because the physical signs are not well marked, and are not the ordinary physical signs of pneumonia, as we have come to consider it; that is, lobar pneumonia. Usually, when a patient is attacked with catarrhal pneumonia, he will not have very violent fever, marked dulness, bronchial breathing, and the other marked symptoms that we have in croupous pneumonia, and thus many cases are entirely overlooked. The affection may involve a very small area of the lung, or it may involve the whole of one lobe, or portions of both lungs.

Let me illustrate this by a case I saw a short time ago. A patient comes into my office and states that he has a bad cold, and that he had a slight rigor forty-eight hours previously. I find him distinctly feverish, with rapid pulse and respiration, and on examination of the chest there is found a left-sided broncho-pneumonia. Râles are heard pretty much all over

the left lung. The râles are some sonorous and some sibilant, formed in the larger tubes, and indicating a process of bronchitis of these tubes. With this there are heard, in a number of points over the front and back, coarse sub-crepitant râles. Very careful percussion shows that at several points in the left lung resonance is not perfect as compared with the resonance of the points immediately around them; not that it could be called flat, but simply less resonant than over the unaffected lung.

The patient is ordered home and to bed. The disease passes on through a stage, attended by a moderate degree of fever of rather a remittent type, with a rise in the evening to 102° or 103° and a fall in the morning to about 101°; never entirely disappearing. This is attended with a good deal of perspiration; the skin is relaxed, the cheek of the affected side is flushed, and the patient loses flesh very rapidly; he becomes extremely anæmic; the tongue is foul and coated, but the appetite is pretty well preserved; the secretions are scanty, as in all inflammatory or febrile affections; the urine scanty and high coloured, and the bowels are constipated. The cough is troublesome, and is attended with considerable expectoration, at first of clear mucus, not rusty coloured, but soon becoming streaked with yellow lines, and gradually more solid and purulent in character.

The physical signs remain as I have described them, except that the râles gradually become larger and more moist, and are heard over the whole of the left lung, back and front. With this there is scarcely any dulness on percussion over the lung, and it is only by very careful examination that you will find four or five points of limited size, where there is distinct relative impairment of resonance. You would be surprised at the great disproportion between the numerous râles and the amount of dulness and the absence of pure bronchial breathing.

As the case advanced, the lower portion of the lung cleared up, the râles gradually diminished, and the respiratory murmur returned; but at the apex there remained râles, which became larger and larger, until they finally became almost bubbling in character, the respiratory murmur slowly became more blowing in character; diffused, hollow, blowing breathing.

Now, what has been the course of the disease in the lung? We have had originally a catarrh affecting the bronchial tubes. This has extended along the left bronchial tube until it has reached and involved the alveolar structure, and thus set on foot a broncho-pneumonia of the left lung. Such changes are very insidious in their course, and the disease may exist for a long time before being discovered.

Catarrhal pneumonia is to be distinguished from bronchitis by its unilateral character, the presence of sub-crepitant râles, the detection of small areas of dulness, by careful percussion, and by the degree of febrile action. The exudation is not of a croupous but of a catarrhal character; the walls of the alveoli have been attacked so that the cells are no longer able to rapidly get rid of the exudation. It takes a long time to accomplish this, so that at the end of six or eight weeks râles may still continue at the apex of the lung. A portion of the exudation undergoes cheesy degeneration, breaks down, and is discharged slowly.

Will it ever be removed, or will it pass into a state of catarrhal phthisis? This will depend upon the violence of the attack and the tendency of the individual. Every one is liable to an attack of catarrhal pneumonia, and in any one, owing to the causes before referred to, it may set on foot catarrhal phthisis. Of course, in a person who has a weak state of constitution, particularly if he has an inherited weakness and tendency to lung disease, or if his health has been broken down by any of the debilitating causes of which I have spoken, an attack of less severity will be able to start a catarrhal phthisis in his lung. We may have this disease running a very rapid course, and terminating in from six weeks to four or five months, with all the evidences of a catarrhal pneumonia, passing into a chronic form, with marked fever, night sweats, and breaking down of the lung tissue, and the patient slowly sinking, and finally dying. These are cases of galloping consumption, or acute catarrhal phthisis. There are one or two symptoms occurring during its course to which I shall allude more particularly toward the end of the hour.

In the more common form the disease is not usually so severe or general from the beginning;

but it begins like a common cold, and is, I am sorry to say, often mistaken for an ordinary cold. The patient does not trouble himself much about it, but thinks that it is an ordinary cold, such as he has often had, and that he will be well in a few days. If such a patient was carefully examined, it would be found, instead of there being an ordinary cold, by which we mean a catarrh of the upper air passages, that there was considerable febrile action, more than usually occurs with a simple coryza, or a simple catarrh of the throat.

On carefully examining the lungs, there would be found, at some parts, physical signs indicating a slight degree of catarrh of the small tubes and air cells. The points where you will usually find these signs are at the apex and the root of the lungs. The physical signs that, as a rule, you will meet with, are such as these: in the first place, they merely indicate congestion of lung tissue, and a slight catarrh, feebleness of the respiration, with prolonged expiration, and on very deep breathing, or after coughing, you will have a few sub-crepitant râles; or there may be more marked catarrh; then we will have sonorous and sibilant râles, with more copious sub-crepitant râles; or lastly, the attack may be attended with a large amount of exudation; then there will be a slight impairment of resonance, a little difference on the affected side, as compared with the surrounding healthy lung, the respiratory murmur rather harsh and blowing, the expiration prolonged, and the râles more marked.

Now, these are the physical signs met with in a localized pulmonary catarrh, which is, in reality, a simple circumscribed attack of catarrhal pneumonia. You see that these are very slight signs, and unless the physician is wide awake and the examination very minute, they will very likely be entirely overlooked. If you simply run your ear over the chest, without removing the coat and vest, you will be sure to mistake the nature of the attack.

The febrile signs pass away in from two or three days to a week, and the patient appears to have regained his ordinary health. He has a little expectoration, which diminishes, and the cough passes into a simple, dry, hacking cough. He goes about his business, and continues, for an uncertain time, pretty well. Another attack similar to the first occurs, perhaps after two months, or perhaps after a longer period. This attack is more marked, and the nature of the disease more easily determined; but I have had cases where there had been evidence of at least five or six attacks, and where their nature had never been recognized until after a period of nine or ten months, and not until the disease, which had at first involved only a trifling spot, had involved a considerable portion of the lung.

This is the history of three out of four cases of so-called consumption. They commence as ordinary colds; the patient will tell you that he has a neglected cold, which has finally settled itself upon the lung. The probabilities are that this was an attack of catarrhal pneumonia, involving a small spot of the lung, and as each attack has occurred, it has involved the affected spot, causing an extension of the inflammation, until finally the exudation has passed into a cheesy state, the tissue of the lung has become involved and broken down, and phthisis has resulted.

I would, therefore, dwell on the extreme importance of recognizing the early stage of this disease, and it is only by a minute physical examination that we are enabled to tell whether a patient who has a feverish cold has a simple catarrh of the upper air passages or a slight catarrhal pneumonia. Any patient who has a catarrhal pneumonia, no matter how small the affected spot may be, is in danger of having it remain and pass into a catarrhal phthisis or develop tuberculosis. It is of the greatest importance to recognize catarrhal pneumonia, because, while it is true that, after the disease has involved a large portion of the lung, with destruction of its tissue, an entire cure is impossible, it is equally true that in the early stage, before destruction has occurred, the process is curable, in the majority of cases. It is only in those cases where the constitutional tendency or the individual peculiarity is very marked, that we find a resistance to our treatment in the beginning of the attack. I think it is no exaggeration to say that the great majority of cases of consumption are curable in the early stages. We will hereafter see how far it is curable in the later stages.

Suppose the patient does not consult us in the early stages, but after some period of time has elapsed, what will be the conditions present? I have a number of patients here who illustrate these conditions. After the acute stage has passed it leaves behind certain changes in the lung, and the patient presents certain general symptoms. Let us first study these general symptoms. They vary greatly, according to the state of the local trouble, but much more according to the individual peculiarity. Sometimes a patient with positive lesions in the lung will seem to be in ordinary health, keeping his flesh very well.

Now, here is a lad who has a small circumscribed cavity under the clavicle. He had when he came in a catarrhal phthisis of the left apex, profuse night sweats, quite rapid emaciation, and marked physical signs, but no spitting of blood. The acute stage passed away, but has left behind an induration of this upper right lobe; he has gained in flesh, the night sweats have stopped, and he has the appearance of being in pretty good health for a person who has been confined so long in a large hospital. Some patients, then, will present almost ordinary health, with scarcely any febrile action, with little cough and expectoration, and they will scarcely believe you when you tell them of the local disease in the lung. More frequently you will find that such patients present a history of recurring febrile attacks.

Now, for instance, this man, Fisher, who has a catarrhal phthisis of the whole upper lobe of the right side, with only small centres of disease scattered throughout the lobe, not giving rise to any marked dulness, but causing impaired expansion of the upper part of the right lung, weakness of respiration, prolonged expiration, and on coughing or deep breathing slight mucous râles, indicating that the lung has passed into a state of degeneration, leaving, I fear, little ulcerated spots, has presented in the highest degree these occasional febrile attacks.

If while he is feeling perfectly well a change of weather occurs, or he makes some unusual exertion, or sometimes without any apparent cause, he will have a little creep, followed by fever. He will feel a little sick and lie down, but in the course of twenty-four hours he again feels better. He has more cough, and examination shows the physical signs to be more marked. I suppose that since he has been under my observation he has had eight or ten of these attacks. Such attacks are highly characteristic of catarrhal phthisis in its chronic variety. The patients become so susceptible to any disturbing cause that they will have such attacks even under the best of care, and with every attack you will observe that there has been a fresh development at some part of the lung, usually around the affected area. These occasional febrile attacks the patient ascribes to fresh colds, and there is a certain amount of truth in this, because there is, with each attack, an extension of the catarrhal process.

During the whole course of the disease there is apt to be some irregular febrile action. This varies much in different persons; for instance, this patient is almost entirely free from fever; this next man has more marked febrile action, with a morning temperature of 98° and an evening temperature of 99.5°; while this one has a continued febrile action, and his morning temperature is never down to normal. As the disease advances and the system becomes more and more broken down, the fever assumes a marked hectic type.

I have now a patient under my care, with catarrhal phthisis, in whom the morning temperature is never below 102°, and the evening temperature 104°, 105°, or 107°. I have found her sitting up in bed, feeling pretty comfortable, with a temperature of 107.5°; but, of course, this high fever is only seen in exceptional cases, where the system is strongly predisposed to fever, or where the local process is highly irritating.

With this fever we are very apt to find night sweats, and, popularly, these are regarded as certain signs of the existence of consumption. As a rule, however, night sweats are only an evidence that the patient has had hectic fever, and that after the fever there has been a crisis, accompanied by sweating. Generally, they are not very injurious, but sometimes they are excessively profuse, and thus cause exhaustion. Thus, in the lad, the fever was not very high, but the night sweats were very obstinate, and

resisted almost every known remedy for that condition. Sometimes, after a patient has recovered from a catarrhal attack, he is very much predisposed to profuse sweating. When this occurs, it is a very significant symptom. I have repeatedly had patients, who were suffering from night sweats in a very marked form, tell me that some years previously, after getting a slight cold, they had troublesome night sweats for three or four weeks, which had been stopped by treatment.

You will occasionally meet with cases in which the hectic fever and night sweats are so pronounced that they mislead you as to the nature of the trouble. You may mistake it for malarial fever. Sometimes the patient will tell you that he was perfectly well until he had an attack of chills and fever. On examination, you will find that he also had a little cough and expectoration. In such cases the patient has had a slight catarrhal pneumonia, with the hectic fever and sweats well marked; but after the attack has passed into the chronic form the chills and fever have become more moderate. Hence, when a patient presents a history of an apparent malarial attack, and if he has a slight cough, you should study the lungs very carefully. Night sweats are then a frequent symptom of phthisis; but, as a general rule, they are not to be regarded so much as causing harm as the hectic fever which causes them.

All these patients present marked anæmia. There is great impairment in the power of the blood-making apparatus. They lose the power of keeping up their circulation under exposure, and are apt to have cold hands and feet, although you will often find that the palm of the hand burns with a hectic flush. You will also usually recognize the well-known hectic flush upon the cheek, which gives a deceptive appearance of health.

Loss of flesh is a very constant symptom, much more so than you would think if you believed what your patients tell you, for they will often insist upon it that they are keeping their weight. In some of these cases there is a strange blindness on the part of the patient as to his true condition. There is only one way to determine the question, and that is to weigh the patient yourself. I long ago adopted the plan of weighing my phthisis patients at short intervals, in order that I might know the effect of phthisis upon this point; and as a matter of fact, I think you will find that no one symptom is more worthy of study or more important as showing the condition of the patient, than this variation in the weight. If a patient, although his cough and expectoration continue unchanged, is slowly gaining in weight, I think it is a most favourable sign; but if a patient continues to lose weight, while the other symptoms improve, I consider it an unfavourable omen. This loss of flesh is sometimes very rapid, rendered so by the high degree of fever, the copious purulent expectoration, and the intermittent attacks of diarrhœa, of which I shall speak more particularly in a few minutes. Sometimes it is very slow, and the patient will keep his weight for some time.

Loss of strength and shortness of breath is always presented by these patients. They give out on the least exertion, and this exertion causes considerable shortness of breath. The shortness of breath is caused partly by loss of power in the respiratory muscles and heart, and partly by the actual crippling of the lungs; but when the patient is quiet you will be amazed to find how little they suffer from shortness of breath. I do not suppose that one of these five men before you suffers from any conscious shortness of breath. This seems to be due to the fact that, as the lung is involved, there is a corresponding wasting of the solids and of the blood, and a corresponding diminution in the chemistry of the body; there is less blood to be oxidized, and consequently a smaller amount of pulmonary tissue suffices.

