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THE TREATMENT OF CONSTITUTIONAL SYPHILIS.

BY

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During the first half of the eighteenth century but little was known about the unity of that disease which is now commonly called Syphilis; it was still confused or associated with such pathological conditions as urethritis and chancre. In the second half of the century, the theory of the identity of syphilis and gonorrhœa was firmly opposed by Balfour of Edinburgh; and Benjamin Bell, in opposition to John Hunter, who maintained the identity of the two diseases, but the question was finally set at rest by the experiments of Ricord, who established the axiom that the gonorrhœal secretions can never produce a chancre, and yet, although the truth has been settled in the mind of the scientific physician, it cannot be forgotten that even so late as 1829 Sir Astley Cooper denounced the practice, common in hospitals, of giving mercury for gonorrhœa, and it was not until 1852 that Bassereau separated primary venereal sores into two classes, named respectively, hard and soft; before this time it was pretty generally supposed that all venereal sores were due to the action of a single virus.

Syphilis may be defined as "a contagious disease, chronic in character, due to the entrance of a specific virus into the system, which is capable of further propagation and transmission, both by inheritance and by inoculation with the blood and morbid secretions from the affected individual."¹

The specific cause of this infection is as yet unknown, and, until such has been discovered, it is inevitable that all efforts to treat this disease must be founded on empiricism. Yet, although we are in ignorance of the exact causation, we are in possession of the knowledge that syphilis being contagious is probably of microbic origin, that syphilis bears a definite relationship to those conditions which are commonly known as "infectious diseases," in that the mode of infection is by contact, and this infection is followed by a period of quiescence,

or incubation, terminating most commonly in eruptions, accompanied to a greater or less extent by fever, malaise, and other characteristics of a general infection, and that these in their turn give place to periods of latency, which latency may, however, be interrupted by exacerbations or by neoplastic lesions—a history characteristic of a disease of microbic origin.

To-day, scientific physicians are inclined to attribute the specific cause of all diseases to one of two different classes of micro-organisms; bacteria, or that amœbic-like species, of which the plasmodium malariae is our most notable example, and are called protozoa. To which is syphilis attributable? In the past, effort after effort has been made to find in the lesions, the blood or the body of the syphilitic person bacteria, which could, according to Koch's law, be defined as the causal agent of syphilis, but without avail; and yet, when we consider the likeness which the tertiary form of this disease bears to tuberculosis, we cannot help returning to our search for a microbic origin of these tubercular syphilides. Perhaps, however, when some method of differentiating from the body tissues, that protozoid class of organism, even now known to be responsible for certain diseases, has been found possible, the discovery of the cause of lues will soon follow.

The question of the etiology of syphilis cannot, however, be discussed without considering the possibility of the dual causation of syphilitic lesions. Are the lesions caused by secondary and tertiary syphilis, due to the same etiological factor? Many say yes, but others say no, certain of the latter asserting that while the primary and secondary lesions are certainly due to a specific virus the tertiary manifestations are but due to a post-syphilitic degeneration.

Let us consider the likeness existing between syphilis, the exanthemata and tuberculosis. An individual becomes affected by the syphilitic virus; a definite period of incubation follows, which period is succeeded by the primary sore, a local manifestation of what is probably at first a local disease; we then have what has been called the period of secondary incubation, which is followed by more or less generalized lesions.

Trace the infection; an entry is obtained for the virus, the incubation period is spent in its gathering of strength, which point having been reached it manifests itself, possibly as a small soft sore. This sore enlarges and rapidly becomes indurated; the irritation of the virus has produced a hyperplasia of the tissues. Rarely the disease is arrested at this point by nature's method; more frequently the virus is disseminated by the blood and lymph channels, and this dissemination occurs during the so-called period of "secondary incubation." This period is succeeded by more or less generalized manifestations,

which, like the exanthemata, are accompanied by constitutional disturbance, often indicated by rise of temperature, and general malaise, but still nature attempts a cure. Sooner or later, however, other factors enter into consideration. The invaded host gains strength on becoming accustomed to the toxins of the invader, and the latter gradually become attenuated, possibly through the same conditions as influence the virus producing the different exanthemata, and thus the early secondary symptoms pass to the later secondary and these latter to the early tertiary where hyperplasiæ are the characteristic phenomena. Possibly where the virus becomes firmly encapsulated, as in tuberculosis, a period of truce ensues, and cure results in a longer or shorter period of time, according to the resisting power of the host and the virulence of the invader.

To recapitulate; let us consider the following hypothesis:—

Syphilis is at first a local disease. It then becomes generalized. Lastly, by the degeneration of localized healed lesions, local manifestations may again appear. In other words, the syphilitic virus seems to tend to provoke the same hyperplasia of tissue as does the tubercle bacillus, possibly, the so-called tertiary manifestations are quite frequently due to the breaking down of these areas of hyperplasia alone, which is characteristic of many new growths. Again, such hyperplasia may characterize encapsulation of the virus, which, as in tubercle, may mean the healing of the disease, and the degeneration following such encapsulation may be totally independent of the activity of the virus, and it may be altogether encapsulated and therefore inert. This hypothesis will explain that few cases of tertiary syphilis have been proven to be contagious.

“No discussion should be required in this place to show that mercurial remedies are the real remedies for this disease.” With these words, Liebreich, nearly twenty years ago, opened the discussion on Syphilis at the International Congress held at Copenhagen. Do we believe this literally to-day?

In these days, when our faith in the specific action of drugs is decreasing, when even men like Osler openly state that we have but three or four brilliant instances of the specific action of a remedy,² and when the most modern thinkers will classify with him, as our four greatest specifics mercury and potassium iodide for syphilis, with quinine for malaria and iron for chlorosis, it seems bold to say, that there are many who are unconvinced of the specific action of mercury. E. L. Keyes, in a private letter about two years ago, wrote: “no treatment, mercury in excess, or mercury in tonic doses, or mercury in controlling doses, no iodides, no springs, nothing but the lapse of time

and the grace of God ever eradicates the syphilitic virus; but time always does it; that is, the disease ceases to be virulent, and ceases to be communicable to another in any manner after a long enough time with or without treatment."

Why, then, should treatment be necessary? Because its aim is "to suppress symptoms, and prevent them from doing harm during their existence; to control symptoms and prevent relapse, without harming the patient in any way; so to manage the disease that it may not be contagious during its existence by keeping down such symptoms as yield contagious secretions, that the patient may be enabled to marry as soon as possible, to produce healthy offspring, and that the symptoms of the disease during their progress shall be restrained from leaving unsightly scars or damaging the structure of tissues or organs during their existence. These ends may be more certainly attained by the judicious use of the preparations of mercury and iodine than by any other means; and this is the reason why these drugs hold their place in medicine as anti-syphilitic specifics, notwithstanding the fact that the disease goes on and runs its full course in spite of their use, and notwithstanding the fact that much harm has doubtless been done with the drugs by their unskillful use."³ Mercury can at least be said to paralyze the virus and act as an antidote to its toxins, or to increase the resistance of the host. It tides us over that period of virulence, when the host is overridden by the invader, when the invader is at the height of its power, when the host possesses the minimum resistance.

Does mercury act as a specific against syphilis? I believe not. Those who treat syphilis continuously for a definite period of time, believe that mercury does; that mercury acts as a germicide, but it is strange that such dilute solutions as we are able to circulate, are able to kill the virus when we remember that mercury circulating in the system of workers in mercury is apparently unable to act as a germicide, and prevent infection or the growth of the syphilitic virus. What action then may it have, that nearly all acknowledge its beneficial effect on acute secondary lesions?⁴ It may perhaps act as an antidote to the toxins and thus let the body build up the tissues, or it may even favor the formation of an antidote formed by the tissues.

Probably nearly all the members of the profession in Montreal are followers of Jonathan Hutchinson, and believe in the specific, curative or antiseptic action of mercury; consequently this disease is usually treated here by the administration of mercury, more or less constantly for a definite period of time, say two to four years, irrespective of the

activity or non-activity of the virus. Other workers, however, while believing in the specific, curative or antiseptic action of mercury, have suggested intermittent treatment. This they advocate, knowing that the tissues during continuous treatment become tolerant of the remedy, and that syphilitic exacerbations occur during the constant administration of mercury when, as Peterson says, we have lost our remedy. In other words, the constant use of mercury causes the tissues to become accustomed to its influence, and we have lost its powerful action, when we most need it. This tolerance of the tissues for mercury, is seen not only in the fact that in the continuous method much larger doses are necessary in an exacerbation than in the first rash, but in the hypodermic treatment, when the tissues have become accustomed to this drug, we can often employ one grain of sublimate, though the B. P. maximum dose is but 1-15 of this amount.

Do these advocates of intermittent treatment err? Do they obtain a more powerful action against symptoms only by sacrificing the patient's chance of ultimate cure? Do they increase his chances of suffering from tertiary manifestations and the post-syphilitic affections, such as tabes and general paresis?

If it were possible to prevent tertiary lesions by early continuous treatment of secondary lesions, nearly all would advocate this method, but unfortunately, this does not seem possible; on the contrary in Norway where many cases are not treated by mercury, tertiary cases are not more frequent (Groen), and that class of affections, which has been called "*les affections parasymphilitique*" appear more frequently in the wealthy, who are probably the best treated, than they do in the poorer classes. In Dalmatia and Bosnia, where there is much syphilis and little effort at treatment parasymphilitic affections are stated to be unknown.⁵

When this is considered with the fact noted by those treating syphilis by the intermittent method, that mercury does not act so well in those without symptoms as it does in those with symptoms, it is not to be wondered that many are dissatisfied with the specific and continuous use of this remedy. This is explained by the fact that in those with symptoms the affection is more or less general.⁶

The study of, this the "*chronic intermittent treatment*," forces us to consider what and when should be our periods of intermittency and thus we are led to reflect upon the condition of the virus during this period. It has been suggested that during periods of activity the virus is free, and during periods of inactivity it is encapsulated and incapable of being reached by mercury, and only when it is non-encapsulated, as is demonstrated by symptoms, is mercury indicated. This is the view

of those who treat only when symptoms are present, imminent or just passed, and consequently they have received the name of the "symptomatic school."

To recapitulate, there are three distinct methods employed by those who treat syphilis by mercury, and their treatments are based on three different hypotheses.

(1) The continuous method:—Those who favour this, believe in the antiseptic action of mercury, which according to their theory is equally powerful at all times, and should be administered for a definite period, say two to four years. Of this school Hutchinson is the leader.

(2) The chronic intermittent method:—Those who employ this method, either believe in the antiseptic action of mercury and its ability to attack the virus under conditions of both activity and inactivity, or feel that mercury does not act as a germicide, but as an antitoxine, and as such should theoretically be equally efficacious at all times, if it were not for the tissues' capacity for becoming tolerant to its use, and it has been suggested in this respect that it is possible in latency a certain part of the virus is free and gives off toxins which are insufficient to irritate and cause lesions, unless there are localized foci of degeneration.

Probably this school use mercury in latency, hoping that it will act as an antitoxine directed against these poisons. Of this school Neisser was the most prominent advocate.

(3) The symptomatic method:—Those who treat lues by this method believe that the syphilitic virus, when inactive, is probably encapsulated and incapable of being reached by mercury. They consider it wrong to disturb the tissues by the employment of mercury when the virus is inactive, and they consequently begin treatment only on the appearance of syphilitic lesions, and cease treatment until again indicated by symptoms, shortly after the disappearance of syphilitic manifestations.

In the discussion of this, the symptomatic treatment of syphilis, a definition of the term symptoms is called for; an explanation of what may be considered indications of the activity of the virus is imperatively demanded and must be considered before the practical treatment of lues is discussed.

We assume the care of a patient, who has passed his period of "secondary incubation," an early rash accompanied by a generalized enlargement of the lymph glands is apparent; we choose a method of treatment with mercury and succeed in our efforts to drive away the cutaneous manifestations. The lymph glands are still palpable, but are neither as apparent or tender as they were some weeks previously, and

although the cutaneous syphilides have ceased to exist, our patient has, for some few days, been complaining of a slight ulceration over the gum of one of his wisdom teeth. Let us consider his history and condition more fully. His weight is decreasing and has decreased quite alarmingly. A pasty colour, or even a marked anæmia, has drawn his friends' notice to his apparent ill health for some weeks past. On his solicitation, we have increased our dose to the point of tolerance, and yet our symptoms have not remitted. What course is open to us? Stop the use of mercury at once. Tonics and constitutional treatment should be our method now. With watchful care we should regard his condition under the non-employment of mercury with the knowledge, that loss of weight, anæmia, and lassitude, quite frequently accompany a sufficiency of that drug, that moderate glandular enlargement may be present for months, and even years, when the patient may be either without syphilis or suffering from a latent form of this disease, and most important it is to remember that ulcerated and tender mucosæ are found quite frequently in those suffering from a sufficiency of mercurial treatment.