Cough is a very constant symptom; few patients are free from it; but I have had patients come to me and say that they have not coughed for several months. The cough of catarrhal phthisis varies according to the stage of the disease. In the early stage, during the acute attack, the cough is troublesome. This subsides and becomes of a hacking character, occurring at short intervals, but frequently leaving the patient free at nights. As the disease advances, and the exudation breaks down, you will find that the cough becomes more severe and harder, and is apt to occur especially at certain times

of the day, particularly if a cavity has formed, which fills up, and coughing comes on, and it is emptied. This may occur with the regularity of clockwork. When the cough is hard and spasmodic, particularly when matter is raised from the lower part of the lung, it may excite vomiting, which may prove a troublesome complication.

The matters expectorated are, in the early period of the case, simply catarrhal products and clear mucus; as the disease progresses they become streaked with yellow, and later they acquire a solid, yellow character, floating in a certain amount of bronchial serum or mucus. It is impossible to determine the state of the lung from the character of the sputa, for sputa having all these characters may be produced at any stage, because, while the lesions at one part may have reached the final stage, they may at another point be just beginning. The patient may have a severe phthisis, and raise very little, while another with a small amount of disease may raise a large amount. We must, therefore, conclude that a large amount of the expectorated matters come from the bronchial mucous membrane.

In many cases you will find that the patient complains of local pains about the chest. These apparently depend upon small local attacks of pleurisy, or sometimes upon attacks of muscular rheumatism, to which such patients are exceedingly liable, on account of the relaxation of the whole system.

There are certain special symptoms which may occur during the course of phthisis, to which I will now allude. The first of these, hæmoptysis, or spitting of blood, is a symptom universally dreaded, and always regarded as a certain sign of consumption; but I know of no symptom whose significance is so much misunderstood. There is no difficulty in recognizing when a patient has hæmoptysis; the character of the blood and the way in which it is raised will indicate its origin; but it is very difficult to decide upon the precise spot from which it comes. Undoubtedly, in the larger number of cases, it comes from the bronchial mucous membrane, especially of the smaller tubes. In other cases it comes from the capillaries of the lung. In others from a vessel of considerable size which has been opened by ulceration.

In what condition does it generally take place? We notice it in many cases at the very beginning of the attack. Now, as long as it was the habit to say there was a deposit of tubercle in the lung, and the irritation from this deposit caused the hæmoptysis, hemorrhage was regarded as a sign of tuberculosis of the lung; but as a matter of fact, those cases that have hemorrhage are least apt to have tubercle. In tubercle, as I have described it to you, no blood-vessels exist; no anatomist has been able to discover any capillaries in it; and when it forms in the wall of a blood vessel, a clot forms, and the vessel is closed. Where you meet with hæmoptysis in a person who has been apparently well, you will find that it usually occurs from an acute attack of catarrhal pneumonia or congestion of the lung.

We thus see that hæmoptysis is most frequently an evidence of acute congestion or acute catarrhal disease, and that it generally occurs at the very beginning of the attack, and that when it appears during the progress of the chronic form it will usually be found that each attack of hæmoptysis marks an acute extension of the disease.

I have a few more remarks to make in regard to hemorrhage, which I shall defer until we meet next week.—*Medical and Surgical Reporter.*

DIAGNOSIS OF BRAIN DISEASE.

The April number of the *Journal of Nervous and Mental Disease* contains an extremely interesting and able review of Nothnagel's work on "The Local Diagnosis of Cerebral Diseases—a Clinical Study," of which we present the following abstract. The opinions of Prof. Nothnagel are fairly embodied in the conclusions with which he ends the discussion of the symptomatology of the lesions of each particular region of the brain. The first part considered is the cerebellum:

1. CEREBELLAR AFFECTIONS may remain latent and defy diagnosis. This is regularly the case with permanent or destroying lesions located in one hemisphere.

2. Space-limiting lesions may, on the other hand, produce manifold and complex phenomena.

3. As characteristic of cerebellar disease, we reckon only disturbances of co-ordination, especially a reeling gait with vertigo. These symptoms are also present in other central nervous affections, and cannot, therefore, be regarded as pathognomonic. The presence of cerebellar disease must be assumed from the sum of the positive and negative symptoms.

4. Cerebellar reeling always indicates a functional implication of the middle lobe, whether this be the original seat of the disease, or whether it is only embarrassed by crowding or pressure.

5. Disorders of co-ordination and vertigo may be wanting where the disease is located chiefly in the hemispheres, and, exceptionally, they may be wanting when tumours of slow growth are localized directly in the vermis. If an affection situated in the posterior cranial region, below the tentorium, is suspected on other grounds in those cases, the diagnosis of original or secondary disease of the cerebellum can only be approximative. It cannot be proved.

6 Aside from those noted under head 3, no symptoms are at present known that can be considered as expressive of disorder of the cerebellar functions. Perhaps certain disorders of speech (anarthria [?] in extensive atrophy of the cerebellum) may be so considered, but this is not certain.

7. Vomiting, when continuous and severe, may support the diagnosis of cerebellar disease, but it is not conclusive since it occurs in other cerebral diseases. It is absent altogether in destroying lesions, and is by no means regularly present in crowding lesions.

8. The same is true of amblyopia and amaurosis, respectively, choked disk and optic neuro-retinitis.

9. Headache is present only in cases of crowding or pressure lesions. Its fixed locality in the occipital region under certain circumstances may suggest cerebellar disorder, but is no more conclusive in this respect than its location in the frontal region would be in an opposed sense.

10. The most various disturbances in the functions of cerebral and spinal motor and sensory nerves may attend cerebellar disease, but only in case of pressure lesions. They have, therefore, no diagnostic value, but are liable to mislead. Nevertheless, sometimes, some one symptom may be isolated, which will permit a closer local diagnosis. Thus, complete right-sided paralysis of the whole facial indicates that the tumour is on the right side, and pronounced hemiplegia indicates that it is on the under surface. But positive conclusions must be guarded against.

11. Psychic disorders are absent except under such circumstances as may develop them in any lesion of the brain.

12. The author, in contradistinction to Hughlings Jackson, holds that tetanus, either of the neck or of the whole body, is not of any value in local diagnosis. * * * *

CRURA CEREBELLI.—As regards lesions of these parts, he concludes that only those of the medium crus to the pons afford a symptom that is at all diagnostic. It consists in a peculiar deviation of the eyes, the one downward and outward, and the other upward and inward, the body turned in the direction toward which both eyes (apart from their direction in a vertical sense) are directed. Thus far, clinical observation has demonstrated these symptoms as attending no other lesions than those of the middle cerebellar peduncle. Other symptoms that may attend lesions of the cerebellar crura are conjugate deviation of the head, eyes, and body, vertigo, and inclination to fall to one side or the other. The conjugate deviations are sometimes toward and sometimes away from the side of the lesion— the cause of this discrepancy being unknown.

PONS VAROLII.—The diagnosis of local lesions of pons varolii is treated at length. Recent hemorrhages into this part can be diagnosed with certainty only when the special cross paralysis is present, but it may be regarded as probable when the attack is accompanied by general convulsions and contraction of the pupils and is followed by death within a few hours. The following are the diagnostic features:

1. Stationary intra-pontine destroying lesions may produce disorder of the function of the motor, sensory, and vaso-motor nerves of the extremities, and of the 5th, 6th, 7th, 8th (?), 11th (?), and 12th cranial nerves. Pressure

lesions may produce symptoms indicative of implication of the 9th and 10th nerves.

2. The number of nerves involved varies according to the size and seat of the lesion, though it is not possible to say with certainty from the nerves involved what part (in cross section) of the pons is injured.

3. In many cases stationary lesions of the pons produce the same symptoms as some of those of the cerebrum, and cannot be distinguished from them.

Dys-and anarthria being more frequeut with lesions of the pons than with other localized lesions, except those in the medulla, point with a certain degree of probability to the former.

5. Tumours and destroying lesions of the pons have a peculiar character in the presence of alternate paralysis. This forms, when present, the most important diagnostic mark, but it is not pathognomic, since it also occurs in basal affections. In the latter case, however, we have to do with slow chronic disorders. A sudden appearance of this symptom indicates almost certainly a lesion of the pons.

6. This alternate paralysis involves the motor and sensory nerves of the extremities of the side opposite the lesion and the trigeminus, abducens, facial (auditory ?) and hypoglossus of the same side. Within these limits the extent of the paralysis may vary in different cases.

7. The paralysis of the extremities, motor as well as sensory (and vaso-motor ?) is always contralateral to the lesion, but implications of the cerebral nerves mentioned under 6, may be either on the opposite or on the same side.

8. Whether conjugate ocular paralysis of the external rectus on one, and the internal rectus on the other side, is characteristic of lesions of the pons, is still uncertain.

9. Though anæsthesia is more frequent with lesions of the pons than with those of the cerebrum, it is not of diagnostic value. As regards the implication of special nerves, as of the abducens, if on the same side with the lesions of the brain, as shown by associated symptoms, it indicates almost certainly that the lesion is located in the pons.

10. Difficulty in swallowing and disturbances of respiration and circulation may be corroborative, but they are not fundamental.

11. Ataxia appears in exceptional cases of disease of the pons, and it would not, therefore, contra-indicate their diagnosis as such. Its relative frequency in cerebellar disease, however, lessens its value as a symptom of pontine disease.

12. The various so-called impulsive movements, such as backward, pendulum movements of the members, etc., are only accidents, and therefore of no diagnostic valuc. Lateral decubitus, or moving or drawing to one side, have not been observed in man, except with implication of the crus cerebelli in the lesion.

13. Spastic phenomena limited to a single group of muscles are rare, and can assist the diagnosis only with a special combination of symptoms, such, for example, as trismus.

14. Epileptiform convulsions are not present in stationary lesions and tumours, but they have a certain diagnostic value in cases of recent hemorrhage and embolism.

15. Sensory phenomena are not among the probable symptoms of diseases of the pons, and as yet there have been too few observations as regards the auditory nerve. Still the appearance of unilateral disturbance of hearing must be taken into consideration in forming a diagnosis. Contracted pupils, when present in an apoplectic attack, possibly point to the pons.

16. Vomiting, headache, and vertigo are present in pressure lesions of the pons under the same conditions in which they appear in other portions of the brain. * * *

Lesions of the Medulla can only be diagnosed with approximate certainty, and then only in a small number of cases. The most distinctive features are dependent on implication of the cerebral nerves, and the most important of them are dysphagia, aphonia, and disturbances of respiration and circulation. The paralysis may be either hemiplegic or paraplegic, but pronounced anæsthesia has not, as yet, been observed with these symptoms.

Of Lesions of the Crura Cerebri, the author says, the characteristic symptom is paralysis of the motor oculi, usually involving all its branches, on the same side with the lesion, and opposite the paralysis of the extremities. This may also appear with basal lesions, but if the paralysis, both of the members and motor oculi

is sudden and simultaneous, a lesion of the crus may be presumed. * * *

Diseases of the Tubercula Quadrigemina are rare in medical literature, and only a few observations could be utilized for fixing the question as to local diagnosis. From these, the conclusion was deduced that disease of the anterior pair almost always is accompanied with impairment or loss of vision. This symptom is not to be referred to the optic lobes necessarily, unless, with non-reacting pupils, it be of sudden appearance, and accompanied by other symptoms of local disease, and absence of posterior ophthalmic symptoms.

Lesions of the posterior are accompanied (not invariably) with paralysis of (certain branches?) the motor oculi, but the presence or absence of this symptom is not sufficient for diagnosis. The paralysis may be bilateral with an unilateral lesion, and in this case, if unattended with paralysis of the members, it suggests the optic lobes as the part involved. Disorders of equilibrium and co-ordination like those accompanying cerebellar disease, are also sometimes observed. * * *

Lesions of the Optic Thalami exhibit the following symptoms:

1 and 2. An absolute diagnosis of isolated lesions is impossible at present, except under specially favourable circumstances, for the symptoms are ambiguous.

3. Motor paralysis does not support the diagnosis of thalamic lesions, and when it exists we must assume the implication of other parts, even though the thalamus be the part principally involved.

4 and 5. The same is true of anæsthesia. If disturbances of sensibility, dependent on injury of that portion of the inner capsule which passes the thalamus, should occur, they might enable us to say that the lesion is situated in or near the thalamus, but they would not establish the existence of thalamic disease. The same is true of vaso-motor tracts.

6 and 7. Though disturbances of vision may occur, whether in the form of contralateral amblyopia or homonymous hemiopia, cannot be stated, they are not of great diagnostic value since they also appear with lesions of other localities. The same estimate may be placed on the diagnostic value of hemichorea, athetosis and unilateral tremour.

8, 9, and 10. Increase or diminution of reflex excitability is not indicative of thalamic lesions, but, possibly, disturbances of the muscular sense and disorders of psycho-motor actions are.

In conclusion, thalamic lesions may be reasonably conjectured under specially favourable conditions, but they cannot be diagnosed with certainty. * * *

Corpora Striata.—As most cerebral hemorrhages occur in these parts, the symptoms of them coincide pretty well with those of typical hemiplegia. Of late years the anatomy of the brain has been revised, and the corpora striata have been shown to consist of several physiologically distinct parts. More exact localization is now possible than was formerly the case. Our author studies separately lesions of six different localities in the striated bodies, viz.: Those of the lenticular nucleus; those of the caudate nucleus; those of the anterior portion of the internal capsule; those involving either the lenticular or caudate nucleus, with, at the same time, the anterior portion of the internal capsule; those of the posterior portion of the internal capsule; and those affecting only the lenticular nucleus or the optic thalamus, with the posterior portion of the internal capsule or the adjoining part of the radiant crown of Reil. His conclusions are as follows:

1 and 2. Destroying lesions of the corpus striatum may produce contralateral motor, sensory and vaso-motor paralysis, and if they be not extremely small they regularly cause motor hemiplegia.