In fact, we must always bear in mind the knowledge that mercury is eliminated by the mucosæ, that in many persons those symptoms so frequently seen on the mucous membrane of the syphilitic mouth, are as likely to be due to mercury as to syphilis. In this respect we must remember that exacerbations have been noticed in such lesions of the buccal mucosa, on the administration of one of a series of bi-weekly hypodermic injection of a large dose of bichloride of mercury.

How then can we know when to treat our patients with mercury and when to avoid the use of this remedy? By the exercise of judgment, alone, we must act, as we have no certain means of differentiating between lesions, common to both lues and an excess of mercury. Judgment must be based on the observation of the patient from the beginning of treatment; his weight; its variation under treatment; his blood; its variation under treatment; his general condition under the cessation or employment of mercury. These and many other signs and symptoms, must be weighed, in order that we, with our present lack of knowledge, may judge of the best course to pursue.

The next question that arises, is the local preventative or prophylactic treatment. Can constitutional syphilis be avoided by the obliteration of the primary lesion. Lues, of course, is primarily a local disease. Can it be prevented from becoming generalized. Theoretically it may, but practically speaking, our capacity to prevent the generalization of this disease is to be doubted. The individual is infected, but unfortunately it may be weeks or months before the primary sore is obser-

vable. What has become of the virus in the meantime? Although it is probably cut off from the distant tissues by the salutary action of the leucocytes, we are without proof that some of it has not been carried by the circulatory systems to remoter parts of the organism.

Even when a sore first becomes apparent, who can say that it is leucitic? It is rarely until the nearest glands are and have been for some time affected, that we can be more than suspicious of the syphilitic nature of the lesion. In fact, the rapid enlargement of the lymph-glands is one of the suggestive symptoms of this disease. Again, when the nearest glands are enlarged, is it not probable that others also may contain the virus?

Yet, I consider that we are justified in radical operations in certain selected cases. Even when the nearest glands are enlarged, in some persons we may do little harm and possibly much good by such radical measures which should not fall short, however, of the removal of the glands, if they are palpable, difficult though this latter procedure may prove to be. "Up to this time, all that can be said in the present state of the question is, that cutting out the initial lesion of syphilis can do no harm, and may do some good. It should be placed before the patient in this light, and, if he elects excision and the chancre is in a suitable position for thorough removal, it may be excised."

"On the hypothesis that local primary lesions afford no certain indication of the beginning of a constitutional disease, the general treatment applied before the development of undoubted syphilitic symptoms has been called the general preventive method," but this hypothesis cannot be accepted without exception. "The local primary lesion, if observed at all, must be recognized as the real beginning of the disease, and a general preventive treatment is then just as much out of the question as local methods. It follows logically that general, that is to say, specific, treatment should be adopted as early as possible; delay is justified neither theoretically, as everyone will admit, nor practically, as my own experience has taught me. It is true that on this principle patients will be subjected to specific treatment whose symptoms are purely local and might, therefore, dispense with general treatment. Such treatment, however, can do no harm, and affords, at least, that moral satisfaction of feeling that nothing has been left undone."⁸

The general preventative method is not looked upon with favor in this country. The possibility of submitting an individual to mercurial treatment, without need is quite naturally to be deplored. Our teachers have impressed on us that secondary symptoms delayed by mercurial treatment are prone to appear with greater violence at a later

date. Again, the possibility of doubt existing in the mind of both patient and physician, as to whether the patient really suffered from primary syphilis, when such diagnosis has not been verified by secondary symptoms, has been pointed out as a serious consideration, and, indeed, these must be considered such by those who believe in the antiseptic, specific and curative action of mercury, but to those who believe in mercurial treatment as being simply anti-symptomatic, and that time alone cures this disease, they are of little import, especially when it is remembered that a negative diagnosis is also uncertain when given to a patient who has suffered from a typical primary sore, and here I have in mind those cases where, although typical early secondary symptoms have never appeared, grave visceral and other lesions afflict a patient who thinks he has never had syphilis.

When to a believer in the symptomatic method of treatment comes an individual suffering from a sore, situate on the genitalia, which has appeared at least a week after coitus, and without apparent cause, suspicion is quite naturally aroused. When, in addition, the history discloses that such coitus was according to our ethics illegitimate, we naturally seek a rapid induration, and when this is followed by a rapid enlargement of the lymph glands, in the immediate vicinity, and later a general adenitis, our suspicions have been so far confirmed that it seems hardly necessary to await further confirmation in many cases, and, indeed, it seems doubtful whether we are justified in doing so.

Let us begin treatment, therefore, and continue the use of mercury until we have not only healed the sore but until the last vestige of induration has disappeared, and then make assurance doubly sure, by its continuance for some weeks after the last suspicion of an active virus has been dispelled. And the disappearance of the last vestige of induration, at the seat of the primary lesion, is often not the work of days but of months, as is shown by the history of a patient, seen at the Montreal Dispensary nearly four years ago.

On the 20th November, 1899, he presented himself for examination, complaining that the day before he had noticed two small sores at the preputio-coronal junction. Each was seen to be about 3-16 inch in diameter, and to secrete a clear fluid. No induration was palpable. The patient was prepared to affirm that he had not had coitus for six weeks. The diary of that date ends with the question "are they specific?"

22nd November, "The two sores now seem to rest on a plaque of induration, otherwise conforming to above."

1st December, "Induration still marked. Submaxillary and inguinal glands enlarged."

4th December, "Induration still marked. No abrasion or secretion. Sternoid and glands of groin enlarged. No sore throat or headache."

14th December, "Examination shows indurated plaque covered by normal mucosa. Fauces only suggestive. Little sore throat. Glands in groin slightly enlarged, submaxillary slightly enlarged. Has had coitus."

6th January, 1900, "Examination shows indurated dry submucous plaque to be still on penis, glands in groin and neck still enlarged. Epitrochlear glands doubtful. Slight injection of throat. Slight pains. A few papules on lower part of thorax and abdomen. Not yet typical."

30th January, "Typical lues, to be treated with mercury."

Patient was then kept on anti-syphilitic treatment for four months. He then disappeared, but reappeared on 12th February, 1901, giving this history. For five months he was at work in Quebec, always enjoying perfect health, but was untreated. He then spent one month in New York and two months here, without being treated. The notes here state, that all this time he claims that he had a hard preputial "wart" on site of old chancre, which had been cured, for at least three weeks before the wart appeared. This, by picking, came off and showed an ulcerated surface simulating a chancre for which he came for treatment. The sore rapidly disappeared under mercurial treatment.

This history is interesting because it tells of the existence of a penile lesion, at least on the site of the primary sore, for over one year. The condition of the seat of the primary lesion, then, may certainly be said to be one of the indices which must be examined in our consideration of the question of the advisability of our using mercury, or continuing its use.

It has been pointed out that the discomforts accruing from the primary sore, and the local adenitis, often become so marked that we are forced to institute general treatment before the appearance of secondary symptoms, and in some, also, the exigencies of their occupations, social and family ties, seem to make it most important that the possibility of the appearance of tell-tale symptoms must be combated, if this can be done without injury to the patients.

On May the 5th, 1903, a gentleman presented himself to me with a history of illegitimate coitus, about ten days previously. He had noticed a small sore on the morning of his first visit to me. Examination showed a sore of about $\frac{3}{8}$ inch in diameter, surmounting an area of suggested induration, the inguinal glands were barely palpable.

He was instructed to keep this clean, the opposing mucous surfaces were kept apart with absorbent cotton and he was asked to report daily for examination. The second day demonstrated an increased area of abrasion and the presence of induration was now assured. At this period, I considered excision, believing that the chances of its being lues were nine to one, but I desisted from this as certain circumstances made it unadvisable. The patient was seen daily for three weeks. The inguinal glands became rapidly enlarged. The sore extended as a band of about $\frac{1}{2}$ to $\frac{3}{4}$ inch around the preputio-coronal junction, and surmounted a definite plaque of even greater dimensions. The distant glands rapidly became palpable and soon a definite adenitis, even discernable in the epitrochlears, was apparent. I explained the situation to him, and the patient, I think wisely, chose immediate treatment by mercury. This I instituted, and soon had the pleasure of seeing what was apparently an unhealing sore, become healthy in appearance; nineteen days after we began treatment, it may be said to have almost disappeared and this disappearance has been brought about without local treatment. Cleanliness alone has been exercised from the first; at one time without avail, but when general treatment with mercury was used as an adjunct the healing process was immediately noticeable, and seven weeks later, outside of that tell-tale induration, nothing is left of his primary lesion. On the 15th July the induration is well marked.

Is it not right in such a case to begin treatment without waiting for what are often disfiguring cutaneous manifestations? Ziemssen answers: "general treatment, curative, not preventive, should be commenced at soon as possible after infection."⁹

If it be permissible to repeat certain fundamental principles to be considered in the treatment of syphilis, before dilating on the methods of employing mercury, it will be well to consider that broadly there are but two schools of thought, amongst those who use mercury for the treatment of this disease; those who believe that mercury cures syphilis by its antiseptic action; and those who believe that time alone cures syphilis, and that mercury acts only on the virulence of the specific organism, although it may perhaps be said to act as an antiseptic in that it decreases the virulence of the virus or possibly it increases the resistance of the host.

Those who believe that mercury cures syphilis, use mercury for a definite period of time. Those who believe that time, alone, cures syphilis, use mercury on the appearance of symptoms, during their imminence, and immediately after they have passed, believing that mercury used in the interim is certainly of no avail as a curative agent,

and quite possibly detrimental to the general health of the patient. "From the antiseptic point of view it is not justifiable, and from the practical point of view it is of little use, to repeat the treatment," (as does Fournier), "if no new symptoms manifest themselves. It should be had recourse to at once, however, if any relapse occurs. Fournier's plan of repeating the treatment once a year for four years might just as well be extended to the whole of the patient's life, for I have seen relapses, even after four years, in cases in which less energetic forms of treatment, like Fournier's, had been undergone every year."¹⁰

How should mercury be administered, at what intervals should the doses be taken, and what are the common indications that point to our dosage being too great, are questions which must now be considered.

The three most common ways of administering mercury to-day are:—

1. The hypodermic method; 2. By inunction; 3. By the mouth.

These have been named in the order of their efficacy, and it is by the exercise of judgment alone that we can decide which method is most suitable for a given patient, or at a given time. It would be absurd to employ any one of these methods for all patients. It would be unwise to be unprepared to change from one method to another.

In the consideration of how frequently it is necessary to administer a dose of mercury, it must be remembered that this drug is excreted in large quantities, especially by the urine, even up to the tenth day after injection; consequently, in using it in maximum doses it will be necessary to repeat this quantity at intervals of at least ten days, but better, probably, at not greater intervals than one week, and in using smaller doses it must be repeated more frequently.

What is a maximum dose? It has been already stated that, in the hypodermic method of treatment, by accustoming the tissues to its use, doses as large as one grain of corrosive sublimate have been used. In endeavoring, however, to ascertain the maximum dose, certain circumstances must be considered: first, the condition of the buccal cavity; second, the number of the alvine excretions.

Preparatory to beginning treatment with mercury, the patient should be recommended to visit his dentist, and by a thorough examination of his teeth prepare his buccal cavity to act as one of our best indices to an excessive dosage of this drug. A good mouth wash, also, should be recommended, and its frequent and constant use throughout mercurial treatment, insisted on.

Let us begin by administering a small dose of mercury, which may be gradually increased from time to time until the point of tolerance is ascertained by an apparent slight tenderness of the gums on opposing the teeth. An overdose is indicated by stomatitis and dysentery.