3. If the lenticular or caudate nucleus alone be involved, the hemiplegia may gradually disappear; but if the internal capsule be affected, either alone or with the gray nuclei, the paralysis is permanent. In these permanent paralyses (*i. e.*, in lesions of the internal capsule) secondary contractures frequently occur.

4. The motor hemiplegia from stationary destroying lesions affects, regularly, both extremities of one side and the inferior branch of the facial, the muscles of the trunk usually being paretic. The hypoglossal nerve is either wholly unaffected or only affected in the beginning; it is not often permanently involved. In rare

cases the extremities of the facial nerve (including its upper division) are involved alone.

5. Lesions of the lenticular nucleus cannot be differentiated from those of the caudate nucleus.

6. If the lesion be limited to the anterior portion of the corpus striatum (which is supplied by the lenticulo-striate artery), motor paralysis is the only symptom.

7. In some cases hemi-anæsthesia is associated with the hemiplegia. Besides the paralysis of common sensation, the nerves of sight, hearing, taste, and smell may be impaired, though their impairment is not an essential part of the hemi-anæsthesia.

8. The hemi-anæsthesia indicates the implication of the posterior portion of the inner capsule with the adjoining foot of the radiant crown. Still lesions may exist in the posterior section of the capsule between the optic thalamus and the lenticular nucleus without causing anæsthesia.

9. Usually the motor and sensory paralysis disappear together, but exceptionally the former leaves and the latter remains.

10. Sometimes vaso-motor disturbances occur in the paralyzed members, indicating a lesion in the posterior part of the internal capsule.

11. Though hemichorea often accompanies anæsthesia, its relations to lesions of the parts of the corpus striatum already described cannot be stated.

CORTEX CEREBRI.—The conclusions deduced from an analysis of a large number of carefully reported observations are:

1. Disease of the superficies of the brain (the gray matter and the white medullary substance directly underneath it) sometimes causes marked phenomena and sometimes causes none.

2 and 3. Psychic disorders and dysphasic and aphasic phenomena point to cortical lesion. True, aphasia may occur without cortical lesion (in lesion of the centrum ovale), but these cases are so rare that the rule as stated may be accepted as the basis of diagnosis.

4. In purely ataxic aphasia the first locality to be suspected as the seat of lesion is the third left frontal convolution, but the possibility of a lesion of the insula must also be considered.

5. If, as appears probable from some observations, lesions of other parts of the brain may cause aphasia, it occurs so rarely that the location indicated must be first suspected. It is impossible from the character of the speech disorder to decide on the locality of the lesion.

6. Word-deafness indicates, most probably, a lesion of the left parietal lobe, particularly the third temporal convolution.

7. Hemiopia by itself is not conclusive evidence of cortical lesions. If it appear suddenly as the only symptom, perhaps after an apoplectic attack, with negative ophthalmoscopic appearances, it may be regarded as presumptive evidence of such lesion, most probably in the occipital region.

8. Unilateral disturbances of vision may occur with cortical lesions, but nothing can be stated in regard to their value in local diagnosis. Hitherto, they have been observed only with diffuse cortical lesions.

9. Disorders of cutaneous sensibility have no diagnostic value for cortical disease.

10. The conjecture is offered, hesitatingly, that unilateral disorder of the muscular sense when it appears as the only symptom, perhaps indicates a lesion of the parietal lobes.

11. Motor disorders accompany cortical lesions, and under certain conditions they enable us to locate them.

12. Sometimes the paralysis takes the form of ordinary cerebral hemiplegia, such as is commonly observed with lesions of the striate body, and it may or may not be accompanied with secondary contractures. In such a case diagnosis is impossible. The assumption of a cortical lesion would be supported if aphasia co-existed, but even then the paralysis may be dependent on a lesion of the striate body, associated with one of the third frontal convolution. A single ptosis co-existing with paralysis of the extremities, and of the facial and hypoglossal nerves, makes it probable that a cortical lesion is present. Pronounced disorders of sensibility occurring with motor hemiplegia, indicate either that the lesion is not cortical, or that if it be cortical it is very extensive, and extends deeply into the medullary substances.

13, 14, 15. Cortical paralyses are frequently monoplegias, partial hemiplegias, isolated paralysis of the facial and hypoglossal, of the arm,

rarely of the leg, of the arm and leg, or arm and face. When monoplegias exist, and their intra-cerebral origin has been established, they point, not with absolute certainty, but with great probability, to cortical lesion; though their precise form and development does not at all indicate this origin.

16, 17. Certain motor phenomena, as convulsions limited to certain muscular regions, and connected later with paralysis of the parts, are of great diagnostic value. They indicate with a high degree of probability the existence of cortical disease. In some cases, the clonic convulsions first make their appearance in paralyzed muscles, and in such the presence of a cortical lesion may be assumed.

18. In other cases the motor phenomena assume the character of an epileptic attack, but with this peculiarity, the spasms always begin in the same group of muscles. This form of convulsion always appears subsequent to a paralysis. It is presumptive evidence of cortical lesion. *

Lesions of the remaining portions of the brain cannot, according to Nothnagel's conclusions, be diagnosed with certainty.

INJECTION OF CHLOROFORM IN LUMBAGO.—B. W., a farmer, was attacked about the middle of March last with lumbago, by which he was confined to his bed eleven weeks. Had been treated during this time with tonics and counter-irritation, etc., without benefit. I found him, June 10th, lying upon the bed, unable to rise without assistance; severe pains in back and limbs while sitting.

I injected ten drops of chloroform in the lumbar region on the right side, giving great comfort. In three days after I injected fifteen drops more upon the left side. In ten days he was able to go about comfortably and slept well, whereas before he scarcely slept at all. He is now (July 12th) well, following his usual occupation.

The pain accompanying the injection was severe, lasting ten or fifteen minutes. For the relief of this a cold compass was applied over the parts for half an hour, with great benefit. —W. A. Bradford, M. D., Butler, Ky., from *Louisville Medical News.*

A RARE CASE OF VASO-MOTOR NEUROSIS OF THE LOWER EXTREMITY.

At a late meeting of the Société Médicale des Hopitaux (*Gazette Hebdomadaire*, April 9, 1880), M. Straus read a paper on the following rare cases of vaso-motor neurosis of the lower extremity. A man, thirty-five years old, a business emyloyé, entered the Tenon Hospital on the 19th of June, 1879, on account of rheumatic pains in the right shoulder and left foot. He had no fever, no cardiac complication; the pains lasted for eight days, and rapidly yielded to rest and salicylate of soda. The patient was considered convalescent, when M. Straus observed on the left lower extremity the following curious vaso-motor phenomena:

Even when the patient is lying down, the foot and toes of the left side are the seat of marked turgescence with obliteration of the course of the tendons and red coloration of the skin. To the touch, there is a noticeable increase of temperature, in comparison with the healthy side. This turgescence, which is in nowise painful, does not extend beyond the ankle. The articulations of the foot and tarsus are entirely free and painless. When the patient is sitting down, with the legs hanging, the swelling and coloration of the membrane increases, especially on the toes and front part of the foot, without extending beyond the instep. The standing position still further increases the symptom, which reaches its maximum when the patient has taken a few steps; then the foot and toes of the left side become violet, as if phlegmonous, and the veins become conspicuous under the skin. There is no trace of varicose veins.

Walking is very painful, and can only be done on the heel alone: the patient cannot wear his shoe on the left foot; there is no paresis, or atrophy of the muscles, which respond readily to electricity.

He says that on several occasions, during ten years of military service, after being fatigued, or after forced marches, he has felt pain and swelling in the left foot, which prevented him from walking for several days, or even weeks. He was under treatment for rheumatic pains, neuralgia, etc.

These singular vaso-motor phenomena continued during the two months that the patient remained in the hospital. They were analyzed with care, especially the differences of temperature. Minute measurements were made almost daily, and showed a constant difference between the foot on the left, and that on the right side, increasing from 2 to 4 degrees centigrade, and varying according as to whether the patient was lying down, standing, had walked, had his legs covered, etc.

On the 6th of August, 1879, he was so much better that he could put on his shoes, he could walk, and was taken to Vincennes; but the vaso-motor paralysis still continued, as well as the thermic modifications.

During the past winter the patient has been able to resume his trade, and to take quite long walks, but in spite of the severe cold he could not put his feet near the fire. The left foot is always turgid and highly coloured, and between the two extremities the difference of temperature is 1.5° centigrade.

M. Straus refers to the important paper of Dr. Weir Mitchell, which appeared recently, and relates to cases which are almost identical (On a Rare Vaso-Motor Neurosis of the Extremities, in the *American Journal of the Medical Sciences*, July, 1878). He also recalls analogous facts observed by M. Vulpian and M. Sigerson, and, finally, to a recent observation by Mr. Allen Sturge, of London (see *American Journal of the Medical Sciences*, July, 1879, p. 258). Perhaps the disease is not so rare as it has appeared to be, and is often confused with rheumatoid conditions, paralysis, varicose veins, etc. M. Straus finishes his communication by a comparison between this vaso-motor neurosis and that described by M. Maurice Raynaud, under the title of local asphyxia and symmetrical gangrene of the extremities.

Do the vaso-motor disturbances in question (whether they be of a vaso-paralytic or of a vaso-dilative origin) relate, as thinks Dr. Weir Mitchell, to a disturbance of the vaso-motor medullary centres? M. Straus does not dare to decide, but he inclines toward an opinion broached by M. Vulpian on the subject of symmetrical gangrene of the extremities, and according to which these vaso-motor disturbances would not necessarily proceed from a central spinal origin; they could result from the modifications (reflex or otherwise) sustained by the numerous peripheral ganglia which exist near the termination of the nerves in the vessels, and which control, in part, their innervation. The clearly defined *unilaterality* of the vaso-motor disturbances, in this case, seem to be an argument against the spinal localization of the disease.

M. Dujardin Beaumetz stated that he had been attacked by symptoms similar to those described by M. Straus. But their etiology was different. They appeared in consequence of the rupture of the tendon of the left patella.—*American Journal of the Medical Sciences.*

THE CAUSE OF BRIGHT'S DISEASE.

Drs. DaCosta and Longstreth, of Philadelphia, contribute a most valuable article to the July number of the *American Journal of Med. Sciences*, entitled "Researches on the State of the Ganglionic Centres in Bright's Disease." From the investigations of a large number of cases, extending over a period of several years, they have arrived at the following conclusions: 1. That in Bright's disease, especially in the contracting kidney, there exists a constant lesion of the renal plexus. 2. That while this lesion might be looked upon as forming part of a general process of degeneration in connection with the kidney-disease, we think it is the cause of the renal malady and precedes the degenerative changes. 3. That the diseased condition of the ganglia furnishes the clue to the alterations of the vessels of the diseased kidney. 4. That similar changes, producing similar results, may exist in other ganglia; for instance, in the cardiac plexus, explaining the hypertrophy of the heart. The details of nine cases are given, accompanied with illustrations of the microscopical appearance of the renal ganglia. Striking pathological changes were discovered in every case. For examining the ganglia the following method was pursued: The kidneys and all the structures in front of the vertebral column, including the aorta and celiac axis, were removed. From this mass

the solar plexus and its nerve-branches were carefully separated. The ganglion was carefully dissected while submerged in the preservative fluid, and that portion which gives off filaments for distribution to the kidneys was examined microscopically. Other portions of the ganglia were also examined for comparison. No satisfactory results were obtained from the examination of the nerve trunks supplying the kidneys. The glanglionic cells showed fatty degeneration, with oil globules and granular matter, their nuclei obscured. The basis substance was fibrous and fatty, and granular changes were present. J. B. M.

Coca in the Opium-Habit.—Seeing in the May number of the *News* an article by Professor Palmer, headed The Opium-habit—A Possible Antidote, I determined to give it a trial, and now send you the following report of the result:

Mr. J. T. B. commenced using opium in April, 1862, for chronic diarrhœa contracted in the late war. Since that time he had used on an average two ounces of opium a week. The coca treatment commenced June 24th. On the 25th he took ten grains opium, on the 27th two grains morphia sulph., on the 29th one and a half grains of morphia, July 1st one grain of morphia, July 3rd three quarters of a grain of morphia, and on the 5th, 7th and 9th one sixth grain of morphia. He took the coca *ad libitum*, or whenever the system demanded the opium. He took, as above stated, opium and morphine for several days. This he did, as we verily believe, for fear the coca would not cure him, and to-day says had he to go over it again he could stop the opium at once. After getting from under the influence of the opium he had a considerable diarrhœa, which was readily controlled by ten-grain doses subnitrate of bismuth. It has been near two weeks since he took any coca, and no opiates since the 9th of last month, and to-day looks like another man. He says he is cured, and I believe he is. He has spent about eighteen hundred dollars for opium and patent nostrums said to cure the opium-habit.—Benton J. Hon, M.D., Orleans, Ind. —*Louisville Medical News.*

Surgery.

CERTAIN ANÆSTHETICS.

BY W. H. HINGSTON, M.D., L.R.C.S.E., D.C.L., SURGEON TO HOTEL DIEU, MONTREAL.

Read before the Medico-Chirurgical Society, Montreal.

There would seem to be much similarity of action on the economy in the ethyls, methyls, and formyls, and in their adaptability to anæsthetic purposes.

Chloroform for many years held its sway, undisputed save by ether; and in the claims of each the Atlantic Ocean seemed to divide the two camps—British practitioners holding, in great measure, to the discovery of Simpson; and American practitioners to the anæsthetic of the Boston school. (I name not *his* name, for the modern Athens has not yet decided to whom to award priority in the introduction of ether.) In Canada, chloroform has been more generally used. I may say, until within the past few years, it has been used almost exclusively in hospitals and dispensaries. As I have not had any serious accident in the administration of either anæsthetic, I have come to regard *both* with confidence, and without misgivings.

Still, deaths are now and then recorded from ether, and more frequently still from chloroform; and in the hands, too, of the most competent. But I am satisfied these untoward results would be less frequent were the administrator of either anæsthetic to give his *undivided* attention to his work, and not occupy himself as too often happens in surgical cases, with the doings of the operator.

Still, as already observed, deaths are recorded, and will doubtless continue to be recorded in the future. To reduce that number to the minimum is the desire of us all.

A couple of years ago, at the recommendation of Spencer Wells, I made use of the bichloride of methylene ($C_2H_2Cl_2$), using that prepared by J. Robbins & Co., Oxford Street, London. It has the colour, nearly the taste, and very nearly the smell, of chloroform. I could see no difference in its action, and seeing no difference in its action, but much difference in the price, discontinued it. Spencer Wells claims that vomiting is less frequent with the

bichloride of methylene than with chloroform, but as I have not observed vomiting from the latter to be frequent when properly administered, I could see no difference in that respect. In the hospital, and out of it, I have used chloroform and ether indifferently; in long and tedious operations, generally inducing complete anæsthesia with chloroform, and continuing that condition with ether.

Not long ago attention was drawn in the columns of the medical press, and chiefly by Dr. R. J. Levis in the *Philadelphia Medical Times*, to hydrobromic ether. I procured a quantity of Wyeth's of Philadelphia, and the results I shall briefly state to you.

It was administered, as I have been accustomed to administer chloroform, on a thick towel folded into a cone. The air was excluded as I have been accustomed, except in old persons, to exclude the air when giving chloroform or ether. But while never measuring the quantity of chloroform, nor watching the pulse, some attention was paid to these matters with the new anæsthetic, measuring the quantity and often noting the pulse.

I was first struck with the rapidity of action of the bromide as compared with that of ether or chloroform, in inducing complete anæsthesia; and more still with the suddenness of the return to consciousness. So sudden indeed was this return that it appeared to some of those present on certain occasions that the patient had not slept at all.

In only one case was there difficulty in inducing anæsthesia. Upon a stout muscular young man an attempt was too suddenly made, and without any warning by my assistant, to bring him under the influence of the bromide. Considerable cerebral excitement was manifested, and the violent muscular resistance offered rendered the proper application of the towel extremely difficult. This was the only exception to what was observed in all the other cases, and could have been easily avoided by making an equally rapid influence, but with a more thorough assent on the part of the patient—the greater ease with which this anæsthetic is inhaled facilitating its use. With the exception noted there was scarcely any emotion, and no struggling, save in the case of an infant, who could form no appreciation of the ordeal to which it was being subjected. As is the case with other anæsthetics, there was increased rapidity of the heart's action, and greater general arterial tension, as Dr. Levis terms it. With the increased frequency of the heart's action, there is, as might be supposed, increased frequency in respiratory movements, but less than with ether or chloroform; and less heaving than with the nitrous oxide gas.

In not one case have I noticed vomiting, and this alone would seem to give it a great advantage over chloroform, which, though occurring more frequently with the latter than it should, due in great measure to faulty administration, yet sometimes occurring notwithstanding every effort to prevent it.

The following notes of the exhibition of the new anæsthetic are not so complete as could be desired. They may be premised by stating that I was never accustomed to measure the quantity of chloroform or of ether administered to a patient; nor during the employment of either anæsthetic to pay any attention whatever to the pulse. Rarely if ever do I feel the pulse at the wrist or elsewhere, being firmly of opinion that when death does take place, the heart is always the *last* to register the untoward event.

In the trial of the bromide of ethyl I, for the most part, disregarded the pulse, but when noted it was recorded either by my colleague, Dr. Brunelle, or the *interne*, Mr. St. Jacques, or my student, Mr. Bastian, or myself, but not by them or by myself, and for the reason given, with anything approaching that exactness which obtained in Paris when the anæsthetic was undergoing trial there. The first trials were at the Hotel Dieu, then in the city, and also at Belœil.

1st. Mrs. P. M., æt. 26. Reduction of femoral hernia. ʒiiss., Bromide of Ethyl, (C_2H_5Br.) Complete anæsthesia in two minutes, which lasted seven minutes. Five seconds after I announced reduction, *i. e.*, after removal of the anæsthetic, patient was perfectly conscious. Pulse was not noted in this case, but breathing was scarcely increased in frequency. No stertor; no vomiting; and the return to perfect and sudden consciousness was as quickly

as after laughing gas. One of the Sisters of the Hospital and Mr. Bastian were present.

2nd. Scirrhus Breast.—Mrs. ——, æt. 38. Pulse before operation was 74, and at no time during operation above 80. Respiration was scarcely influenced; and anæsthesia was complete in 55 seconds; and was kept up for 18 minutes, with ʒvss. of $C_2 H_5 Br$. Hospital staff present.

3rd. Double Club Foot.—Patient, æt. 6 weeks. Complete anæsthesia in 30 seconds. Continued during division of plantar-fascia and posterior tibials of both sides. Removal of anæsthetic was followed in less than four seconds by complete consciousness, and full and entire wakefulness. Dr. Perrault, of St. Hyacinthe, besides hospital staff, present.

4th. Hon. Mr. O., æt. 55, for examination of elbow joint. ʒij. was administered; considerable excitement and struggling, from anæsthetic having been too early removed. An additional two drachms induced desired condition, and almost immediately after its removal entire consciousness returned. Dr. Brunelle present.

5th. Amputation above wrist joint.—Patient L. M., of Belœil, æt. 72. Dr. Perrault, who kindly administered anæsthetic, was not informed of its nature, and found its action satisfactory. No record was made of quantity in this case. Complete consciousness on removal of napkin.

6th. Talipes, double, same as case 3, above alluded to. It was now for division of both tendones achillis. The anæsthetic was given up same as in former instance, but the little patient was allowed to sleep after the operation, as is advisable after chloroform or other anæsthetic. The above two operations were performed at Belœil. Dr. Perrault present.

7th. Examination for stone in the bladder.—I handed the anæsthetic in this instance to Dr. Finnie, who administered it without having been made aware of its nature. I believe Dr. F. was quite satisfied with it.

8th. Operation for Hæmorrhoids.—A woman aged 30. The quantity was small, not more than ʒiss. Anæsthesia was quickly produced, and the piles removed, but not till complete relaxation of the sphincters of the bladder and rectum had occurred. Notwithstanding the complete anæsthesia which this accident denoted, intellection was almost instantaneous on removal of napkin.

9th. Anæsthesia for the removal of a portion of the lower jaw-bone in a middle-aged person.—The operation was a tedious one, and the anæsthetic was continued during its performance, the nose and a part of the mouth being covered with the napkin while the operation was being performed. Intoxication continued in this case long after the operation was over and the bromide withdrawn; the patient being somewhat demonstrative in her friendship. Several of hospital staff present.

It would serve no good purpose to mention other cases where no features of special interest were observable.

Bromide of ethyl has now, for a time at least, taken the place of other anæsthetics at the Hotel Dieu; and as no features of special interest have been observed, none are here recorded. In private practice I have had occasion to use it many times since I commenced its use at the hospital, and from my experience, so far, I am disposed to give it the preference over chloroform, on account of its milder and pleasanter action. Over ether it has one great advantage: pure bromide ethyl is non-inflammable. By the surgeon who adds, to his usual armamentaria, lamps and atomizers, that disease germs may be brought to understand: "So far shalt thou go, and no further," this quality of the new anæsthetic will be duly appreciated.

As the introduction of bromide ethyl is recent, and is already being extensively used in the adjoining States, manufacturers are vieing with each other in placing the article before the profession. It is evident they have not all been equally successful, and several varieties are said to have been exhibited; one containing so much ether that it ignited; another so disagreeably pungent and irritating as to be not easily inhaled. So far as I have learned, but one kind has reached Montreal, that of Wyeth, of Philadelphia. I had, first from Mr. Gray, and afterwards from the manufacturers, an article which seemingly possesses the peculiar yet not disagreeable odour, and the quality of non-inflammability which should characterize the proper article.

It will suffice to say that I have used chloroform or ether in hospital or private practice but once or twice since I commenced using the bromide of ethyl, and the conclusions at which I have arrived after a short, yet I believe a sufficient, trial are:

1st. That bromide of ethyl, or, as it is indifferently called, hydro-bromic ether, is an anæsthetic of great value.

2nd. That being less pungent than ether, and less irritating than chloroform, it can be administered with greater facility than either.

3rd. That it is far more rapid in its action than ether, and even more rapid than chloroform.

4th. That the pulse and breathing are less influenced than with ether or chloroform.

5th. That there is less resistance and struggling on the part of the patient.

6th. That judging by limited experience, vomiting is less frequent than after chloroform or ether.

7th. That in no case was there disposition to fainting.

8th. That it is eliminated from the body much more rapidly than any anæsthetic except laughing gas.

If the above propositions are fairly stated, it follows as an obvious corollary that bromide of ethyl is one of the, and in some respects the most valuable anæsthetic hitherto used.

I confine my observations, advisedly, to the use of bromide of ethyl in surgery. What aid the accoucheur may obtain from it remains, in great measure, to be seen. Dr. Turnbull claims that, when used in tablespoonful doses, when the pains are most intense and distressing, it gives as prompt relief as ether, and yet it did not interfere in the least with the expulsive efforts. The quantity given appears large, and would indicate that it had been administered as chloroform usually is in obstetric cases, largely diluted with air; whereas, in all my surgical cases I have endeavoured, save in old persons, to have the air excluded as much as possible.—*Canada Medical Record.*

DRESSING FOR BURNS.—Iodoform, ʒi; spermaceti, ʒi; extract of conium, ʒij; carbolic acid, gtt. x. Spread on some soft material and cover the burnt parts.

Midwifery.

ON THE USE OF INTRA-UTERINE STEM-PESSARIES.

BY ALBERT H. SMITH, M.D.

So much has been said for and against the use of intra-uterine stem-pessaries, and especially have such violent and sweeping condemnations been uttered recently against them, that it becomes impossible, except through careful observation and the results of clinical experience, to arrive at a just estimate of their value, and to assign them their proper place in the list of surgical appliances. While some recent authorities, as Barnes, Goodell, Tilt, Hewitt, Schroeder, and Winckel, accept them without question as therapeutic agents, to be used, of course, discreetly and judiciously,—as may be said of all therapeutic measures,—yet it must be admitted that the great proportion of gynæcologists stand with those (as Thomas and Courty, of Montpellier, and De Sinety) who teach that they are instruments whose capabilities for harm far outweigh their possible usefulness, and some even in the more extreme position of unqualified condemnation, with Nonat and Emmet. When we find it stated by the last-named eminent author—excelled by none as an accurate, honest, and conscientious observer of his cases—that "experience will at last teach every one that no permanent benefit is *ever* derived from its use, that no degree of tolerance is ever established, but that sooner or later, in almost every case, mischief will result," it can be considered only as an unpromising work to attempt to convince the mass of the profession that there can be any virtue in the intra-uterine stem. And yet I have had such excellent results from its use, and have come to look upon it as such a necessary therapeutic means in the management of certain kinds of cases, that, at the suggestion of a valued friend among us, I have determined to make it the subject of a paper, in which I can bring forward my own views and observations,—not authoritatively at all, but mainly to elicit discussion from others who have had experience perhaps far greater than my own.

The intra-uterine stem appears first to have

been proposed by Velpeau, who, however, did not strongly urge its use, and it was abandoned until again brought into notice by Sir James Y. Simpson, more with reference to its use as a dynamical exciter of functional activity than as a mechanical agent in reducing deviations. Shortly afterwards Valleix and Kiwisch came out boldly in favour of its mechanical application, using it in combination with an external framework or support. Since his day it has been in use, with various modifications in shape and material, and adopted with reference to its efficacy in various morbid conditions.

The forms in which it has been used are (1) the *simple* stem, with bulb or disk in the vagina, or attached to a vaginal pessary or to an external framework, and (2) the *bifurcated* spring stem. Of these, I should reject the stem of Valleix, or any of its modifications with external attachment for the purpose of a permanent fixation by grasping a solid rod in the uterine canal, as utterly unsound in theory, and dangerous in the extreme in practice. The essential qualification of a *vaginal* pessary is that it shall recognize and permit the natural mobility of an organ which was arranged by nature specially for adaptation to the various changes of position of the body and the various relations of the surrounding viscera which depend upon their distension or collapse, and no pessary is safely left in the vaginal canal without close watching which in any degree depends for its action on pressure upon an immovable basis of support, such an instrument soon showing that it has been adopted in violation of nature's teaching, by the painful sense of pressure at first, and soon afterwards by the development of ulcerative inflammation at the point of firm contact, and, if long left without relief, perforations and fistulous openings into the bladder, or rectum, or peritoneal cavity. If, then, such pressure is unjustifiable in the vagina, with its ordinary slight sensitiveness and its capacity of tolerance of pressure, how vastly more should we hesitate to subject to such an influence the cavity of the uterus,—so sensitive and easily excited to inflammatory action, and so liable to transmit its irritations to the neighbouring peritoneum and connective tissue! If there are dangers arising from the simplest form of stem which require careful and conscientious looking after,—which I not only am free to admit, but wish to impress upon you seriously,—I think I am justified in discountenancing absolutely the fixed stem, which never can be required, and must always be vicious in its influences. This statement will apply equally to fixed stems which derive their support from vaginal pessaries not freely movable in the pelvic cavity and permitting the natural change of position of the uterus, such as the hysterophore of Zwancke or Schilling—dangerous instruments in themselves, even without any intra-uterine attachment. In short, the only stem with vaginal combination which I have ever felt warranted in using is that of Dr. Chadwick, of Boston, of which I shall speak hereafter.