“Mercurial stomatitis commences with swelling and relaxation of the mucous membrane of the mouth, particularly at the edges of the gums between the teeth. The parts most exposed to pressure and friction slowly wear away, the ulcerated surface forming a greyish-blue patch on the mucous membrane. This is best seen at the edges of the gums, and wherever the teeth, particularly those with cutting edges, press constantly against the mucous membrane of the tongue, lips, or cheeks (wisdom teeth at the angle of the jaw).”¹¹

The maximum dose then is the largest quantity which can be used without causing tenderness to the gums, stomatitis or a too frequent evacuation of the intestine. In this respect, it must be remembered that the maximum dose varies. It is increased as the tissues become tolerant to the use of mercury, and varies with the method employed. Patient who will not tolerate a large dose by the mouth will quite frequently benefit by larger doses by inunction or hypodermically. It is also most important to reflect that, what may be the maximum dose in so far as the tolerance of the tissues is concerned, is not, and may be, far from that quantity of mercury which will best cure the symptoms or cause them to be cured.

The internal administration of mercury is by far the most pleasant and convenient form of giving this drug, but, it is the least effective method, and is consequently unsuited to cases where grave lesions are present, or imminent, but is probably the best method in early and mild affections. Mercury administered in this way, however, acts quite frequently as an irritant to both stomach and intestine, as is indicated by buccal lesions and an increased number of stools. The preparations most frequently used, are in the order of efficacy, hydrargyrum cum creta, hydrargyri perchloridum, hydrargyri prot iodum.

Of the first: This is probably the best all round remedy of the three, and is used by Jonathan Hutchison with great success. It may be used as a powder, pill or tablet. At the beginning of treatment, it is well to give three one grain doses per diem to an adult, or three third grain doses to a child of six months to one year. This dosage may be increased to the maximum dose for the patient in about ten days to three weeks.

Proto-Iodide is probably more frequently used and is usually administered in the form of pills. It is apt to give diarrhoea as it lacks the astringency of the chalk in the former preparation, and it is difficult to see the advantage of the iodine in this preparation when used for early secondary lesions.

Corrosive Sublimate is the salt most frequently used when it is desirable to administer this drug in a liquid form. It is an irritant poison with a dose of 1-120 to 1-12 grain, and, consequently, should

never be used as a pill. In cases of congenital lues, F. J. Shepherd, of Montreal, sometimes gives 1-96 grain three times a day in form of a solution to an infant:

R Hydrargyri Perchloridi Semi-granum
 Aquam q. s. ad Uncias Sex
 Misce fiat solutio

Sig.—One teaspoonful three times a day

Mercury by inunction, is the method most frequently used in this country in dealing with grave cases, where life, or an important organ, is threatened. The favourite preparation is unguentum hydrargyri, or blue ointment, which is made by rubbing up equal parts of metallic mercury with prepared lard.

The patient is instructed to rub into the skin of the abdomen, axillæ, groins or popliteal-spaces, on succeeding days, a portion of this ointment, of a size varying from a bean to a walnut. He is warned to use such friction that little or no ointment is left on the surface. This procedure he is expected to carry out six days out of seven.

The only disadvantages of this treatment are the time taken in the daily inunction, the fact that the ointment soils the clothing, and dermatitis or eczema is liable to occur from the irritation of the ointment and the friction. The second disadvantage can be obviated by using white precipitate ointment as suggested by F. J. Shepherd. This ointment is made by rubbing up ammoniated mercury with simple ointment, and is made in the proportion of one in ten. It is a clean, white ointment, and although it has been used most frequently in this disease, for local lesions it seems to be a good substitute for blue ointment, and in the few cases in which I have used it has given me satisfaction.

This ointment also is apt to set up a dermatitis or eczema. Respecting blue ointment it has been stated that the eczema is due to the condition of the base and it has been suggested that by the daily or frequent preparation of the ointment this may be averted. This rule also applies to white precipitate ointment.

A dermatitis or eczema may usually be prevented by changing the site of inunction daily, and if unsuccessful, the dermatitis may be treated with "calamine lotion," of which the following is one of the best formulæ:

R Calaminæ ʒii
 Zinci Oxidi ʒi to ʒii
 Glycerini ʒss
 Aquæ Calcis ad ʒviii
 Misce fiat lotio

or preferably we may use lead lotion made in the strength of 1 part liquor plumbi subacetatis (B.P.) in forty parts of water.

Inunction is the method most frequently employed at sanatoria for the treatment of this disease, the ointment is rubbed in by a professional masseuse, who in certain cases as a self-protection against mercurial poison, employs a smooth glass, somewhat resembling a flat-iron, to supply the friction requisite to aid in the absorption of the ointment. It is quite frequently used, also, in congenital syphilis, where a small portion of the ointment chosen is placed on the child's abdomen, and the child's binder having been replaced the ointment is allowed to work in by the friction of the child's movements.

Before leaving the subject of this method, it will be well to state that certain syphilographers believe that the curative action of this drug is due to a resulting mercurial atmosphere and not to the direct absorption of the mercury at the place of inunction. Inunction is, however, undoubtedly the best all round method of using mercury.

The hypodermic method of administering mercury has been recently increasing in favor and I think quite rightly, as it may be said to be the only way in which we are certain of administering a definite quantity of mercury.

In this method either insoluble or soluble salts are used. Of the former I will not speak, except to condemn it, because it is my firm belief that much if not all the danger which is said to be due to the hypodermic method is attributable to the fact that the insoluble salts are cumulative, and we know not when their poisonous action may be suddenly induced.

Of the hypodermic injection of soluble salts, much can be said in favor. Of the salts to be used the number is many. Every advocate of this method has his favorite preparation. Those who have been educated in this method by Swinburne, of New York, use a solution of bi-chloride of mercury; they have not always, however, kept to the principles of this teacher, but have wandered from and returned again to the use of this salt.

Over three years ago, a patient of mine being discouraged with the duration of the daily treatment and the filthiness of the administration of mercury by inunction, I was forced to remember the advantages of the hypodermic method as witnessed at Swinburne's clinic, with the result that an appeal to that surgeon elicited his opinion, as given in a private letter. "I use 1 per cent. mercury, bichloride, 1 per cent. NaCl, as an injection. I do not know what the safety limit is, but I have many times given 30m., slowly, daily in alternating buttock, into the same spot each alternating time for 6 weeks and

more, and have only seen good results; very seldom have I produced salivation; when produced it is easily controlled. I have found it to be the quickest, surest and as regards mercurialization the safest method I have ever employed, and I use it more and more." Ever since receiving this letter I, like him, used the hypodermic method more and more with an increasing faith in its efficacy.

The method I employ is to keep powders of corrosive sublimate, weighing one grain each. At the time of operation I dissolve one powder in thirty drops of water by boiling, and this I use at first in five drop injections each containing 1-6 grain, and eventually in thirty drop injections each containing one grain. These I employ at first twice a week, injected deeply into the gluteus maximus muscle, and later once a week, always injecting into alternate buttocks.

Of course, there are certain disadvantages in the employment of this method. First, it is painful, perhaps not always at the period of injection, but corrosive sublimate is an irritant and reaction is certain to follow its injection, and this reaction is often the forerunner of a marked inflammation, followed by an area of induration.

Suppuration, also, is said to follow. Theoretically this should be rare, as we should not get suppuration by the injection of a strong antiseptic. We must allow, however, that the lowered resistance of the tissues, due to the reaction following an injection of corrosive sublimate must be considered, perchance there are present therein micro-organisms capable of causing suppuration, under these circumstances, although they are of too slight virulence to cause suppuration in healthy tissues. Practically speaking, however, in hundreds of injections, I have seen but two cases of abscess formation, and interesting enough, these were both in the same patient. Embolism, also, is said to follow. Of these, Blaschko has had only 12 in 50,000 injections; as these emboli are aseptic, this danger may be disregarded.

Of course, buccal symptoms also have to be regarded in this as in any other form of the administration of mercury, and possibly in patients suffering from such we may have to use some method when the absorption is slower, but, with care, it is rare that such change has to be made for this cause.

The rapidity with which this remedy cures the symptoms is shown by the history of a patient who presented himself at the Montreal Dispensary, 11th February, 1901. Examination demonstrated a macular and papular rash on the lower part of the thorax and upper part of the abdomen. A hard sore was found at the preputio-coronal junction. This had appeared after an incubation of ten days and had already lasted for six or seven weeks. The scrotum also pre-

sented some "sores." The injection of a solution containing 1-3 of a grain of corrosive sublimate was begun and its strength gradually increased. On 20th February the patient received double this dose, and on the 25th, he received almost a full grain. On March 7th, the patient presented no rash or other symptoms of the disease. The condition of the site of the penile sore is not mentioned in my notes. This case, therefore, demonstrates the fact that seven or eight hypodermic injections made during a period of three to four weeks has been sufficient to allay the most apparent symptoms of lues.

It may therefore be deduced that in many cases the hypodermic injection of corrosive sublimate is a safe, clean, and non-irksome method of relieving symptoms in a short time.

While mercury seems to have a specific action on the primary and early secondary lesions of syphilis it seems to have little effect on the tertiary and some of the late secondary manifestations. According to the hypothesis already given mercury probably acts only on the non-encapsulated virus, and again as probably the late secondary, and certainly the tertiary lesions may be stated to be symptoms characteristic of an encapsulated virus, we can hardly expect mercury to affect them.

Fortunately, however we are not without a specific for these lesions which are usually characterized by hyperplasia. The iodides as represented, especially by potassium, iodide and ammonium iodide are our remedies. While the action of these drugs on simple syphilis is almost nil, they act with wondrous results on all lesions accompanied by swelling or effusion into the tissues as pericostitis, swelling of the glands, syphilis of the testicle, liver or brain and on all those lesions known as gummata. This curative action, however, is merely temporary. It is observed only so long as the drug is taken.

"While mercury by its antiseptic and bactericidal effect injures the microbe which is the cause of the disease, the iodide, by its absorbent action, removes the hyperplastic changes of the tissues which have been produced by the microbe. In short, while mercury cures the disease itself, the iodide only causes absorption of the products of the disease."¹²

The salt of iodine most frequently used is potassium iodide. This comes in colorless opaque cubic crystals which are freely soluble in water. The dose of this salt is two to twenty grains freely diluted in water and given after meals.

While potassium iodide acts like magic on most tertiary lesions, it is to be remembered that it is not only a depressant, but is a gastric irritant, and in certain subjects who possess an idiosyncrasy for this drug, and in other subjects when given in too large or too frequent

doses is apt to give rise to that condition which is called iodism, consisting of coryza, the watery discharge from the nose being sometimes profuse; sneezing; intense pain of a bursting character over the frontal sinuses, commonly called "headache"; swelling and redness of the gums, hard and soft palate, and fauces, foulness of the tongue, and increase of the mucous of the mouth.¹³

While this drug, perhaps of all others, can be most depended upon to work miraculous cures of the lesions of tertiary syphilis, its utility is somewhat impaired by these facts, but it has been proven, and demonstrated repeatedly by F. J. Shepherd, that the most satisfactory way to administer this drug is in large quantities of water, and if when thus administered it still causes ill effect, the sodium, or particularly the ammonium salt may often be substituted with advantage.

The iodides are responsible for the making of more reputations than perhaps any other remedy. If the medical attendant has diagnosed a tertiary syphilitic lesion and follows this diagnosis with treatment by these remedies, administered in heroic doses and yet with care, results can and will, in the majority of cases, be obtained such as are rarely seen in the treatment of the lesions of any affection, with any remedy.

Although the dose of the iodides is usually given as two to twenty grains, experience has demonstrated that such doses in the majority of cases are much too small. One drachm or even more is usually required per diem, consequently, we usually supply our patients with a 100 per cent. solution of potassium iodide with instructions to add from one-third to one teaspoonful to a quart of water, according to our knowledge of his idiosyncrasies, and expecting to increase the minimum dose to the maximum, as we learn the system's disposition. He is then instructed to drink this whole quart in one day.

With reference to the addition of sarsaparilla or allied compound to this solution, whereas it would be difficult to prove these useless, certain it is that the iodides are capable of performing miracles without the use of adjuvants. Although it is necessary to administer these remedies for a short time after the disappearance of all manifest lesions, it is to be especially noted that the iodides are not likely to affect the patient beneficially after such disappearance has been brought about and should therefore be considered a symptomatic remedy and not a specific for syphilis.