To the spring or self-retaining stem I can scarcely give a more enthusiastic commendation than to those just mentioned, although it is certainly a safer instrument; and, as it has the endorsement so fully of such authorities as Goodell and Barnes, I must accept it as a form of stem capable of useful application. The objection to it, however, not only upon theoretical grounds, but also from results which I have personally observed in many cases, is that it retains its position in the cavity by the continuous lateral pressure upon the internal surface of the uterus of expanding wings. That this continuous pressure is not so pernicious in its influence as that of the stem with external fixed attachment I am very ready to admit, because in the case of the latter the pressure is attended with rude and violent thrusts against the sensitive tissues with every change of the body or of surrounding organs; but even the gentle pressure of the spring exerted uniformly and continuously tends to establish ulcerative inflammation and ultimately to imbed the arms of the stem in the uterine tissue, exciting general parenchymatous metritis and metrorrhagia. The least objectionable form of this variety is that of Chambers', having a bifurcated vulcanite stem, making only gentle pressure; Lawson Tait's, with its soft-rubber wings, like those of Sir Henry Thompson's self-retaining catheter, and Bantock's, with the steel springs, are instruments which I should hardly expect to have retained safely in any uterus for twenty-four hours.

All that I consider necessary or desirable for ordinary use is a stem consisting of a simple rod terminating in a rounded expansion at one end and in a flat disk at the other. It should be of non-corrosive material, which can be made slender enough, while retaining its strength and firmness, to be slightly flexible and elastic, and to occlude as little as possible the canal of the cervix. Vulcanite fulfils these requisites completely. Its length should vary with that of the canal in which it is to be inserted, never reaching to within three-eighths of an inch from the level of the os uteri to the roof of the uterine cavity. The inner extremity should end in a slight bulb, not so large as to interfere with its ready introduction or to press with its lateral surface heavily upon the uterine wall, nor so small as to present any sharpness to catch in the rugæ of the cervix in its introduction. The other end should be inserted into the centre of a flat circular disk, smooth and free from sharp edges, thin enough to occupy practically no space in the vaginal canal, or, by its pressure upon the posterior wall, either to ulcerate the mucous membrane or excite rectal tenesmus, and large enough in diameter to present a comfortable surface to the vagina and to prevent any possibility of its entering by pressure into the cervical canal, and thereby permitting the inner end to strike upon the fundus uteri. Such an instrument can be introduced into the uterine cavity with little or no pain; can be worn, in cases free from parenchymatous metritis or parametritis at the time of introduction, without consciousness of its presence,—as I can testify from personal experience in many cases,—for months, interfering with neither the social nor the domestic duties of the patient. I have used it now for two years with great satisfaction, excluding every other form except that of Dr. Chadwick's, which in a class of cases—which I will more fully consider hereafter—I sometimes have substituted successfully. This instrument consists of the stem which I have described, having inserted into two holes in its disk, upon the vaginal surface, a wire staple so bent into a hook-like shape that it will receive into its grasp a flexible ring pessary; this to be not large enough to prevent free movement of the cervix in the pelvic cavity, but only to retain it in its direction towards the sacral hollow,—this being free from the objections urged against the stem with vaginal attachment involving a fixation of the stem in the pelvic cavity.

The introduction of the stem involves at first a good deal of nice and delicate manœuvring when it is used in a case of flexion with much distortion of the canal, but so soon does the canal adapt itself to the presence of the straight stem that if for any reason it requires removal and readjustment the second introduction becomes very easy; and I have a patient—a lady of intelligence and close observation—suffering from retroflexion attendant upon a small, sensitive fibroid in the posterior wall, who has learned to remove and replace the stem, as well as the vaginal pessary, both of which she has now worn for several months.

That the stem should never be inserted with any considerable force need scarcely be stated: it is a rule which suggests itself to every careful practitioner. The speculum can never be used with advantage, and is usually a serious hindrance to the passage of the stem. In any case of flexion the presence of any form of speculum, even Sims's, would interfere with the free movement of the outer extremity of the stem in adapting the inner end to follow the course of the canal. Before selecting the stem, of which three sizes are necessary,—two, two and a quarter, and two and a half inches,—the length of the uterine cavity should be accurately measured by the introduction of a graduated sound, and the stem selected which will measure, from its tip to its insertion in the disk, three-eighths of an inch less than the measurement of the canal. In using the sound for this purpose, the operator should at the same time observe carefully the course of the canal and its perviousness, and, if it be very tortuous or at any point closely constricted so as to render the passage of the sound difficult, there should be introduced either a flexible or metallic bougie or a uterine expanding dilator, such as Ellinger's or Wilson's; and in some cases, I have found it desirable, when the the canal was very tortuous, to pass the narrow stem between the separated blades of the dilator while still in position. The plan mentioned by Dr. Goodell, in a discussion in the Transactions of the Gy-

næcological Society, of retaining the sound in the cavity and following its course by the point of the stem, is a good one in many cases. It is rarely of advantage to grasp the disk with any forceps to steady it, though in some cases of closely-resisting vaginal orifice, where the distance of the os uteri from the perineal commissure is much greater than the length of the stem, it becomes a necessity. It should then be grasped by some slender forceps giving a firm hold upon the disk, but occupying as little room as possible in the vaginal opening. As a rule, the easiest method of introduction of the stem is by the unaided fingers, and with a little practice one becomes quite expert at introducing the stem into a canal of any ordinary condition of flexion or tortuousness. The first step is to find the os uteri and pass the point of the stem into it directly until it reaches the point of flexion. If the os be near enough to do this before the disk enters the vaginal opening, it is a very easy thing; if not, the whole stem, disk and all, should be passed into the vagina, and by means of the first two fingers, gradually brought into position for the end to enter the os. It should be grasped between the inner surfaces of the fingers, and, after reaching the point of flexion, the axis of the stem should be changed in its direction, carrying the cervix with it until it corresponds with the axis of the canal, when it will, in most cases, readily slip up beyond this point into the uterine cavity, until its course is arrested by the disk resting against the point of the cervix. In a retroflexion this is usually very easy, because the disk can easily be lifted high enough against the vesico-vaginal septum to allow the point of the stem to be directed into the canal beyond the point of flexion; but in cases of anteflexion it is sometimes more difficult. In either case it will be found to facilitate the insertion to make a leverage upon the stem by a counter-pressure of one finger upon the disk while the other is used to make traction upon the stem, or the reverse. In retroflexion the disk would be drawn towards the vaginal roof by the second finger, while the index presses the stem downward towards the line of axis of the canal; in anteflexion the index pushes the disk towards the posterior cul-de-sac, while the second finger draws the stem forward, thus slightly counteracting the flexion and letting the point of the stem slide or creep, as it were, along the anterior wall until it slips into place. This is often aided by a pressure with the other hand upon the fundus resting behind the pubis, carrying it more toward the centre of the brim and acting in opposition to the traction forward of the stem in the vagina, tending thus very materially to straighten the canal and facilitate the passage of the stem.

The question next arises, How is the stem to be kept in position? And it is in reply to this question that we have so many of the devices which have by their pernicious influence brought the stem into disrepute. Courty and Schroeder retain it in position by vaginal tampons; Tilt, by a boxwood vaginal disk; Chambers and Bantock, by their diverging springs; Tait, by his soft-rubber projecting spikes; and others, by vaginal or external attachments. In reality, there is no difficulty whatever in keeping the stem in place: it is the least of all troubles connected with its use. For whatever purpose it may be used, the natural relation of the uterus to the pelvic canal should be insured, which is with the long axis of the uterus corresponding as nearly as possible with the axis of the superior strait of the pelvis, the os uteri looking backward towards the sacral excavation. It will readily be seen that so long as this relation is preserved the stem cannot possibly slip out, because the proximity of the os uteri to the posterior vaginal wall is so maintained that the stem, which then looks upward and forward towards the pubic brim, cannot slip out of the uterine canal any appreciable distance without the disk striking against the vaginal wall; and if the falling out of the stem has been the result of a sudden lifting of the uterus towards the pelvic brim,—which alone can cause it,—the return of the uterus to its position will make the stem again enter the canal by pressure of the disk against the vaginal wall; and never would it be possible for the stem to slide so far from the canal into the vagina as to get its upper end below the point of flexion and be unable to return. So, then, when the cervix is in its normal position in relation to the pelvic axis the stem cannot get away. Thus it will be seen

that in a case of flexion with anteversion or simple descent, the stem, after introduction, is firmly and surely retained, there being no disposition of the cervix to turn forward. In flexion with retroversion, until the version is corrected, the os uteri presents towards the vulvar opening, the uterine axis being in correspondence with the axis of the vagina, and there is then nothing to prevent the stem from sliding out into the vagina and being lost. But, as this is a condition which should never remain uncorrected in any patient under treatment, the retroversion always requiring reposition, so soon as this restoration is made and the cervix carried backward the stem is again safely secure. This is done by the introduction of the lever-pessary, which, passing into the posterior cul-de-sac, draws the cervix backward, restores the body of the uterus to its normal relation to the pelvic axis, and thus insures the retention of the stem, by means not used for that purpose, but for the relief of a condition quite independently necessary. Here comes into play a most valuable function of the stem, which probably all gynæcologists who use it have discovered, but which has been authoritatively suggested first by Schroeder, viz., that of a repositor more efficient and vastly safer than any of the instruments ordinarily in use. The stem converts the retroflexion into a retroversion, to correct which it is only necessary to press the disk gently backward with the finger towards the sacrum, and the uterus revolves upon its horizontal axis, the fundus passing upward and forward to its proper position. Schroeder recommends the instrument for this purpose even in cases where there is no flexion, and where the stem is removed so soon as the version is corrected, using it simply for its safety as an elevator. But unfortunately we sometimes meet with cases in which we cannot maintain the restored position of the retroverted uterus by the lever-pessary, because either from congenital anomaly, or from traumatic causes, or from gradual adaptation of the tissues to the abnormal position, the posterior cul-de-sac is obliterated and the posterior wall of the cervix is almost or quite continuous with the vaginal wall. There is therefore no resting place for the posterior bar of the lever-pessary. Here, then, comes in the ingenious little contrivance of Dr. Chadwick, which accomplishes the same results by substituting for the backward traction of the lever-bar upon the cervix in the cul-de-sac a backward pressure of the stem upon the cervical wall within its cavity, the pressure being made by the soft ring fitting closely into the wire hook below the disk of the stem, the ring being large enough to prevent the cervix from coming forward, and yet small enough to allow a free motion in the pelvic cavity. I have had with this instrument some excellent results in cases where everything else failed. Its great objection is the tendency of the stem, by constant pressure against the cervical wall posteriorly, to make a cleft in the tissues and gradually imbed itself; but I had one patient who actually wore one of these instruments for over eleven months, to her great relief, before I found sufficient need, after repeated examination, to remove it. During this time she came to my office frequently to consult me and have examinations made, and was able to perform all of her domestic duties, as well as to enjoy social pleasures. After I removed the stem I introduced a simple ring, the lever being inapplicable on account of the conditions mentioned above; and now, nearly two years since, the flexion has never returned, and she is quite comfortable. Usually, however, I have not been able to keep in place this form of stem-pessary nearly so long.

I come now to consider the range of usefulness of the intra-uterine stem. In reference to the purposes for which it is available, its modes of action may be divided into mechanical and dynamical. Under the first head may be ranged all its applications for restoring deviations or malpositions of the uterus, which will be almost exclusively those complicated with flexions. Inasmuch as anteflexions are much more frequently found as uncomplicated with other change of relation than retroflexions, which are usually associated with version, and as they are, moreover, less amenable to other treatment than any other form of deviation, it is in this form of deviation that we are most frequently required to resort to the use of the stem, and it is in these cases that I have seen such admirable results. They present most frequently, though by no means exclusively, in nulliparous women,

and are attended usually with vesical irritability and dysmenorrhœa; and if the married woman was the subject of such a condition before marriage, she will most probably, though not necessarily, be sterile. Time does not allow me, nor would it add to the interest of the subject, to go into the details of the cases treated; but I will simply say that I have seen all of these conditions relieved by the stem, and in a majority of those thus relieved the benefit has been permanent, the flexion not again returning. The cases in which sterility has been obviated by the wearing of a stem for a few months, pregnancy occurring shortly after its removal, have been among the most satisfactory results. That pregnancy is not prevented by the presence of the stem is well established. The relief to the bladder from pressure of a markedly anteflexed uterus by the stem when, upon examination, a tumour is found in the anterior cul-de-sac, at first giving the impression of a fibroid pressing upon the bladder, but, upon the straightening out of the uterus with the stem, disappearing entirely, is also one of the decided boons from the use of this instrument.

In retroflexion, which is much less frequent than anteflexion, and usually less marked, we very seldom require the stem, because the condition yields to the influence of the lever-pessary in elevating the fundus and removing the backward pressure; but there is a class of cases of retroflexion in which we get most signal results. These are the cases in which the flexion assumes the marked retort shape, where we find the fundus of the uterus bent backward at such an angle that it is found as a well-recognized tumour in the posterior cul-de-sac. After satisfying one's self that it is the fundus of a retroflexed uterus, a lever-pessary is introduced to raise it, which at first promises good results, but only to bring disappointment time after time; the fundus and body of the uterus,—which while the finger of the operator is kept upon the front bar of the pessary remain in natural position apparently, the cervix turning backward in its normal relation,—so soon as the finger is removed, begin to creep over the posterior bar of the pessary, until the latter rests not against the body of the womb, above the cul-de-sac, carrying it upward, but in the angle of the flexion, the neck in the front and the fundus behind grasping it between them and pushing its anterior bar forward against the pubis, or perhaps extruding it entirely beneath the pubic arch. The lever in this case does no good, but, on the contrary, aggravates the mischief. Here, then, comes in the stem to perform an admirable function: it straightens out the whole uterine canal, takes away completely the apparent retro-uterine tumour, and the lever-pessary, now introduced behind the cervix, acts upon a normally-shaped uterus, and is enabled to perform its whole duty as an elevator with permanent relief. Many, many cases of this kind have fallen under my care in my own practice and in the practice of friends, baffled and discouraged by repeated disappointments, where the use of the stem for a few months seemed to bring about a permanent restoration of the normal uterine axis, which upon its removal showed no tendency to be again deflected, the lever having no further interference with its sucessful working.