In after days, when the individual who has once suffered from the generalized manifestations of lues, has almost forgotten that he has once had syphilis, the clear horizon may be clouded by the appearance of some isolated local lesion, not gummatous, possibly ulcerative, an

unhealing sore, the condition known as geographical tongue, a small squamous syphilitic, or one of many such sources of annoyance. Should we in such cases submit our patient to another course of mercury or the iodides, and once more plunge our patient into despair? It seems needless. Experience has demonstrated that many of these local lesions will disappear with local treatment, especially if accompanied by a general tonic. Remove the source of irritation, if there be one, which acts on tissues of low resistance. Tone up the system, if it has become depressed by overwork, or otherwise, and treat the local lesion with a suitable local remedy. In the case of the so-called geographical tongue, abstinence from the use of tobacco, accompanied by a suitable mouth-wash, will often prove satisfactory. In the case of an unhealing sore, tonics accompanied by such an ointment as that of ammoniated mercury is often all that is necessary.

We must guard against the excessive use of mercury. When we get successive crops of lesions let us pause and try local remedies. Often we do not know whether we have to deal with an excess of mercury or an active lues. Often we are confronted by a cachexia or an insomnia which it is difficult to decide whether it be syphilitic or mercurial. In these cases again tonic treatment and rest, will probably suffice.

When we get periostitis or leucoplakia, during periods that are free from other symptoms, what is to be done? If these tend to spontaneous cure we need not worry, but if they have had every chance to become cured and yet persist, we undoubtedly must go back to mercury or the iodides, as a last resort.

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INSANITY AT THE CLIMACTERIC.

BY

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There is a popular and widespread belief that the menopause is a time at which mental breakdown is especially liable to occur. Every general practitioner has been consulted by many an anxious woman, who, experiencing the various nervous disturbances so common at the

change of life, dreads actual loss of reason. And the belief that the menopause is indeed a time fraught with the gravest danger to the mental organization is not confined to the laity, but is very generally held by members of the medical profession. Because of frequent reference to the climacteric as a factor in causing insanity by physicians, I have thought that possibly a short discussion of the question might prove of interest at this time.

Amongst psychiatrists there is a marked difference of opinion as to the part played by the climacteric in producing mental disorder. Berkley, who closely follows Kraft-Ebing's method of classification, does not mention a climacteric insanity, nor does Ziehen give such a place in his classification. Spitzka considers that it is doubtful if the menopause has any influence in determining an attack, and Brower and Bannister, while giving considerable space to the insanities of critical epochs, devote but a half page to climacteric insanity and ascribe to it no other special features than that mental disease at this period tends to assume a melancholic phase. Krapelin, who at the present time is in high favor not alone in his native land, but in America also, does not specify a climacteric insanity, but his conception of melancholia corresponds very closely with the variety of depression commonly described as the melancholia of the menopause. Kraepelin considers melancholia to be a disease of the involutional period, and it is by him classed with presenile delusional insanity and senile dementia under the heading "involution psychoses." Regis, on the other hand asserts that the menopause "is very frequently the occasion of intellectual and moral perturbations and psychic modifications, which may sometimes go so far as to cause insanity," and with this view British writers, notably Bevan Lewis and Clouston, are in substantial accord.

In order to arrive at a conclusion upon a topic which causes such disputation amongst the great authorities on insanity, I have made an analysis of the cases of insanity admitted to the Nova Scotia Hospital in the past five years, especially with reference to cases admitted at or shortly following the climacteric. During these five years, a total of 639 cases were admitted, 313 being women and 326 men. Of the 313 women, 72 were between the ages of 40 and 55 years, two of the number being admitted twice during the period. Of the 326 men, 58 were between the ages of 50 and 60, one man being admitted twice during the semi-decade. One must under any circumstance be arbitrary in fixing a limit to the influence of any of the critical epochs, but I think that by including the cases occurring within the ages I have given full value to the possible influence of the menopause in causa-

tion, at least in the cases occurring in women. So we may say that in 23 per cent. (i.e., 72 out of 313), of our women patients, could the climacteric have possibly figured as a cause, and that in 18 per cent. (i.e., 58 out of 326), could the corresponding condition in the male sex be possibly associated in the etiology.

On account of the impracticability of affixing any definite time for the climacteric in the male sex, the discussion of the influence of involutinal changes in the sexual organs of men, as a cause of insanity, is particularly unsatisfactory. The statistics of the cases occurring in female patients afford more reliable data.

Out of the total of 70 women whose cases come under present consideration, in only six was the climacteric assigned by the friends to be a causative factor. In four of these six, there had never been a previous attack of insanity, although two out of the four had an hereditary history. The remaining two patients presented a personal history of previous attacks and a family history indicative of hereditary predisposition. So that in only about 9 per cent. of women admitted whose ages ranged between 40 and 55, or in a little less than 2 per cent. of women of all ages admitted, did we get a definite statement that the climacteric was considered a cause, and in two-thirds of this small proportion there was the contributory factor of predisposition by hereditary or previous attack. Unfortunately the histories which we are able to secure are often so meagre that it is impossible for us to prepare statistics for which accuracy can be claimed, but it is really a surprise to me that so very small a proportion of our women patients should have their insanity ascribed to a process which not only means the gradual involution of the sexual glands—a process which is very frequently attended by an extraordinary variety of nervous symptoms—but which is concomitant with beginning changes of a senescent nature in the cerebral cells and in the blood vessels throughout the body, and consequently with profound disturbance of the nutrition of the whole nervous system.

No less than thirty of the seventy women selected for special study afforded a history of previous attacks. This appears at once to be an unusually large number, and stamps the period as one in which the likelihood of a recurrence of insanity, in those predisposed by previous attack, is very great. This observation also applies to the male cases, for in 23 out of the total of 57 male patients, a history of previous attack was given. It seems, therefore, that the period is one in which those of a psychopathic tendency should have special care, and should be guarded as far as possible from everything which might contribute to a mental breakdown.

An analysis of the clinical histories of these patients shows that amongst the types of insanity presented, melancholia and manic-depressive insanity (following Kraepelin's classification), bulk most largely. I have already referred briefly to Kraepelin's conception of melancholia. Its manic-depressive insanity is a somewhat inclusive group, taking in many of the cases which older nomenclatures would class as melancholia, a very large proportion of the cases which were formerly styled mania, and also the circular insanity of other writers. Time forbids the argument of Kraepelin's position in this matter which is certainly novel, and has met with much opposition. He is, however, perhaps the most eminent psychiatrist of our day, and consequently his method of classifying insanity must receive respectful attention. Profound admiration of his teaching has led me to favor his classification, and following it as closely as I could, I have prepared a table to illustrate the forms of insanity manifested, and the results of treatment, in the cases under consideration. The preponderance of melancholia and manic-depressive insanity will at once attract your attention.

	MEN.					WOMEN.				
	Cases.	Recovered.	Improved.	Stationary.	Died.	Cases.	Recovered.	Improved.	Stationary.	Died.
Acute Delirium	1				1					
Chronic Confusional Insanity	1		1			2		1	1	
Alcoholic Pseudoparesis	1				1					
Dementia Paralytica	7			2	5					
Organic Dementia	4		2		2					
Involution Psychoses										
Melancholia	17	7	3	2	5	24	9		4	11
Senile Insanity	2			2						
Manic-depressive Dementia	24	13		6	5	39	19	6	12	2
Paranoia						4			4	
Epileptic Insanity						1				1

Reference to the table shows that the manic-depressive insanity gave a recovery rate of slightly over 50 per cent. in both men and women, while of the cases of melancholia, little more than 40 per cent. of the men and less than that proportion of the women recovered. The cases of melancholia, moreover, show a considerably greater death rate than the cases of manic-depressive insanity.

A total of 28 women and 22 men recovered, the proportion being 40 per cent. of the women and 37.1-3 per cent. of the men. The average total duration of the attack in the women who recovered was 12.1-2

months, and the average time in hospital, 7 3-4 months. In the case of the men, the average total duration of attack was eight months and the average time in hospital 5 1-3 months. In one of the women patients the total duration of attack was more than five years, while, on the other hand, in several the duration was less than two months.

Of the 28 women who recovered, 16, or 57 per cent. had been insane before, and of the 22 men who recovered 13, or 59 per cent., have a similar history. This goes to show that the prognosis is not greatly prejudiced by a personal history of previous insanity, although it does not follow, as might appear, that such a history makes the outlook for recovery more favorable than it otherwise would be.

Experience at the Nova Scotia Hospital, therefore, goes to show that the climacteric can be urged as the only or principal cause of insanity in but a very small proportion of cases. The years during which involutinal changes of the sexual organs are going on are, however, very apt to witness a recurrence of mental disorder in those predisposed by previous attack, but recovery at the climacteric period is not particularly prejudiced by a history of previous attack. The prevailing types of mental disturbance are melancholia and manic-depressive insanity, of which the latter offers a considerably better prognosis as regards both life and recovery from the attack. The average duration of the attack in men was much less than that in women, which may perhaps be due to a more profound disturbance of metabolism in female patients at the time of the climacteric.

For many reasons, the period of sexual involution might be considered as having important bearings upon the mental organization. Just as we have a normal psychology of puberty and adolescence, characterized by a buoyancy, expansiveness and trustfulness, attributable with some reason to the developing activity of the sexual glands and the contribution of their internal secretion to the general metabolism, so we have commonly manifested at the menopause a tendency to depression, to distrust, to self-examination, introspection and unsociability which might be termed the normal psychology of the climacteric, and may be deemed to result from the cessation of the internal secretion of the sexual glands. A seemingly trifling cause might prove enough to turn the scale at such a time. In certain women, the knowledge that some of the charm of womanhood has departed, is sufficient to cause an amount of distress, which might really have a disturbing influence upon the mental balance. And it is not a cause for wonder that the irritability and dispiritedness which may be considered normal to women of nervous temperament at the time of menstruation, should be exaggerated into an abnormal state

by the increased frequency and quantity of flow so usual at the menopause.

For some years there has been a tendency to regard the forms of alienation which are not dependent upon defect of organization, or upon structural change in the nervous system, as being due to fault in nutrition. The problems of insanity, according to this view, are, therefore, very largely problems of nutrition, and when the far-reaching effects of the change in the structure of the whole body which occur at the climacteric are considered, it becomes perfectly evident that there must be a modification in the mental life, or breakdown will certainly occur. Thus, we have to take into account the changes in the organs associated with the functions of digestion, absorption and assimilation—pancreas, liver, lymphatics, etc., the changes in the organs of elimination—bowels, kidneys and skin; and the changes in the blood and lymph vessels of the whole body, though perhaps more especially of the brain, in order to fully appreciate the bearings of the change of life upon the mental organization. The complexity of the subject is, therefore, very apparent. Of course against all these changes, which are to be considered katabolic in tendency, we can set the fact that the menopause brings lessened requirements. The reproductive function is no longer active, the household duties are less exacting, and usually there is in every respect less demand for great activity. So it happens, that ordinarily, the individual becomes adjusted to the changed circumstances, and no ill effect is produced. But the neurotic subject is not capable of easy adaptation to such changes, and consequently needs to be carefully protected from every influence which might act prejudicially.

The practical point of my paper is, then, that, while the climacteric is nearly always a disturbing period, it is only in those predisposed to insanity that mental breakdown is especially to be dreaded. When, however, there exists a predisposition, whether this be on account of an heredity either psychopathic or neurotic, or on account of a previous attack of mental disease, every effort at prophylaxis is demanded.

Mercier lays down the dictum that the causes of insanity are heredity and stress. Therefore, when the element of heredity cannot be eliminated, it is of especial importance to so regulate the burden imposed upon the predisposed organization as not to endanger the mental poise. There is not sufficient recognition of the very patent fact, that individuals differ markedly in their capacity for bearing burdens and enduring strain. In the education of the young, incalculable damage may be done and is being done by failure on the part of teachers to properly adjust the amount and the quality of the work required to

the capabilities of the pupils. Parents are all too prone to encourage bright and ambitious children to tasks far too heavy for delicate organizations. And the attainment of years of discretion does not always witness indication in the individual of due appreciation of the limitations which nature has put to the powers of accomplishment. It consequently falls to the lot of the physician to advise teacher and parent and even the individual himself, as to the nature and extent of the tasks which may with safety be undertaken. Richardson has enunciated an excellent rule: "To every individual, as to a steam-boiler, we should allow a large factor of safety in all estimates of his capacity."

Of course stress may take other forms than over-work. All unnecessary cares and worries, the unpleasantnesses of family disagreement, the distress caused by the misbehaviour of relatives, the misunderstanding of motives, the hostile criticism of neighbours, the tale-bearing of well-meaning but ill-advised friends—all, or any of these may cause an amount of strain, to a sensitive mind, which to a more evenly constituted mortal is inconceivable, but which is, nevertheless, of no small importance. A well-timed and properly directed caution by the thoughtful and watchful family physician might often times have the effect of putting an end to such possible causes and possibly prove the salvation of a patient's sanity. A placid, contented existence should be aimed at in these cases.

And then the general health must always receive close attention. Any known defect, especially of the generative apparatus, should be given appropriate treatment. The eliminatory organs should be maintained in a state of full functional activity, and no pains should be spared to keep the nutrition of the whole body at a satisfactory standard.

When treatment of an actual attack is demanded, the procedure is of course largely determined by the type of insanity manifested. There is, therefore, nothing special to be said on this subject, inasmuch as the treatment of mental conditions at the time of the climacteric differs in no essential respect from that of corresponding conditions at other epochs. Of course the possible association of some uterine derangement in female subjects will suggest itself, and if found, should be treated as in any patient, sane or insane.

A commonly held tradition, is that recovery from insanity, even though of many years duration, often obtains after the change of life has been established. I have had no experience justifying such a theory. It can call to mind no instance in which a patient whose case had been otherwise adjudged hopeless showed any improvement at or after the menopause.

REPORT ON CASES OF RHEUMATISM TREATED IN THE ROYAL VICTORIA HOSPITAL DURING THE YEAR 1902.

BY

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During the year 1902 there were treated in the medical wards of the Royal Victoria Hospital thirty-two cases of Acute Rheumatism, of whom sixteen were males, and sixteen were females.

A majority of the cases were admitted during the spring months, namely, eighteen cases during April, May and June. June heads the list with eight cases, April and May coming next, each with five.

The average age of the patients was 25 years; the oldest 54, the youngest 5 years. From 5 to 10 years of age there were 3 patients; from 10 to 15 years, 4; from 15 to 20 years, 5; from 20 to 25 years, 4; from 25 to 30 years, 6; from 30 to 35 years, 3; from 35 to 40 years, 3; from 40 to 45 years, 1; from 45 to 50 years, 2; from 50 to 55 years, 1.

A family history of rheumatism was given in six cases; of tuberculosis in four cases. In ten cases there had been one or more attacks of tonsillitis, and two cases gave a history of chorea.

Previous attacks of rheumatism had occurred in sixteen, that is, in half of the cases. The average age at which the first attack occurred of all the cases was 21. One case gave a history of having had nine attacks of acute rheumatism in as many years; another had had seven, and another four; eleven cases had had two or more attacks.

In seventeen cases the onset was articular. In six cases tonsillitis occurred at the onset or immediately preceded it. Eight cases attributed the onset to an exposure to wet or cold. The onset was marked by headache and vomiting in two cases, by pain in the back in three, and by symptoms referable to the heart in two. One case developed during an attack of influenza, while in another case, aged 5, three days before the appearance of the articular symptoms, the child had come down with an attack of acute broncho-pneumonia.

The joints affected, in order of frequency, were as follows: knees, 24; ankles, 23; wrists, 19; shoulders, 17; elbows, 10; hips, 8; metacarpophalangeal, 7; interphalangeal of hands, 7; acromio-clavicular, 3; interphalangeal of feet, 2; carpo-metacarpal, 1; temporo-maxillary, 1. One case suffered chiefly from pain in the lumbar region, another from pain in the heel.

Endocarditis was present in 19 of the 32 cases, classified as follows: Mitral regurgitation alone, 5 cases; mitral stenosis and regurgitation, 4; mitral stenosis and regurgitation with aortic regurgitations, 2;

mitral and aortic regurgitation, 2. In one case the cardiac lesion developed after admission. Dry pericarditis occurred in four cases, pericarditis with effusion in one case, pleurisy with effusion in one case, and one developed lobar pneumonia. Two cases terminated fatally, one was a child, aged 12, with mitral regurgitation, who developed pericarditis and pulmonary infarct, and died on the 19th day of her illness. The other was a woman, aged 21, with mitral and aortic endocarditis, who had been three months in the hospital. The rheumatism became subacute; she suffered from persistent vomiting, and during the last seven weeks was jaundiced. The findings at the autopsy, in addition to the cardiac condition, were acute bronchitis, atrophic gastritis, and acute duodenitis and ileitis.

The routine treatment was hot fomentations of lead and opium, locally, and the internal administration of salicylates.

There were six cases of Sub-acute Rheumatism, including two admissions of the same case; three of the patients were males and two females; the youngest was 22, the oldest 48, and the average duration of the stay in the hospital was 24 days.

One case gave a history of previous attacks of sub-acute rheumatism, while two cases had previously had acute rheumatism. One case, a man aet 44, who had been a chronic sufferer for years was admitted three times during the year, the first and third time with sub-acute rheumatism, and the second time with an acute attack. None gave venereal or alcoholic histories. In every case the onset was more or less gradual three or more weeks before admission, with stiffness and indefinite pains, soon becoming localized in one or more joints. In three cases the symptoms came on a few days after exposure to wet.

Only one case was monoarticular. The joints involved were as follows:—knees and ankles each in three cases, the hips and wrists each in two cases, the shoulder in one case, and the small joints of the hand in one. None of the joints showed signs of either acute inflammation or of chronic changes. In the majority of instances, in addition to the pain and stiffness, there was slight swelling. In one case there was a slight remittent fever on two occasions reaching 101°, but the other cases were afebrile. There were no complications, except eczema in one case.

The treatment in four cases was mainly hot air body baths for half an hour each day. Other remedies employed in the different cases were, hot fomentations, cantharides, or salicylates locally, and aspirin or alkalies internally. One patient was discharged well, the rest improved.

There were four cases of Chronic Rheumatism, including two admis-

sions of the same patient. Their ages were 26, 43 and 55; one female and two males. The average duration of stay in hospital was 43 days.

The first case was a man, 55 years old, who for three years had suffered from pains in his joints and muscles. Four months before admission he became disabled with severe pains in both ankles and feet. On admission there was great pain and tenderness in the right ankle, with slight reddening of the skin. This gradually subsided, and he was discharged in four weeks almost well. Seven months later he was re-admitted with pain and slight swelling of the right wrist and knee, and later developed great pain and tenderness in the right heel. He was discharged improved.

The next case was a woman, 26 years old, who had had acute inflammatory rheumatism several years previously. For eighteen months before admission she had some pain in nearly all her joints, beginning with signs of acute inflammation in the small joints of the hands and feet and settling chiefly in the hips and ankles. On admission the shoulders and ankles were painful, and there was tenderness in all the joints. After two months she was discharged improved.

The third case was a man, aged 43, with some alcoholic history, who had suffered from pains in various joints for ten years, with several more or less acute exacerbations. He was admitted with swelling, heat and pain in the right knee and ankle, and pain in the shoulders, elbows and feet. Later he developed signs of acute inflammation in the tarso-metatarsal joint of the left great toe. He remained in the hospital one month, and was discharged improved.

There was no venereal history in any of the patients, and no complications. The treatment in each case was the hot air body bath every day, supplemented by hot lead and opium fomentations. In none of the cases did any of the joints show permanent anatomical changes, or ankylosis.

Twelve cases of gonorrhoeal arthritis were treated, in which the diagnosis was certain. Of these twelve cases only one was a woman. All the cases were young adults, the average age being 27 years; the oldest was 35, the youngest 19 years old. The average duration of stay in the hospital was 32 days.

Only one case had previously had acute inflammatory rheumatism. Four had had one or more attacks of arthritis following previous gonorrhoeal infections; one case gave a history of intemperance to account for the extension of the trouble from the urethra.

In six of the cases on admission there was evident urethritis, requiring treatment, the other six gave a clear history of more or less recent infection. In only one case was the urethritis acute, of less

than two weeks standing; seven claimed that it was their first attack of gonorrhœa. The time elapsing between the infection and the onset of the arthritis varied widely from three days to four years, but in the latter case the patient still had a chronic discharge when the rheumatism manifested itself. In half the cases the arthritis appeared within a month of the urethritis. In only two cases was the onset acute with fever. In one of these, a woman, the tendons and fasciæ were chiefly involved, especially those of the hands, and the two achilles tendons. In all the other cases the onset seemed to have been more or less gradual. All the cases were of a polyarthritic type, with the exception of two, in both of which the symptoms were confined throughout to the heels and plantar fasciæ. In only three cases did any of the joints involved show visible signs of acute inflammation, swelling and redness. Two of these cases had slight fever for about a month, never exceeding 101.5° . One of the two, whose case was complicated at the time by manifest signs of secondary syphilis, showed a widespread involvement, including the ankles, heels, soles and small joints of feet, the shoulder, both sterno-clavicular and acromio-clavicular joints, the temporo-maxillary joint, and the vertebral. In this and in another case, which was complicated by secondary syphilis, the primary sore had not appeared until more than two months after the onset of the arthritis.

The parts most frequently involved were as follows:—the heels in seven cases, the ankles in six, shoulders in five, the plantar fascia and sterno-clavicular joints in four, the knees in three, the wrist, the acromio-clavicular, the vertebral, and the temporo-maxillary joints in one case each. There were no complications, apart from the arthritis, in any way referable to the gonococcus.

The treatment in every case was by the hot air bath, one-half to three-quarters of an hour's exposure every day to a temperature of about 300° F. The results are difficult to estimate. Two cases were discharged well. In one of these, in which the arthritis was of eleven months standing and involved both ankles, the symptoms, including some limitation of movement, disappeared after only four treatments. All the other cases were discharged markedly improved, except one, who would not remain in for treatment. In many cases the treatment seemed to have a marked effect at first in relieving the pain, but after the first week or so, the improvement proceeded more gradually or not at all. The only other treatment, apart from that of the urethritis was the local application of liniments and fomentations.

In no case does there seem to have been any ankylosis or limited mobility of the joints on discharge.

PERFORATION IN TYPHOID FEVER.

BY

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In a recent article on Leucocytosis in Typhoid Perforation, I endeavored to show how unreliable for definite diagnosis this symptom *per se* was, how after vainly seeking for one distinctive sign by newer methods we are obliged to fall back on older methods of physical examination to confirm any such diagnosis.

In the following citation of cases I should like to emphasize the variations and symptoms which occur, when in the course of enteric fever a perforation of the bowel ensues, and how often the so-called classical picture of perforation is absent, and instead of this a quite "atypical" sequence of events transpires. That the so-called typical picture refers to peritonitis has already been emphasized by Dr. Osler in his instructive article on Perforation and Perforative Peritonitis in Typhoid Fever, (*Philadelphia Medical Journal*, January, 1901), which forms a good basis of daily examination of all typhoid cases and a close attention to which should still more diminish the typhoid mortality.

In the cases occurring in the Royal Victoria Hospital the variations are so considerable, the state of the patient sometimes so good, early after the complication has set in as to render the diagnosis doubtful, in fact, the onset is so insidious at times, or so "atypical" as it has been wrongly entitled, that the citation of the following cases may be of interest.

Since the Hospital was opened, nine years ago, 857 patients entered suffering from typhoid. Among these there are eighteen cases with perforation, that is, a little over 2 per cent. of all cases. The average day of perforation was 18.8 from the onset of the symptoms. All cases were of the male sex.

Case 1.—G. M., male, *æt.* 19. Admitted 20th February, 1895. Perforation on the 17th day of disease.

Typical Features:—At 11 p.m., complained of sudden abdominal pain, generalised, and with some slight tenderness; vomiting one hour later.

Atypical Features:—No distension or rigidity, no change in pulse or temperature.

The following morning there was slight pain with some distension; tenderness was more marked; the temperature had fallen from 101 to 98.4-5, and the pulse rose from 110 to 140, and was thready. Vomiting set in and the patient died about 18 hours after the initial symptoms.

Case 2.—N. P., male, æt. 21. Admitted December 7th, 1897. Perforation on the 35th day.

Typical Features:—Existing distension more marked; liver dulness obliterated; increased tenderness, especially in the right flank; fall in temperature from 102° to 98°.

Atypical Features:—No increase in rigidity, no complaint of pain, pulse unaltered, no vomiting.

The patient was delirious from the time of admission; general peritonitis set in and death occurred on the 2nd day. There was no operation.

Case 3.—B. K., male, æt. 22. Admitted 5th December, 1897. Perforation on the 23rd day at 6 a.m.