There is met with not unfrequently, in the unmarried and in the sterile, a peculiar flexed uterus, presenting a soft, flaccid, slender, elongated body,—so soft and flabby that it is scarcely appreciable to the most careful bimanual or rectal touch, and one for a moment believes that he has a rudimentary uterus or a cervix without a body; and not till after the sound has with difficulty been made to reach the fundus, and can be felt through the abdomen, is he convinced that there is a uterine cavity at all; and he then feels the uterine body, into which the sound enters perhaps three or three and a half inches, like a long, slender cylinder, no thicker than the thumb. In such cases I have seen the intra-uterine stem strengthening and stiffening up the uterus, giving a basis for the lever to act upon, and between them, in a comparatively short time, the uterine walls became more condensed and appreciable to the touch, and the organ shortened and widened into a normally-shaped uterus.

The dynamic powers of the stem are exerted in its stimulant effect in two morbid conditions, viz., amenorrhœa and uterine hypertrophy, whether the result of hyperplastic increase or defective involution after pregnancy. In the

first of these conditions it was that Sir James Y. Simpson brought forward to the notice of the profession his metallic stem, the results of which were due more probably to its presence as a foreign body in the uterus than to any supposed galvanic influence. In the second condition, viz., uterine hypertrophy, I have had some very remarkable results: uteri enlarged from parenchymatous metritis, and subinvoluted uteri, taking on atrophic change promptly after the insertion of the stem, and a stem which was far from reaching the fundus at first requiring to be exchanged for smaller and smaller sizes, until the uterus reached its normal dimensions.

That the stem is an instrument capable of great mischief if recklessly used I am not only free to admit, but would earnestly impress upon every member of this Society. But of what active remedial agent cannot almost as much be said? That it may light up a fire which will run wild through the pelvis, perhaps ending in suppurative cellulitis, perimetritis, and even death, is true; but the uterine sound has done the same in careful hands,—how much oftener in careless hands than the stem we cannot say. I would lay down rules of caution, from which I never depart except in rare and well-appreciated cases:

Never neglect to measure the uterine cavity; never use any force in introducing the stem; never use it when complete mobility of the uterus is prevented by old adhesions or irremovable pressure of surrounding organs; never use it where the flexion of the uterus cannot be easily corrected by the sound or other instrument previously passed into the cavity. Avoid it where there has been any history of previous peritonitis, parametritis, or pelvic inflammation of any sort; or where any induration of tissue can be detected; or where there could be the faintest suspicion of malignant degeneration; or where there is any symptom of acute parenchymatous metritis; or where its introduction gives rise to any violent or persistent pain. Keep the patient absolutely quiet for twenty-four hours, and watch from time to time until the tolerance is fully established. Use hot-water injections daily during its use, and remove it on the least evidence of its having a pernicious effect.

With these restrictions, I regard the intra-uterine stem as a safe and reliable instrument.

In opening the discussion, Dr. W. H. Parrish said that one point in the paper that had especially attracted his attention was the frequency of cases which the lecturer encountered where the stem-pessary could be allowed to remain. His own observation had been that very few patients can bear the presence of the stem-pessary without ill consequences. This instrument would seem to be of special use in simple flexion of moderate degree; but such cases are just as well without treatment. The patients that more urgently need relief are those who have metritis or parametritis, and, of course, it is just in such cases that the use of the stem-pessary would be contra-indicated. The particular form of stem-pessary recommended is, perhaps, the best, and one that the speaker himself would prefer to use, and had used, but he had generally found that it caused so much irritation that he was speedily obliged to remove it. He agreed with Lawson Tait in the opinion that there are a very few cases which can be treated in no other way than by the intra-uterine stem-pessary, and to these he would limit its application.

Dr. H. Lennox Hodge said that he had been particularly struck with the care which the lecturer urged to be employed in the use of the stem-pessary. The mere fact that it might do harm under careless management would not constitute a legitimate objection to the use of the instrument; he had no opposition to make to any agent, provided it is shown that it can be skilfully used with entire safety. But there are other objections to the intra-uterine stem-pessary. In the dissecting-room at the University of Pennsylvania he had endeavoured to introduce the instrument in several cases of marked flexion of the uterus after death, and found it to be impossible: he believed that in these patients even the most skilful operator would have failed to introduce it during life. One of the chief objections is that this hard instrument is intended to be allowed to remain in the interior of so delicate an organ as the uterus; indeed, its introduction has been followed by great harm, and even by death. This is allowed even by its advocates. They say that it should be used only in extreme cases;

and the speaker was pleased with the caution that the lecturer had impressed upon his hearers when speaking of this point. The recommendation expressed was particularly in regard to flexions; but there is great diversity of opinion among gynæcologists as to the methods to be adopted. The opinion of the speaker's father, and of Dr. Emmet and others, is that flexions are not always followed by important results; there may be even a considerable degree of flexion without much discomfort. The trouble is that there is always present more or less uterine congestion, as was pointed out by the late Dr. H. L. Hodge. Flexion becomes of more importance when complicated with version; but these are just the cases which the lever-pessary is especially designed to meet. Take a case of flexion and retroversion: place the woman in Sims' position; replace the uterus either with the finger or the sound or the finger and the sound; lift the perineum; allow the air to enter and distend the vagina, and the fundus uteri recedes into the abdominal cavity. Now introduce a lever-pessary, and the womb does not again come down. He wished to make this point. As regards flexions, many of us find we can relieve them without the use of the intra-uterine stem: therefore, why use an instrument which may be followed by dangerous results? Again, in retroflexion, why use the stem-pessary, when the condition can be reduced by a simple manœuvre and prevented from returning by a lever-pessary?

The lecturer had also spoken of the successful treatment of a hypertrophied and flabby uterus by the stem and the daily use of hot-water injections, but the speaker had obtained the same benefit from the hot-water injections without the pessary. As regards amenorrhœa, he believed that constitutional measures will often succeed, and a small flow is not increased by any means at our command. The stem must act as a local agent, and it is this consideration which stimulated Simpson to devise his intra-uterine stem, made up of two metals, as already described. If the courses are scanty in an ordinary case, the speaker would not recommend an intra-uterine stem; but if he finds that the case does not yield to ordinary treatment, he does not hesitate to use it.

Dr. O'Hara said that the instrument evidently was capable of causing considerable irritation, and even worse, and believed that the indications for its use should be very strictly defined.

Dr. MacFerran called attention to the fact that the problem is not simply to reduce a flexion of the uterus, but requires us to search for the cause of the original deviation, and, if still existing, to remove or counteract it. He believed that the tendency was to pay too great attention to the uterus, which in itself is a delicate organ, and to overlook or ignore the original causes of the condition.

Dr. W. H. Taylor said that the incautious introduction of a stem-pessary might produce an abortion; and he inquired whether it might not effectually prevent conception if worn continuously.

Dr. W. R. D. Blackwood had used the intra-uterine stem in two cases of retroflexion, and permanent relief followed. In regard to the fear of producing an abortion, of course the same precautions should be taken before introducing the stem into the cervix as in the case of the uterine sound; and this objection is disposed of by the fact that the sound is invariably used first.

Dr. Baldwin inquired whether any cases of conception had occurred while wearing the instrument in the practice of the lecturer.

Dr. A. H. Smith replied that he had no personal knowledge of such a case, although two cases of conception occurring during the presence of the intra-uterine stem had been reported to him by Dr. Goodell, one of the cases carrying the child to full term, the pessary having been early removed as soon as pregnancy had been suspected.

He agreed with the gentlemen who had spoken previously, that the intra-uterine stem required caution and should not be indiscriminately employed, the rule being that this expedient should not be adopted when any simpler treatment would answer. Following the same rule, he would not even introduce a vaginal pessary when it was not necessary.

In reply to Dr. Hodge, he said that he made it an invariable rule previously to introduce the sound, in order to measure the depth of the uterus, and where the sound can go the stem

may follow. This would dispose of those cases mentioned where it was impossible to introduce the stem after death. He (Dr. Smith) would lay down the rule that the instrument should not be used in any case where the uterine canal could not be straightened by the sound. The methods of using the intra-uterine stem and the cautions about its introduction are very fully stated in the paper. The speaker was happy to respond to the remarks of Dr. Hodge in reference to the influence of posture upon a retroverted uterus, and agreed with him to the extent that as long as the patient remains in the posture on the knees and elbows the uterus will not come down; but that it will stay there, as many suppose, is not necessarily the case. If we introduce a lever-pessary in that position, when the fundus of the uterus is in the neighbourhood of the umbilicus, it will be found that an instrument that is readily introduced and performs its functions perfectly while in that position cannot be tolerated for a moment when the patient resumes the upright posture, when the weight of the viscera bears down upon it. The fundus of the uterus will often be found to creep down behind over the posterior bar of the pessary, while the anterior bar of the lever will be carried up over the pubes. He had seen this occur time after time. In such patients he has had to temporize and use other measures to reduce the size of the uterus before allowing them to walk.

He would acknowledge freely that some of these cases do not bear the intra-uterine stem; but he considered them as exceptions. As the rule, the irritability is not so great in these old cases, in which the uterus has assumed a version or retroversion, as in ordinary cases of flexion. As to the amount of this tolerance, we cannot formulate a rule; it is greater in some than in others; but there are very few cases in which this flexible stem, if the uterus bears its introduction, could not remain for a considerable length of time, as it occupies no considerable space. He had rarely met with a case in which it would not pass readily into the canal. When irritation occurs, it is never in the cervical canal, but always in the uterine cavity proper; he had, therefore, never found it necessary to adopt the recommendation of Lawson Tait, to cauterize the cervical canal prior to introducing the stem. The amount of irritation caused by this hard-rubber instrument must be very slight, and he was at a loss to understand Dr. Emmet's opposition, which had been spoken of; but it is very evident, from what he says in his writings, hat he has never used it, and, therefore, cant scarcely give a fair estimate of its value. Dr. Emmet says that you might as well expect to straighten out a chordee with a steel sound as to treat a flexed uterus with the intra-uterine stem; but there is no parallelism between the two; one is temporary, the other is permanent and organic.

The question has been raised as to the permanency of the result. The clinical history of cases was purposely omitted from the paper on account of its length, but he could state, from his own experience, that in the majority of cases the canal continues straight. In many cases pregnancy has occurred after removal of the stem. He was unable to see any force in Dr. Taylor's objection, since the sound would always be introduced prior to the stem, and no attentive practitioner would explore the cavity of the womb without first satisfying himself of the non-existence of pregnancy; and there are so many other methods of producing abortion that this would scarcely be resorted to.

In regard to mortality, he had not seen any case where death had resulted directly from this instrument; but he had seen one case where perimetritis existed, but he believed that the stem had nothing to do with the result, as he afterwards discovered that all the symptoms—fever, etc.—had existed prior to the introduction of the pessary. He had in some cases been called upon to remove the instrument, but, as he had already stated, he only recommended its use where every other means has failed, and under the cautions specified in his paper.

In regard to conception during the retention of the pessary, he could not positively say that it has ever occurred, but he has now a patient who has missed one period. In such cases the pessary is removed, as it would inevitably produce abortion. Dr. Goodell has reported a case where a Chambers' double stem-pessary was used and removed at the end of the second month; the patient, however, aborted a month later. He believed that Dr. Harlow had mentioned two cases where pregnancy had occurred. For his own part, he did not see why conception should not occur. The stem occupies so little space, and is so flexible, that it would favour rather than prevent the spermatic fluid from entering the uterus.—*Philadelphia Medical Times.*

Translations.

A Case of Symmetrical Gangrene of the Upper Extremities.

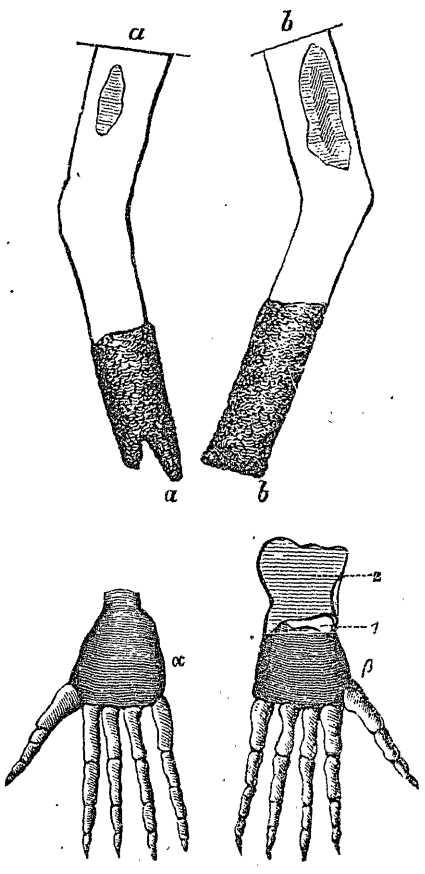
BY DR. CZARDA, OF MALASSORO, CELEBES, EAST INDIES.