Atypical Features:—Pain (radiating to the end of penis), some fulness with obliteration of liver dulness, rigidity more marked on the right side; pulse wiry and rapid; fall in temperature from 101° to 98°.

Atypical Features:—Tenderness not increased.

The patient was operated on eight hours after the initial symptoms; general peritonitis and a pin head perforation was found three inches above the valve. The patient died on the following day.

Case 4.—J. M., male, æt. 22. Admitted 7th December, 1898. Perforation on the 11th day at 9 p.m.

Typical Features:—Pain in the lower part of the abdomen; vomiting, three hours after onset.

Atypical Features:—Tenderness not marked, no distension nor obliteration of liver dulness; no rigidity, no change in the pulse or temperature.

On the following day the pain was much increased; there were distension and rigidity; the temperature in the morning had reached normal and the patient died on the 13th day of disease with all signs of general peritonitis.

Case 5.—J. J., male, æt. 18. Admitted 17th May, 1900. Perforation on the 17th day.

Typical Features:—Patient vomited at 8 a.m., and again at 11; at 12 noon he complained of pain in the lumbar region, on being moved into the bath; there was some distension.

Atypical Features:—Temperature rose from 103° to 104°, and there was no change in the pulse, no rigidity, no marked tenderness.

At 3 p.m. the pulse had increased from 124 to 134; at 7 p.m. he complained of violent abdominal pain; profuse sweating set in, the pulse be-

came rapid and the patient entered into a collapsed state; vomiting recurred.

Operation was performed and general peritonitis found. The perforation existed about nine inches above the valve. The patient died the following day.

In this case no definite onset was discoverable, the symptoms being gradual in development till the picture of peritonitis had developed.

Case 6.—J. B., male, æt. 8. Admitted October 25th, 1900. Perforation on the 34th day.

Typical Features:—Pain in the lower left quadrant; marked distension.

Atypical Features:—No change in pulse or temperature; rigidity and tenderness not marked.

The following morning pain and distension were more marked, the pulse had increased from 122 to 152; vomiting set in and the patient died on the same day.

Case 7.—D. D., male, æt. 7. Admitted 31st December, 1901. Perforation on the 10th day of disease.

Typical Features:—Pain, increasing in severity, in the right lower quadrant; vomiting of a small quantity of food once; leucocyte count 28,000.

Atypical Features:—No rigidity nor distension; no obliterated liver dulness, only slight general tenderness; no change in pulse or temperature.

Operation was performed about 10 hours after the initial symptoms; moderate general peritonitis was evident and a perforation found 1½ inches above the ileo-cæcal valve. This was duly closed and the patient eventually made a good recovery.

Case 8.—G. A., male, æt. 28. Admitted January 3rd, 1901. Perforation on the 10th day of disease. The day previous to this the patient had been complaining of severe pain in the splenic region, worse on inspiration with marked tenderness; there was no rigidity, no splenic friction. On the 10th day of disease this became very severe and there was marked tenderness and rigidity in the left hypochondrium. The patient would lie on the abdomen to try and get relief. There was profuse perspiration about the head. At 6 p.m. he complained of pain in the right lower quadrant; there was no distension, liver dulness was not impaired. The leucocyte count at 9 p.m. was 13,000; at midnight it was 13,000 and at 3 a.m. 11,500. On the following day the rigidity was marked and there was some distension; the patient was in a state of collapse, almost pulse-

less, perspiring freely; leucocyte count 33,000. At 2 p.m. pulse was somewhat improved and he was operated on though with reluctance by the surgeon. Generalised peritonitis and perforation eight inches above the valve were found and the patient died a few hours later.

Case 9.—L. J., male, æt. 23. Admitted 28th May, 1901. Perforation on the 11th day of disease.

At 11 p.m. on the day previous to admission, immediately after micturition, he complained of severe pain at the point of the penis which soon extended over the hypogastric region, but was relieved by fomentations.

Typical Features:—At 6 a.m. the day following he again complained of severe pain in the hypogastrium—again relieved by fomentations; some tenderness also over this region; fall in temperature at 9 a.m. to 99 2-5.

Atypical Features:—No distension or impairment of liver dulness; no rigidity; no change in pulse.

At 12 noon, abdominal pain was again severe and tenderness was more marked and generalised. Rise in pulse from 90 to 100. Rise in temperature to 101°. Still no distension or rigidity.

At 3 p.m., tenderness was more marked. Rise in temperature to 102. Pulse still 100. No distension, rigidity or impairment of liver dulness.

At 5.30 p.m., tenderness more marked, some distension with partial obliteration of liver dulness; pulse, 108; temperature, 102; facial aspect decidedly anxious.

At 8 p.m., generalised tenderness marked; considerable distension, especially in epigastric region; liver dulness obliterated; some dulness in flanks; rigidity marked; pulse, 108; no vomiting. He was brought to the hospital and operated on immediately. General peritonitis was found with a perforation the size of a pea situated 14 inches above the valve. The patient made a good recovery.

Case 10.—W. O., male, æt. 56. Admitted 7th September, 1901. Perforation on the 19th day of disease.

Typical Features:—Slight abdominal pain, relieved by micturition; recurrence six hours later with more severity and commencing rigidity and tenderness; increase of pulse from 110 to 140.

Atypical Features:—No distension, liver dulness not impaired; temperature rose from 100 to 104 2-5.

At 6 a.m. on the following day pain and rigidity were less marked, although there was some rigidity of the lower half of the abdomen. Tenderness was increased. Leucocyte count was 7,000. He was operated on the following morning and very slight peritonitis found.

perforation with exuding fecal matter was found five cm. above the valve and sutured. Death ensued in 58 hours.

Case II.—H. P., male, aet. 21. Admitted 29th September, 1901. Perforation on the 20th day of disease.

Typical Features:—Generalised abdominal pain coming on gradually and general tenderness, slightly more marked in the right lower quadrant.

Atypical Features:—No rigidity or distension, liver dulness not impaired, no change in pulse or temperature. Perforation merely suspected and case carefully watched.

The next day pain and tenderness were not marked; rigidity present; pulse smaller and vomiting set in. Leucocyte count was 4,900. He was operated on and general peritonitis with adhesions between the ileum and sigmoid flexure were found, and also a large perforation 12 inches above the valve. Death ensued 50 hours later.

Case XII.—F. F., male, aet. 37. Admitted 1st August, 1902. Perforation on the 12th day of disease.

Typical Features:—At 6.30 p.m. complained of pain in the abdomen; chilly sensations; some slight rigidity in the left iliac region; general tenderness; fall of temperature from $100\frac{2}{5}$ at 9 p.m. to $96\frac{2}{5}$ at midnight.

Atypical Features:—No distension or obliteration of liver dulness; no change in the pulse or respiration. The pain was relieved by fomentations.

At 3.30 a.m. the following morning the rigidity was thought to be slightly more marked but otherwise there was no change. At 5.30 a.m., both rigidity and the tenderness were less marked; the pulse had increased from 96 to 126. Leucocyte count was 9,200. During the morning the pain, rigidity and distension increased and he was operated on at 2 p.m. On opening the abdomen general peritonitis was found and a perforation about the size of a pea, situated about 18 inches above the valve. The patient died four days after operation.

Case XIII.—M. R., male, aet. 29. Perforation on 32nd day of disease. Admitted 8th December, 1902.

Typical Features:—At 2.30 a.m. sudden pain in the abdomen with general tenderness; rise in the pulse from 100 to 112.

Atypical Features:—Rigidity and distension were not marked, there was no impairment of liver dulness; there was no change in temperature. Leucocyte count was 5,400. At 8 a.m. the pulse was more rapid, 120, but fairly good; no change in temperature. Rigidity and disten-

sion were more marked and there was a good deal of tenderness. At 9 a.m. some dulness could be made out in the flanks changing with position. Liver dulness was partly obliterated; rigidity and distension were marked; pulse and temperature remained unchanged. The leucocyte count was 9,900. The patient died at 10.40 a.m. The autopsy showed extreme typhoidal appendicitis with gangrene and perforation of the extreme tip of the organ. The amount of plastic exudation around the appendix indicated that the perforation there had been of some days standing and was older than the perforation that had taken place in the ileum 8 cm. above the valve, which had been the immediate cause of the fatal issue.

On the 12th day of disease, 21 days before the end, patient suddenly complained of apparently severe pain in the lower part of the abdomen, radiating down the legs. There was some tenderness over Poupart's ligament on both sides; there was no rigidity nor distension, no change of temperature or pulse. Morphia was given with immediate relief. There was no further complaint of pain until the 27th day of disease when he was taken out of his cold bath at the end of six minutes on account of cramps all over the body. These disappeared and there was no complaint of pain until the morning of the 32nd day of disease.

Case XIV.—J. P., male, aet. 34. Admitted 25th April, 1903. Perforation on the 21st day of disease at 11.45 a.m.

Typical Features:—Sudden abdominal pain, some tenderness just above the pubis.

Atypical Features:—No distension or impairment of liver dulness; no rigidity, no change in pulse or temperature.

At 1 p.m. there was very slight rigidity in the right lower quadrant and there were intervals of relief from the pain; there was no change in the pulse or temperature and no distension.

At 2 p.m. the pain was more severe and the patient was restless; the pulse was slightly more rapid; there was no distension and no fall of temperature. The leucocyte count was 9,200. The patient was operated on and general peritonitis found with perforation a quarter of an inch in diameter about seven inches above the valve. The patient died four days later.

Case XV.—J. C., male, aet. 16. Admitted 1st July, 1903. Perforation on the 19th day of disease at 6.30 a.m.

Typical Features:—Sudden pain in the abdomen, cramp-like in character; there was a gradual fall in temperature; respirations were increased somewhat. The abdomen was retracted and somewhat rigid but with free respiration these signs passed off and palpation gave no

pain. Soon again there were paroxysms of pain, accompanied by fixation of the abdominal muscles. There was no distension or impairment of liver dulness; no change in the pulse; no nausea or vomiting. The leucocyte count was 8,000.

At 8 a.m. his condition was practically unchanged. At 9.45 a.m. the pain was severe; rigidity and tenderness were more marked, especially in the lower half of the abdomen; the finger nails were cyanosed and there was some perspiration about the forehead. The temperature continued to fall, reaching $98\frac{2}{5}$; there was some increase in the respiratory rate and the patient vomited some bile-stained fluid. There was little or no distension; liver dulness not obliterated; no change in pulse rate. Leucocyte count was 7,200; at 10.15 leucocyte count was 19,300. He was operated on at 11.40 a.m.; a mild degree of general peritonitis was found and a pin-head perforation situated about eight inches above the valve, opposite the mesenteric attachment. There was practically no lymph, except a little surrounding the perforation; the coils of the intestine were distended and reddened. The temperature has been practically normal since the operation and the patient is now, the 20th day after operation, progressing favorably.

The other three cases were all admitted to the hospital some hours after perforation had occurred, with well marked signs of general peritonitis and the histories are not sufficiently definite for our use.

It may be seen from the above series that with the exception of pain which was present in all cases—excepting in one who was delirious—there are no definite symptoms or signs which we may count on being present within two or three hours of the onset, even in the majority of cases.

There was a fall in temperature only in five of these cases; while abdominal tenderness more or less localised was also present in five cases only.

Distension was present in four cases with improvement of liver dulness in two. There was increased rigidity noticed in only four cases and vomiting as an early symptom occurred in four cases. A rise in the pulse rate was charted only in three cases.

The symptom complex of early perforation is not an obvious certainty in all cases—to say the least—indeed one must often base the diagnosis on but one or two symptoms in the absence of all others, and one may likewise justly add that an error in such a diagnosis leading to unnecessary operation is apt to be far less serious in its results than is the fatal delay of awaiting all the definite signs.

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THE COLLEGE OF PHYSICIANS AND SURGEONS.

The July meeting of the College of Physicians and Surgeons of the Province of Quebec was one of the most remarkable ever held by that body, inasmuch as something definite was done, and it is worth entering with some detail into the results of its deliberations, because, if the conclusions are finally established into law, they will have an important bearing on medical education in this province.

The new rules and regulations were of course drawn up in French and then translated into English. But as it is hard enough for a person whose business it is to write, to write clearly, when his expression has passed through the mind of a translator, it is easy to see what lucidity there will be, and therefore, many of the regulations are hard to understand. One example will serve. Under the heading of "duties of assessors" it is stated: "every candidate, who shall fail in any course, shall be obliged to repair this bad note at the final examination in following September; because every candidate failing in the

primary examination cannot be admitted to follow the final course before repairing his failure with success."