(Translated by Dr. A. A. Riddel, of Toronto.)

We translate the following from the *Wiener Medizinische Wochenschrift* of the 5th June last, such cases being exceedingly rare in young people. The suspicions of the medical chief as to the true origin of the gangrene, it seems to us, may not have been entirely groundless, notwithstanding the statement of the mother and child and the evidence of other witnesses. That a spider should first bite the child on the upper part of one arm, and then deliberately pass over to the other and bite it in a corresponding point, seems altogether improbable. The witnesses who supported the statements of the mother and girl may have given the truth *as far as they knew;* for they may not have seen the patient till some time after the beginning of the trouble, perhaps not till after the falling off of the hands; and then, having heard the account of the parent and girl, may have taken it for granted that it was true. The sketches of the hands and arms given in the *Wochenschrift* to elucidate the history are not as well executed as we could have desired. But as they may tend to enable one to form a more correct view as to the real nature of this singular case, we have had the plates specially engraved for this Journal.

"On the 18th of March, 1879, a child was brought to the Military Hospital at Macassar, in which I was the attending physician, who had lost both hands in the neighbourhood of the wrists. The child, a Macassar girl of about twelve years of age, was found by the garrison doctor, who was also town physician, in a miserable bamboo hut, in such a very neglected condition that the assistance of the police was required to remove her to the hospital. Her name is Remba, that of the mother Jenang, and the father's Radang. The father is a fisherman, and for months together he is away from home; so that the care of the children, of whom there are several, is left entirely to the mother, who in poverty and misery their lives prolongs.

"The child is greatly emaciated, and covered with filth. The stumps of the fore-arms are surrounded with dry cow-dung. After she had been washed, the crusts of dung were carefully removed, and then were seen the most beautiful (*die schonsten*) granulations, which extended ten centimetres (3⅞ inches) upwards on the right stump, and thirteen (five inches) on the left. The right, *a*, is unequal at the end, which forms two prong-like prominences of about three centimetres in length.



The left, *b*, is, on the contrary, even at the end, which is slightly thicker than the remaining portion. On the right upper arm is to be seen, five centimetres long and two centimetres broad, a pale-red spot, free of pigment (the child has a dark skin), which has a superficial scar. On the left upper arm there is a similar pale-red scar, slightly coloured in the middle, 17 centimetres long and four wide. Besides these, there is a similarly-conditioned scar on the right buttock. Both arms are somewhat bowed, and cannot be completely straightened.

"The mother and child, upon being questioned as to the cause of this condition, stated as follows: Some time ago, but how long neither could say (as the natives, from the evergreenness of nature and their monotonous manner of living, can form no conception of time), the child was bitten in both upper arms by a large spider while asleep, exactly in the places where the slight scars are now to be seen. Both arms swelled to an enormous size, and the

child lay with a severe fever and terrible pain for many weeks, without being able to move herself on her mat. At length the hands became dark-blue and cold, and ultimately rotten, occasioning such a foul odour that no one except the mother could remain in the house, and she alone continued in attendance. The hands were changed to a dark, stinking, pulpy substance, out of which large worms crawled. Upon the child making a movement with the hands, the right one fell off, whereupon it was wrapped up by the mother and buried in the yard.

"The mother then firmly applied on the left fore-arm, above the blue part, a bandage of the inside bark of a kind of banana tree, in order that, as she said, the disease should creep no further. A few days later the left hand dropped off at the wrist, and was also buried.

"With this strange account of the spider-bites and falling off of the hands, the then chief of the Military Hospital was not satisfied, particularly as it not infrequently occurs in the Indian Archipelago that malefactors, as a punishment, have both hands chopped off; and therefore a judicial investigation took place. The following day a policeman, at the request of the hospital chief, brought the fallen off and buried hands, which were taken possession of by me and more closely examined.

"Both hands were wrapped in rush matting and cotton. After these were removed, I could take a closer view of the putrified contents. The soft portion of the right hand, *α*, was completely destroyed; the carpal, metacarpal, and finger-bones, and the nails were present, and were only, by a tenacious, dark, pulpy material, in which still a few tendons could be seen, held together. The bones of the left hand, *β*, especially the carpal and metacarpal, were, on the contrary, in the tolerably-well-preserved connecting soft parts imbedded. Not a bone or nail was wanting: even the epiphysis of the radius, *1*, was present. On the dorsum a piece of skin, *2*, was almost intact, being perforated in only two places; and this piece of skin lay in a free, five-centimetre-long patch, whose end, somewhat torn, nevertheless terminated in an almost right line. In this place, as the mother afterwards declared, the binding had been performed.

"The examination of witnesses, as well as the long-continued investigation, could supply no further information. All the statements of witnesses agreed with the account given by the mother and child: namely, that the hands, in consequence of a disease, had fallen off.

"Two months have elapsed since I last saw the child, and therefore I cannot say how far the cure has progressed.

"The Indian physicians are not yet agreed as to whether the injuries were caused by wounds or disease; and therefore I give this interesting case publicity."

Peritonism.

If we pass from the biliary lithiasis to other abdominal affections, we will find other problems quite as interesting.

Who has not often demanded, in presence of a mortal peritonitis, why and how one died of a peritonitis? Assuredly it is not by a direct effect of the inflammation of the peritoneum, and of the immediate functional troubles that result from it. But underneath the peritoneum there are nervous filaments which emanate from the solar plexus. When the membrane is inflamed, the nerves are disturbed if they are not also inflamed, and this disturbance follows an ascending course, from the filaments reaching the branches, and from the branches the trunks: the system of the great sympathetic receives a shock, and this shock overturns the organism. Thus the nervous troubles dominate over the morbid scene: super-excitation of the apparatus of sensibility; revolt of the motor apparatus, arrest of the peristaltic movements, from whence tympanites of the belly and constipation; development of the anti-peristaltic movements, from whence bilious vomitings; participation of the vaso-motor apparatus in its whole extent in the morbid movement, whence chill, coldness of the extremities, retreat of the ocular globes, hindrance of respiration, accumulation of blood in the venous system, diminution of the arterial waves cast from the heart, drying up of the secretions, etc. Such is the very faithful *tableau d'ensemble* which M. Fabre traces of the peritonitic state, in which we see almost wholly nervous phenomena. It is clear that it is not the condition of the peritoneum itself which causes the disease, but really the great sympathetic, incited by the abundant nervous plexus which it sends into the mesentery.

Thus is found theoretically and logically justified the empiric use of opiates that almost all of the great practitioners have recommended against peritonism.

By the side of peritonism is placed the choleriform state, or algidity, analogous by the predominance of nervous perturbation, but differing in that the sensitive system is there less attacked and the alteration of the vaso-motor system more profound, whence the symptomatic differences which follow: absence of abdominal pain, more or less abundant gastro-intestinal evacuations.

This algidity presents itself with a character more general than peritonism: it is in some sort the common expression of grave abdominal affections reacting on the nervous system. We

have seen above an example of it in the biliary lithiasis. It is one of the characters of epidemic cholera, and we frequently find it in the choleriform enteritis of young infants. In this condition we cannot mistake the considerable rôle of the nervous system.—*Gaz. des Hôp.*

THE CANADIAN
Journal of Medical Science,
A Monthly Journal of British and Foreign Medical Science, Criticism, and News.

TORONTO, SEPTEMBER, 1880.

EXTRACT OF MALT.

Probably no preparations recently introduced have attracted more attention or received a more thorough trial than the various preparations of malt. Properly prepared malt, rich in diastase, possesses in a high degree the faculty of digesting starch. It should be given with the food, not afterwards, and may be mixed with almost any non-alcoholic fluid, or with some farinaceous dish, care being taken that the temperature is not too high. We have used, with gratifying success, both with private patients and in the Hospital for Sick Children in this city, the preparations of the Trommer Extract of Malt Co., of Fremont, Ohio, and chiefly the combination with cod-liver oil. In cases of struma it is frequently found that the weakened stomach will not tolerate that great holdfast, cod-liver oil. In such cases we have found no better substitute than the plain malt extract.

In ordinary cases of atonic dyspepsia, we have found it a useful adjunct to other remedies. An excellent tonic food digester, too, in these cases, is the combination of extract of malt with citrate of iron and quinine. For a clear and learned exposition of the mode of action of the various digestive ferments, we need only refer our readers to Dr. Roberts' article in our February and March issues; he there shows how the extract of malt changes starch into sugar, and thus acts as a substitute to the natural diastase of the fluids of the body when that is deficient or wanting.

In the convalescence from exhausting diseases, where often the stomach remains debilitated, malt extract mixed with the food gives it the needful help, and by allowing it rest, and at the same time helping to supply its walls with suitable nourishment, enables it to recover its former powers. Many of the leading physicians of the States and Canada testify to the excellent qualities of Trommer's preparations; and Ziemssen, in his well-known voluminous Cyclopædia, speaks in terms of the highest praise of Trommer's receipt.

Besides the combinations mentioned above, which are those with which we are best acquainted, there are those with hops, pyrophosphate of iron, cod-liver oil and iodide of iron, cod-liver oil and phosphorus, hypophosphites, iodides, alteratives and pepsin, all of which serve a useful purpose when administered according to indication.

FERDINAND VON HEBRA.

We learn from the *Wiener Mediz. Wochenschrift* of the 7th August, that this celebrated Professor of Dermatology died early on the morning of the 5th. He was within a month of being 64 years of age. In a short notice of his death, printed in large type, surrounded by a deep-mourning border, and occupying the entire first page of the *Wochenschrift*, the editor expresses, in affectionate language, the sorrow of the profession the world over at the demise of this talented and noble man, whose decease is a loss, not to medicine alone, but to humanity itself. Owing to the *Wochenschrift* not having reached us till we were about going to press, we can give but a few short extracts of its *In Memoriam*. The notice begins with the truly pathetic German words, "FERDINAND HEBRA ist nicht mehr!" (Ferdinand Hebra is no more,) which are repeated several times in the course of the article.

"Ferdinand Hebra is no more! At an early hour on Thursday morning death relieved him, after a month's painful suffering; and thus ended a man who lived for all times. * * * Still, his name lives. Surrounded by the golden crown of immortality, Ferdinand Hebra will live to the most distant ages: will live in the remembrance of his works and his labours. * * * The Science whose father he was, and posterity for all time, will mention him with the highest veneration which mankind feel for the great ones of their race. Ferdinand Hebra has departed, but he is not dead."

The following communication explains itself:

To the Editor of the Canadian Journal of Medical Science, Toronto, Ont., D.C.

NEW YORK, 41 West 20th Street,
July 31st, 1880.

DEAR SIR,—Having been selected by the Paris Committee (Messrs. Ranvier and Dumont-pallier) having charge of the subscription for a monument or memorial to the late Prof. Claude Bernard, to represent them in the United States,—I beg leave to be allowed to use your columns for the purpose of appealing to the members of the medical profession, and all others interested, to subscribe to this worthy project.

I need hardly remind your readers of the great debt which every practising physician owes to the labours of the illustrious physiologist whose memory we are asked to honour in this way.

All inquiries and subscriptions, in the shape of bank checks or postal money orders, should be addressed to me.

Trusting that I shall have the advantage of your active personal support in this matter, I remain, yours, very respectfully,

E. C. SEGUIN, M.D.

JOURNALISTIC.—Among the new aspirants to fameare the "Monthly Index to Current Periodical Literature, Proceedings of Learned Societies, and Government Publications." One dollar a year. Address 10 Spruce Street, New York. It is useful for reference.

The *International Surgical Record*, a weekly journal published in New York. Price five dollars per annum. Achilles Rose, M.D., is the editor. Address No. 1 Chambers Street, or P. O. Box 1497. It is purely surgical in character, and promises complete translations of foreign medical literature.

Book Notices.

Diabetic Cataract, Iritis, &c. By C. J. LUNDY, M.D.

Sympathetic Affections of the Eye. By C. J. LUNDY, M.D.

Michigan College of Medicine, Detroit. Annual Announcement for Session of 1880-81.

On Peptonized Milk as a Dietetic Food for Infants and Invalids. By R. J. LARUE, M.D.

How Vivisection Concerns Every Citizen. By LEWIS S. PILCHER, M.D.

L'Apomorfina Azione ed usi del Doit. C. Ruata. Padova: Tipografia del Seminario, 1880.

The Therapeutic Value of the Iodide of Ethyl. By ROBERT M. LAWRENCE, M.D., Boston.

Sixth Annual Announcement of the Medical Department, University of Tennessee. Nashville Medical College, Session of 1880-81.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland: 82nd Annual Session, held at Baltimore, April, 1880.

Report of Select Committee on Public Health. Printed by order of the Legislative Assembly. Toronto: Hunter, Rose & Co., 25 Wellington Street.

Questions Submitted to the Graduating Classes of the Medical College of Ohio, from 1871-'72, to the Present Time. Cincinnati: C. R. Murry, 103 West Sixth Street.

A Paper on the Anæsthetic Use of Bromide of Ethyl. By W. H. HINGSTON, M.D., L.R.C.S.E., D.C.L., Surgeon to the Hôtel Dieu Hospital, Montreal.

Quarterly Report of the Kansas State Board of Agriculture, for the Quarter ending June 30, 1880, containing statistics relative to population, acreage of important crops, railroads, public lands, condition of crops, farm animals, meteorological data, etc., together with papers on summer and fall treatment of orchards and vineyards, and the growing of sorghum cane. By J. K. HUDSON, Secretary, Topeka, Kansas. Topeka: Geo. W. Martin, Kansas Publishing House, 1880.

Lucie Rodey: A Novel. By HENRY GREVILLE, Author of "Saveli's Expiation," "Philomene's Marriages," "Dournof," "A Friend," "Marrying off a Daughter," "Dosia," "Pretty Little Countess Sina," "Sonia," "Markof," "Bonne-Marie," "Gabrielle." Translated from the French by Mary Neal Sherwood. Philadelphia: T. B. Peterson & Brothers, 306 Chestnut Street.