The constitution of the College itself has been altered by increasing the number of members to forty-three. Of these, two are chosen by Laval University in Quebec, two by McGill University, two by the University of Bishop's College and two by the Medical Faculty of Laval, which gives to Laval four members as against two each possessed by the other universities. This leaves the profession at large a representation of thirty-five members, which many will think is out of all proportion to the wisdom they possess.

The interests of the profession, apart from the universities, have been jealously guarded, as none of the assessors may be attached to universities, and they alone shall decide whether students possess sufficient knowledge of the subjects upon which they are examined. It is, however, questionable if assessors can be found outside of the teaching bodies, even in a profession so highly gifted as the physicians in the Province of Quebec, who are competent to say the last word upon such erudite subjects as pathology, bacteriology or hygiene.

The most startling innovation is in the regulations dealing with the granting of the license to practice. Hitherto it has been possible for a graduate of a British university or a holder of a British qualification, or one whose name is inscribed in the Medical register of England under the Imperial Act of 1886, to obtain a license to practice in the Province of Quebec without submitting to further examination. Under the proposed regulation all that will be done away with as the important proviso has been added: "provided that the same privileges shall be granted in England to the holders of diplomas of our Province."

It is quite true that the regulations of the College are only provisional; that they will be considered again in September, and that, before being enacted into law, they must have the sanction of the Lieutenant-Governor-in-Council; yet in view of the fact that these regulations are the result of several years' deliberation, that there is practically unanimity upon the subject amongst at least the majority of the College, it is fairly sure that in the ordinary course of events such will become the law.

Looking back upon the course of the College one is struck by its insistence upon preliminary examination and registration before commencing the study of medicine, and it would appear that this withdrawal of privileges hitherto accorded to British licentiates is not directed against them as such, but is intended to meet the case of those graduates from the Quebec schools who go to Great Britain,

there secure a license, and then return with the demand that their names be placed upon the register. The College has always looked upon this procedure as being an evasion of its regulations, and one member at the recent meeting went so far as to describe it as a subterfuge or ruse.

Upon the face of it, the College, being a properly constituted body, and having deputed to it by the province, which is competent to exercise that privilege under the British North America Act, the direction of medical education, is quite within its rights in enacting such regulations. It is as well to recognize that fact, but the College must also keep in mind that its conduct hitherto has not been such as to make its authority cheerfully borne. It has been actuated by ideals which were a little lower than the highest; it had no settled policy; the regulations made at one meeting were controverted the next; its records were imperfectly kept and even its monies went astray. There is no opposition to the College as such, on the part of anyone, but its erratic course has not inspired confidence that its conclusions will always be wise.

The regulations dealing with professional study are of great interest and differ materially from those hitherto in force. In future the course of study is to extend over five sessions of nine months each, and the alterations are of so much importance that it is worth giving them in detail. The curriculum provides for one hundred and sixty "lessons" of chemistry, of which forty shall be practical; two six months' courses of descriptive anatomy; two six months' courses of practical anatomy or dissection; two three months' courses of general and special physiology, of which ten lessons shall be practical; a course of normal histology of sixty lectures; two courses of general pathology of 60 lessons each; a course of hygiene of 90 lessons, of which 10 shall be practical; two courses of materia medica, comprising 20 lessons in pharmacology, 100 of general therapeutics and 120 of materia medica; two courses of 90 lessons in obstetrics and pathology of infancy; two six months' courses of internal pathology; two six months' courses of external pathology; a six months' course of medical jurisprudence and toxicology; three nine months' courses of medical clinics in an hospital containing fifty beds; three nine months' courses of surgical clinics in an hospital containing fifty beds; an obstetrical clinical course of 48 lectures in a lying-in-hospital, with attendance upon at least 20 confinements; a course of practical operative surgery and minor surgery of 60 lessons; a course of ophthalmology, otology and rhinolaryngology of 80 lessons, of which 40 shall be clinical; a course of mental and nervous diseases of 40 lessons, of

which 20 shall be clinical; a course of pediatrics of 40 lessons, of which 20 shall be clinical; a course of gynæcology of 60 lessons, of which 40 shall be clinical; a course of pathological histology and anatomy of 50 lessons, of which 20 shall be practical; a course of bacteriology of 30 lessons, of which 20 shall be practical; a course of history of medicine and medical ethics of 10 lessons; attendance at the morgue upon at least 10 autopsies.

The teaching of theoretical courses of materia medica, of internal pathology, of external pathology and of gynæcology shall be terminated at the end of the 4th year, to allow the students to pass their final examination upon these courses at the end of the 4th year "The fifth year of study shall be utilized in following the clinical courses and lessons of laboratory for the clinics," and in completing the study of special courses.

It is questionable if such an elaborate course of study has ever been devised by any college. There is no objection to the "lessons of laboratory for the clinics," but some students may consider 260 lectures in materia medica, a mispending of the small pittance of life allotted to them. It is also questionable if the framers of these regulations were animated entirely by zeal for the advancement of medical learning; it is not unlikely that they had an eye to what is being done in Ottawa towards Dominion registration, and they can point to their curriculum to prove that if the Quebec qualification is not accepted by the Medical Council as entitling its holder to practice in Great Britain the fault does not lie with the College of Physicians and Surgeons. It is this suggestion of an *arrière pensée* in all the doings of the College, that prevents its conclusions being accepted with as much alacrity as it might desire.

Whilst the College has its own proper functions the universities also have theirs. One of the functions of the universities is to teach the medical sciences, and they have now to decide whether or not they will abrogate it and hand it over to the College. In our judgment they will be remiss in their duty, if they abandon the results of their own experience as to what and how much should be taught and tamely submit to the dictation of the College in all the details of the curriculum.

The business of the College is to ascertain if a candidate for registration as a practitioner of medicine is in possession of the necessary knowledge, and it may exact, as prescriptive evidence, that he has passed a certain number of years in study, but to prescribe all details of courses is to deny all independence to the teaching staffs, who above all others should know what is demanded of them. The College like the universities is the servant of the public and their service will only be endured so long as it is rendered with wisdom and faithfulness.

CLINICAL TEACHING.

There is a tradition that a hospital is a place for the care and cure of the indigent sick, but this tradition has been modified of late years in important respects. Many persons take up their residence in hospitals, who are not sick, and many, who certainly are not indigent, receive the benefits of hospital treatment. But the most important variation of this tradition is in the direction of making hospitals more available for teaching purposes. This is a natural outcome of the situation, for every bedside, be it in hospital or private house, is a place for clinical learning and clinical teaching. The comfort and cure of the patient is the first law of hospital life, and all teaching is secondary to that, but experience has proved that in hospitals where there is no teaching the patients suffer in respect of both comfort and cure.

The development of medical education is in the direction of better facilities for teaching and the best schools have their own hospitals free from the trammels of an administration foreign to the teaching body, a hospital controlled by the faculty and manned by the professors who, apart from teaching and hospital work, more and more assume the role of pure consultants in their various specialties.

The strongest advocate of a hospital devoted primarily to teaching purposes is Professor Barker, of Chicago, and after mature consideration he continues to urge the need of a university hospital, whose departmental chiefs would engage in no work outside of such institution, whose emoluments therefrom would adequately secure them a comfortable existence, and obviate the necessity of any kind of private practice. In other words clinical subjects would be taught under similar conditions, as those in the primary years, and, just as in many modern schools there is a growing tendency to relegate anatomy, chemistry and physiology to the general university, where the professors have no material interest outside of such occupation, so with the clinical teaching, whose chairs would be filled by men able to devote their time wholly to such work, without the need of engaging in outside practice, or if so only to a very limited extent.

The whole subject is one of legitimate discussion and is very near a solution in many of the most progressive schools on this continent, especially in those, whose good fortune it is to be supported with adequate means of carrying out the most desirable improvements. The probability may be admitted at once of obtaining by this means the highest grade of teaching and of more efficient and thorough attention to its details, and we believe that such a scheme would be more prolific in research, as well as in providing the best kind of hospital

service; on the other hand, we very much doubt the success of any such change without the cooperation of departmental chiefs, whose genius, wide knowledge, zeal, and personality, would carry on efficiently the required labor. Men of such calibre and capable of so high a mission are not to be found every day, even in the greatest medical centres. Yet the successful achievement of such an idea depends less on the institution, be it ever so wealthy, than upon those characteristics above mentioned which make the most wretchedly equipped laboratories and clinics, store-houses of useful information and producers of research, which have made famous most of the European authorities, which have made Pasteur and Koch the greatest of bacteriologists, which have raised Nothnagel and Kraus to the first places in clinical medicine, and have made the school of Vienna easily first, in spite of the lamentable filth and neglect which every nook and cranny of that famous institution exhibits to the most casual observer.

For us Canadians the question naturally arises: is such a teaching hospital feasible? If so, is it a wise and necessary change? And even if both feasible and wise, is it likely to lead here to an ideal condition for medical teaching?

The feasibility is largely a financial question, involving as it does either a great monetary sacrifice on the part of the clinical chiefs, or the establishment of endowed chairs each valued at not less than a hundred thousand dollars, for the surgeons and specialists doubtless much more. For six such chairs, and less than that number is inadequate, the fund required would approximate one million dollars. The hospital itself, after the building had been erected and fully equipped, would require for its efficient support a permanent endowment fund of not less than two million dollars, the interest of which would be used for current expenses. Munificent as have been our many benefactions we cannot feel that any such sum is at present to be taken into serious contemplation. Some arrangement might be entered into, whereby this expense might be curtailed by the admission of private patients, whose fees would be controlled, and in large part absorbed by the hospital, but it would scarcely make a sufficient reduction to materially alter the above figures.

Let us consider the wisdom of such a plan. The functions of a medical school are briefly three-fold, primarily to educate men to become well equipped practitioners, secondly, to give post graduate students an opportunity to keep in touch with modern medical views and methods, and thirdly, to encourage work of research and foster a spirit of advanced scientific investigation among those who have time, disposition and ability so to do.

The last of these considerations, so often and perhaps rightly regarded all important, is not to be accomplished alone by means of fine buildings, well equipped laboratories and vast fortunes; ultra-scientific work of the right kind cannot be turned out after the manner of steel nails and railway spikes, nor indeed can any one's efforts at original work succeed save by the inspiration of genius or the quiet development of talent, more especially when stimulated by leaders, whose own genius and attainments are such as to attract and encourage men to achieve higher work,—leaders capable of drawing from others their latent powers, of inspiring even the indolent to a sense of their duty to strive for higher medical ideals rather than for self-interest, success in medical politics and worldly advancement.

Whether or not Canada is assuming any such role in the great active medical world, others from a distance can better judge. That it may develop and take a prominent place in advanced work in the distant or even the very near future no one would wish to deny or cease to hope. The work of Canadian universities, however, in developing practitioners, who are adequately equipped, from an intellectual and practical standpoint, is an opportunity, which we scarcely believe to be fully realised. That this, and this chiefly, is the great function of universities is not, we believe, sufficiently evident, nor can it be denied that, with our unsurpassed clinical opportunities, and the proper attitude towards the clinical teaching, Canadian students would become men with the soundest general principles, possessed of the best means of diagnosis and treatment, all based on the highest ideals and most scientific foundations.

As in the case of medical schools so with the hospitals, whose functions in addition to the rational treatment of the patients are, equally to teach students and encourage research. Given a number of chiefs at the heads of departments adequately salaried, and therefore independent, the hospital will possess men, who, if of a desirable kind, will be enabled to devote the necessary time, not only to the patients and the teaching, but likewise so to encourage advanced work that men from far and near will be attracted to the institution as pupils, or assistants. Such an assistantship as in the German Clinics would imply an admirable training, an assured future, and possibly a succession to the principal post in them or in some similar institution elsewhere.

One of the most regrettable features existing in many hospitals is this very question of assistantship. The resident who serves in a hospital for one, two, or at most three years, gains, it is true an abundance of practical experience, spending as he does many hours in the wards and laboratories but too rarely with a view to work of a

more advanced or scientific character. The reason for this is not far to seek, and though in part it may be attributable to lack of time, or wasted opportunities, it is often still more closely associated with lack of interest on the part of the chief, who, from the limited time and the necessary outside practice is obliged to devote his energies to other matters, much to his own regret no doubt if as we believe he be high-minded and worthy, still more is it to the great loss of the junior, who soon becomes a machine assistant, a slave of routine, devoid not only of capacity for investigation, but of a desire for better things.