Edmond About has just written a novel to prove the existence of domestic virtues in France. Americans, who, as a rule, know little

of France outside of Paris, are apt to deny the possibility of such. Let them, therefore, read "Lucie Rodey," Madame Greville's last romance, in which they will find the wife and mother "faithful unto death," though exposed to trials and temptations. "Lucie Rodey" teaches a great lesson, which will be felt even by those who read it with breathless interest merely for the sake of the story.

Oral Deformities. By N. W. KINGSLEY, M.D.S., D.D.S. New York: D. Appleton & Co.

Although this book will find its most natural place among the works of dental literature, yet beyond illustrating the many different mechanical means which may be employed for the purpose of regulating teeth, it further treats upon the ground where the more aspiring dentist and surgeon may be said to meet—*i.e.*, the treatment of deformities of the palate, &c. And upon this subject it is well worth the perusal of the general surgeon, as showing how completely the functions of that organ may be restored, in appropriate cases, by a well-adapted mechanical appliance, apart from any surgical operation. Upon this subject the author seems not only to have devoted a large amount of time and study, but also to have been favoured by an extensive practical experience. The work is illustrated by means of numerous woodcuts, which serve to render the mechanisms employed very easily understood. It also contains a chapter upon the formation of the sounds of the vowels and consonants, whereby it shows the various positions of the organs of speech in producing the correct pronunciation of the elementary sounds of the English language. The author's original manner of investigation will, no doubt, add an important link to the physiology of that subject.

Eleventh Annual Report of the State Board of Health of Massachusetts, for the Six Months ending June 30th, 1879.

A new law has somewhat changed the State Board of Health of Massachusetts, and given the Health Department a sanitary supervision of various public institutions.

The Report before us, coming out for the half-year only, seems intended to wind up little matters in hand and give a new prospectus, preparatory to a new start, and to give a summary and index of past labours; and very creditable to the Board and the State are these. We augur for the Board great success and increased usefulness in its larger sphere, and wish that our own Provincial Government would take a leaf out of the Massachusetts book. An overhauling of "Noxious and Offensive Trades" and "Polluted Water-courses" might at once begin with our own classic Don, and a result beneficial to all parties (victims and persecutors) follow, as in the case of Massachusetts.

Under the head of "Disinfection," some of the results of the labours of the International Cholera Commission are given. These have proved that our disinfectant modes have been too weak to kill organisms Chlorine and sulphur fumes must be much stronger than we have generally used them. The latter is preferable, on account of being less destructive to household goods; and 18 oz. of sulphur must be burned up for every 1,000 feet of air space. Towns are recommended to have furnaces for thick and heavy materials (mattresses, &c.) to be heated up to 240° or more. Chloride of zinc (1 of Burnett's solution to 200 of water) is recommended for diurnal soaking of linen, &c.

The plan of "Registration of Prevailing Diseases" is too limited and infrequent to be of much service.

The Board publishes some circulars for general distribution which must do much good, such as those on "Care of Young Children," "House Drainage," &c.

Treatise on Therapeutics. By A. TROUSSEAU and H. PIDOUX. Translated by D. F. LINCOLN, M.D. Ninth Edition. Volume I. New York: Wm. Wood & Co.; Toronto: Willing & Williamson.

This is not a work on materia medica or pharmacy, as many may suppose, but on therapeutics proper—a department of materia medica which is of far more importance and value than all the others put together. Indeed, if lecturers on materia medica would devote more time to a consideration of the therapeutical properties and physiological effects of drugs,

and less to a consideration of the commercial, botanical, chemical, and pharmaceutical histories, they would create a lively interest in the subject, and we should hear less complaints of these classes.

The subject of materia medica, which is universally regarded as the most dry and uninteresting of the whole medical curriculum, is capable of being made one of the most interesting as well as most instructive of the whole course, and to no work is the teacher more indebted for assistance in the endeavour to impart that interest to materia medica than to Trousseau's Therapeutics.

In these days, when all our medicines are so well prepared to our hands by the educated druggist and dealer, who devotes all his energy and time to that business, we can conceive of no greater folly than to make young men spend so much time and strength in the acquisition of knowledge for which they will have no possible use in after years, and we think it would be much more to their profit if they could be allowed to devote the time thus spent to a more thorough preparation in the more practical branches of their profession.

Trousseau's Therapeutics is a book that has long been familiar to teachers of materia medica, and we are glad that Wm. Wood & Co. have brought it within the reach of every student and practitioner. There is a vast amount of useful matter in it, and many valuable hints and suggestions in regard to the use of certain drugs; indeed, emanating as it does from the very prince of clinical teachers, one would expect to find it a very treasure-house of rare medical facts and suggestions—and so it is.

But while there is very much in it to commend—and we would like to see it read by every one—there is also a good deal that, read in the therapeutic light of to-day, will hardly be accepted as either very useful or very sound. When we look at it, however, as the pioneer of such modern works as Ringer, Napheys, and Fothergill, we must accord its authors a very large meed of praise for industry, originality, and painstaking research; and we thank the publishers, on behalf of the profession, for placing the work in so attractive a form in our hands.

A Practical Handbook of Medical Chemistry, applied to Clinical Research and the Detection of Poisons. By WILLIAM H. GREENE, M.D., Demonstrator of Chemistry in the Medical Department of the University of Pennsylvania, &c., &c. Philadelphia: Henry C. Lea's & Co; Toronto: Hart & Rawlinson. 1880.

This is a small but very complete work on the application of chemistry to medicine, physiology, and toxicology. It is partly founded on Bowman's work, the later edition of which was edited by Bloxam, but is much more complete in many respects, and contains the description of many new substances, tests, and processes which were not contained in the older work. Unless in exceptional cases, it does not seem to be well fitted for medical men, who have seldom the time or means to devote themselves to the accurate processes therein described; but will be found very useful to chemists who occupy themselves with the applications above mentioned, as it contains a mass of information which could be obtained only by reference to a large number of works.

The book is illustrated by numerous plates of various substances, many of which delineations are old friends, taken from Bowman and others. The writer, from long experience, can testify to their great accuracy.

The first part of the work treats of the proximate principles taking part in the animal economy, and appears to be very complete. The second part treats of the analysis of secretions, excretions, &c., such as urine, calculi, pus, saliva, bile, milk, blood, and blood-stains. We think the guaiacum test for blood-stains is more reliable than the author seems to believe, but we would apply it in a different way. The third part treats of the detection of poisons, the chapter on Arsenic being excellent. We confess, however, that we would not recommend Bloxam's electrolytic process as very handy or generally applicable. Moreover, if the quantity of arsenic present has to be derermined, one of the other processes must be conjoined with it. The author wisely recommends the method of Fresenius and Babo (amended somewhat by Otto), which allows not only of the detection of the presence of the most minute traces, but also of the determination of the quantity present, which is not the case with that of Reinsch, nor directly

with that of Bloxam. We are of opinion that more attention should have been directed to the processes (for detection) of Fleitman and Davy, the latter of which, when properly executed, is wonderfully delicate. It is very doubtful, as stated by Otto, if there is any advantage in employing a retort instead of an open dish in the first solution of the organic substance—that is, ordinary precautions being taken. It may also be noticed that the very characteristic reaction of potassium iodate upon arsenical spots is altogether omitted.

Under the head of the separation of hydrocyanic or other volatile poisons from viscous mixtures, it might be added that the passage of a current of steam is very efficacious, and avoids the disagreeable accidents which sometimes occur. With regard to phosphorus, too, it may be mentioned that the test corresponding to Fleitman's for arsenic, viz., by caustic potash and silver nitrate paper, is a very excellent one, more especially as it is available in daylight, and forms a good class illustration.

With respect to the detection of alcohol, when but small quantities are present in the distillate, the determination by means of the specific gravity can be relied upon only in very accurate experiments. For very small traces, the iodoform test, *i. e.*, with aqueous solution of iodine and potassium hydrate, seems quite equal to the chromic acid reaction. The odour and crystalline shape of iodoform are strongly characteristic.

Again, there are many poisonous alkaloids omitted, which might, with benefit, have been introduced. But, on the whole, we can most strongly recommend the work as well adapted to the proposed end, as a highly accurate and practical compilation.

Mode of Administration of Chloral in Solution.—A number of patients refuse to accept chloral, even when associated with syrup of gooseberries. To cause the painful sensation to disappear, which the passage of this medicine provokes in the back of the mouth, it suffices, says Dr. Lebert, to add to the aforesaid mixture one drop of pure chloroform for each gramme of chloral.—*Le Practicien.*

Miscellaneous.

The Morality of Medicine.—The criminal statistics of Brooklyn for the past year show 25,706 arrests were made by the police. One was a clergyman, one an editor, eight were artists, six actors, two custom-house officers, *forty-seven lawyers* (Jerusalem!), and eleven undertakers; but not a physician was there in the lot.

Effervescence of Urine.—There is another example of effervescence which is, I believe, often misunderstood—that of cold healthy urine when nitric acid which has been exposed to the light is added to it. The brisk effervescence which ensues is frequently attributed to the presence of carbonates, even when the urine is quite recent and faintly acid in reaction. It is, of course, really due to the conversion of the urea into nitrate of ammonia and carbonic acid by the hyponitrous acid present in the test. And the proof is, that no effervescence occurs if strong hydrochloric acid be added to the same urine, nor if perfectly pure colourless nitric acid be used in the same way.—*G. F. Masterman, L.K.Q.C.P.*, Ixworth.

Structure of the Blood Corpuscle.—As microscopic appliances and knowledge increases history repeats itself in the battle now occurring between Heitzman's and Curtis's disciples. Haller, in 1757, in "Elementa Physiologiæ," resolved the solid parts of animals and vegetables into the "fibre" and an "organized concrete." The fibre being to the physiologist what the line is to the geometrician, "Invisibilis estca fibra, solâ mentis acie distinguimus." A reaction against the fibre theory took place in 1779, when Prochaska and others, down to the present century, adopted the views of Leeuenhoeck, who in 1687 announced the "globular" structure of the primitive tissues of the body. Huxley, Virchow, Bennett, Todd and Bowman, Beale and others, have finally elaborated the cell doctrine into its present more satisfactory shape; but another Haller, Dr. Heitzman, of New York, proposes to land us a century back by claiming the discovery of a trabecular structure for the cell. Dr. L. Curtis, of this city, repeated

Heitzman's observations, and publishes his views in the New York *Microscopical Journal*, going to show that blood corpuscles have no trabecular or fibrous appearance, but are made up of very minute granules or corpuscles, which Heitzman has mistaken for fibres, just as the old test objects, such as diatoms, and podura scales were at one time supposed to be striated, and are now known to have been so considered, because improperly observed.—*Chicago Medical Gazette.*

A Crucial Test of Homœopathic Medicines.—In the New York *Homœopathic Times* for March, 1880, is an account of a series of experiments instituted for the purpose of testing the effects of the thirtieth dilution of tincture of aconite. The project was set on foot in Milwaukee by a homœopathic society and carried out with great care. In the words of the originators, "the object of this test is to determine whether or not this preparation can produce any effect on the human organism, in health or disease." "A vial of pure sugar pellets, moistened with the thirtieth Hahnemanian dilution of aconite, and nine similar vials moistened with pure alcohol, so as to make them resemble the test pellets," were given to the prover, who was not to know which of the ten vials contained the aconite. The vials were numbered from 1 to 10, and the prover was to administer them to individuals, sick or well, and to detect by the effects which of the vials contained the medicine. It was provided that "the provers must be physicians of decided ability, who possess a good knowledge of the recorded symptomatology of aconite, and who have faith in the efficacy of the thirtieth dilution." The project was widely announced, and the ten vial package was sent to each of twenty-five homœopathic physicians applying for them, scattered over a dozen different States. To guard against all possible fraud or trickery, the Rev. Geo. T. Ladd, Professor of Mental and Moral Philosophy in Bowdoin College, Maine, was selected to distribute the vials to applicants and to receive reports from them.

Now, all this was not only decidedly fair, but it was highly creditable to those who ventured on an expirement involving so much peril to a favourite theory. One looks to the result with much interest. The result, so far as it has transpired, appears in the report of Mr. Ladd, which was not made until after the date allowed for the returns from the provers. By his report it appears that only nine of those gentlemen ventured on any answer whatever. Mr. Ladd's report is thus summarized in the general report made to the Milwaukee Academy of Medicine—the body which originated the project—and signed by Samuel Potter, M.D., President, and Eugene F. Storke, M.D., Secretary :—

Number of tests applied for and sent out	2
Number of tests which have been reported on	
Number of tests in which the medicated vial was found	0

Be it remembered, that these statements do not come from the opponents of homœopathy, but from its own adherents, and not from a local or partial source, but from a select body representing the more intelligent portion of the sect. We have never met with any evidence more damaging to homœopathy. True, this blow strikes only at the infinitesimal phase of the system, and not at the dogma of similia similibus; but it is also true that the head and front of homœopathy is the unphilosophic, unscientific and absurd doctrine of potentization, and not the theory implied by its title.

We have observed no notice of this report except in the journal named. It would appear that a general effort has been made to suppress it. In the meeting of the New York State Homœopathic Society, lately held at Albany, the report was refused acceptance. The editor of the *Times* complains of this, saying that common courtesy required its reception, though its adoption might have been refused. We do not wonder, however, at the course. The pill was altogether too bitter for homœopathic stomachs.

Births, Marriages, and Deaths.

MARRIED.

At Berlin, on the 17th day of June, Henry Lackner, M.B., of Berlin, to Nellie, eldest daughter of John A. Mackie, Esq., Merchant, Berlin.