To such men after several years of hospital service the future depends, not, as it should, on a previous association with his chief, but rather on the good fortunes of environment and opportunity. The departmental head has not found time to help his assistants in obtaining status and prestige, as occurs for example in the German Clinics, and at the end of their hospital service the assistants depend on a practice based chiefly on lower ideals. The ideal teaching hospital then being neither feasible nor probable, even though it be the sum of wisdom, cannot be hoped for at present in Canada. Should it ever come its success will not lie in buildings alone, but in the scientific spirit, in mutual generosity, in a harmonious desire for better work, in teaching, in research and the treatment of its patients.

Facing as we must then the difficulties under which we as Canadians exist, and the limitations under which work is possible, we can scarcely feel it desirable to wish for any such hospital, unless indeed the men of prestige occupying the highest places in the country would voluntarily take the lead in each department. Far better for the present, let us realise that by the excellent clinical facilities in our splendid hospitals, the time and opportunity be seized with greater eagerness to advance methodical clinical teaching, to develop excellent scientific practitioners, to teach post graduates the newer theories and methods, which we learn to believe in and adopt. With our progressive neighbors to the South, with our ambitious countrymen to the East and West, and new schools of medicine springing up on all sides, let us in Montreal look to our laurels lest by self-satisfaction we become retrograde, not only in the higher work of research but in the casier function of a school, the work of clinical teaching.

ENDOWMENT FOR M'GILL MEDICAL FACULTY.

Another magnificent bequest has been given to the McGill Medical Faculty, this time for the department of Clinical Medicine. Mr. James Cooper, always a philanthropist during his life-time and considerate

for others, died recently of cancer of the stomach. It was his express desire during the few weeks prior to his death that something further should be done in medical science to help obviate in others the malady with which he was afflicted and its consequent suffering. Hence the bequest of "the sum of sixty thousand dollars to form a fund, from which to pay the cost of promoting and carrying out research and investigation, the same to be known as the James Cooper Endowment for the study and teaching of internal medicine, the exact line of investigation to be determined from time to time by the McGill Medical Faculty."

The gift then is placed in the hands of the Medical Faculty as a body, free of succession duties, untrammelled by conditions, which have done so much to render other bequests of a similar nature of less use than they otherwise might have been. The sole condition upon which the present bequest is founded is briefly, for the purpose of investigation under the chair of clinical medicine. One cannot but comment on the wisdom of this method of bequest. While the investment of large sums of money donated to universities is a matter which should always be left to men of greater business ability than are most doctors, yet the specific uses of such sums are scarcely ever put to as good purpose by business men—let us say governors of a university—as by those who are more closely in touch with the needs of scientific work.

We are glad too, to find that the bequest concerns investigation, study and teaching, rather than the erection of fine buildings, which in themselves form by far the least important part of any university. While no definite arrangements have been made as yet for the distribution of the money, when it is handed over to the Faculty, it is generally understood that it will be devoted to fellowships or scholarships, to those of recent graduation who have special desire and aptitude to carry on this kind of work.

Physicians as a rule do not have much luck in the law courts. Two cases, in which suit was taken for the recovery of fees, have been decided adversely to the plaintiffs, at least the accounts were cut to one-third of the amount demanded. The more recent case was that of Dr. George O. Baxter, of St. John, N.B., who took suit against the executors of the Sullivan Estate for \$2,420 and was awarded \$750. The jury failed to agree that five dollars a visit was a reasonable charge or that eight visits a day were necessary. There is a greater prejudice in the courts against doctors' bills than against lawyers', but it would be interesting to note what would happen if a lawyer's bill were adju-

icated upon in a medical society. It may be news to some that occasionally a doctor does overcharge, but from recent legal decisions it would appear that the interests of the public are pretty well safeguarded.

The College of Physicians and Surgeons of the Province of Quebec has another lawsuit on its hands. This time it is against the immigration inspector of the Canadian Pacific Railway, Dr. Faber, and the charge is one of illegal practice, on the ground that his name does not appear in the Register. It appears that Dr. Faber has charge of the immigrants at Quebec who are ill and have to be deported. The Company contends that their medical officer is a well qualified man, that he is not engaged in practice as such is generally understood and that he is in reality a salaried officer, but before they are done with the case, they will get an insight into the Rules and Regulations of the College that will minister to their curiosity. If only the medical men of the Quebec district can make it clear that they are not actuated by the Spirit of Demetrius the silversmith, who saw his craft to be in danger, they will be doing a good turn to the profession at large.

A very full report of the proceedings of the Maritime Medical Association which was held in St. John, N.B., the 22nd and 23rd July, appears in this number of the Journal. This association has been in existence now for more than a dozen years and is always attended by more than a hundred members, most of whom find the long journey to the meetings of the Canadian Medical Association too great an encroachment on their time. Four visitors from Montreal who were to have been present, at the last moment were obliged to cancel their engagements. From the reports received it would appear that the meeting was a complete success, in respect of the scientific and general interest of the papers, the numbers in attendance, and the good feeling that prevailed. Though the Maritime Provinces do not constitute a very great medical centre, in so far as teaching and research are concerned—there is one good medical school at Halifax, however—there is no part of the Dominion in which the general level of the profession is higher.

It is one of the penalties of exalted station, that the occupant must submit his life to the most curious scrutiny. In the actual discharge of his public duty that fierce light must be borne, but it is pitiable that to great men the poor privilege is denied of dying in decent seclusion. The purveyors to the public taste, like the plague that afflicted the

Pharaohs, come up into their houses, into their bed chambers and upon their beds. But in truth the public taste does not demand the details of the sick-room, many of which are revolting, when separated from the case itself, and the public mind has been nauseated by having thrust upon it the unnecessary accounts of Pope Leo's illness and even the particulars of the autopsy itself. It was quite legitimate for the physicians in attendance to set forth from time to time bulletins to mark the course of the august patient from life to death, and probably they did nothing more. The rest was mostly an imaginary account of events that never took place, and only gave pain to all who were impressed by the serene and gentle life of the aged Pontiff.

The Calendar for McGill Medical Faculty for 1903-4, being the seventy-second session, has just been issued. In comparing it with the Calendar of last year, one notes several important alterations:—Prof. Chas. E. Moyse, becomes vice-principal, and Dr. Von Eberts replaces Dr. Ruttan as registrar. Dr. Starkey's name appears in the place of the late Wyatt Johnston's. Dr. Elder has been advanced to the position of assistant professor of surgery; Dr. McCarthy from being lecturer is now assistant professor of anatomy, and Dr. Halsey assistant professor of pharmacology and therapeutics. Amongst the lecturers various new names appear: Dr. Kerry in pharmacology; Dr. MacKenzie in clinical medicine; Dr. McCrae in pathology; Dr. Shirres in neuro-pathology, and Dr. McTaggart in Medico-legal pathology. The fellows this year are: Drs. Thomas, Loeb and Charlton. Amongst the demonstrators and assistant demonstrators there are also several new names, J. R. Roebuck, B.A., in chemistry; Dr. Gordon in physiology; Dr. Archibald in surgery; Dr. Patrick in gynæcology, the two latter having been advanced from pathology and histology respectively. The other additions one notes are: Drs. Henry, Pennoyer, Barlow, Keenan, Gillies, Peters, Campbell, Grimmer and Jamieson. This strengthens the staff numerically up to 92 teachers. Another change is in the matriculation examination by which chemistry and physics are now compulsory instead of being optional as heretofore. The progress in the museum and in the library during the year has been very marked. The Calendar as a whole, is a fine record of the present high position of the Faculty.

Reviews and Notices of Books.

DISEASE OF THE PANCREAS—ITS CAUSE AND NATURE. BY EUGENE L. OPIE, M.D. Lippincott & Co., 1903.

During the past few years the work of Opie of Johns Hopkins upon pancreatic pathology, appearing in scattered articles, has notably increased our knowledge of the subject; and the publication of this work in book form, with considerable enlargements and an exhaustive review of the literature, will be hailed by the profession with no small degree of satisfaction. The book is entirely praiseworthy. It is one which is eminently the result of original work, though including a very complete consideration of the work of others. Not all the diseases of the pancreas are discussed; cysts, new growths, acute suppurative inflammation, and tuberculosis are barely mentioned.

The anatomy and histology of the organ, the varieties of acute pancreatitis, the ætiological relation of gall-stones to hæmorrhagic and gangrenous pancreatitis, fat necrosis, the varieties and ætiology of chronic pancreatitis, the pathology of diabetes mellitus; bronzed diabetes:—such are the main chapters.

The question of the anatomical relations of the two excretory ducts (Wirsung's and Santorini's), within the gland, and of the former with the common bile duct; and the length and diameter of the ampulla of Vater were especially investigated in 100 bodies in order to demonstrate by actual measurement that a gall-stone might occlude the ampulla without obstructing the pancreatic duct in certain cases. This condition anatomically would convert the bile and pancreatic ducts into one closed channel; and the entrance of bile into the pancreas may be followed, as Opie proves both experimentally and by the report of a case, by acute hæmorrhagic pancreatitis. This last mentioned condition is fully discussed. It is Opie's especial credit to have conclusively demonstrated the mechanism by which cholelithiasis causes hæmorrhagic pancreatitis. Chronic interstitial pancreatitis he divides into the interlobular and the interacinar forms. The most frequent cause is obstruction of the duct of Wirsung by calculi or by cancer of the head or body. In the interlobular form, the islands of Langerhans escape, while in the interacinar form (which occasionally accompanies an atrophic cirrhosis of the liver) they are involved. The fact has a bearing upon the question of the pathology of diabetes mellitus. According to Opie's observations, the most constant lesion here is a destruction of the islands of Langerhans, which, he concludes have the function of regulating carbohydrate metabolism. One can touch but very briefly

on particular points in the book; but it contains so much that is suggestive and informing that a full perusal must be warmly recommended as well to the surgeon as the physician.

E. W. A.

A TEXT-BOOK OF LEGAL MEDICINE AND TOXICOLOGY. Edited by FREDERICK PETERSON, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York; and WALTER S. HAINES, M.D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College. Two imperial octavo volumes of about 750 pages each, fully illustrated. W. B. Saunders & Company, 1903. Per volume: Cloth, \$5.00 net; Sheep or Half Morocco, \$6.00 net. Canadian agents, J. A. Carveth & Co.

For convenience of reference this treatise has been divided into two sections, I. and II., the latter being devoted to toxicology and all other portions of legal medicine in which laboratory investigation is an essential feature. Under "Expert Evidence" advice is given to medical experts, and suggestions to attorneys as to the best methods of obtaining the desired information from the witness. The Bertillon and Greenleaf-Smart systems of identification are concisely and intelligently described. An important chapter is that on "the destruction and attempted destruction of the human body by fire and chemicals." Another important chapter is that on the medicolegal relations of the x-rays. The responsibility of pharmacists in compounding prescriptions, in the selling of poisons, in substituting drugs other than those prescribed, furnishes a chapter of interest to everyone concerned with questions of medical jurisprudence. There is also included in the work an enumeration of the laws of the various States relating to the commitment and retention of the insane.

The above is taken largely from the publishers' announcement and certainly underestimates this important work. The chapter on railway injuries and the estimation of damages arising therefrom, is along the lines of the work of the late Wyatt Johnston, and of great value. There are sixteen contributors to the first volume, all men of eminence, and the editor, Dr. Peterson, has produced a work which is likely to become a standard in legal medicine. The same publishers have issued a smaller work on Medical Jurisprudence, Insanity and Toxicology, by Dr. Henry C. Chapman, professor of the Institutes of Medicine and Medical jurisprudence, Jefferson Medical College.

DISEASES OF THE LIVER, PANCREAS, AND SUPRARENAL GLANDS.

Nothnagel's Encyclopædia of Practical Medicine. American Edition. W. B. Saunders & Co., Philadelphia.

In the present volume of the well known Nothnagel series, Prof. Fitz

edits Prof. Oser's monograph upon the pancreas. This work, published in 1898, is brought fully up to date by a review of the important work done since that date by Robson, Körte, Opie, Flexner, and others; making it the most complete treatise on the subject which has yet appeared.

The section upon diseases of the suprarenal glands, written by Neusser, of Vienna, is also edited by Fitz, with additions, including especially the recent work of Abel and Crawford, Takamine, and others on the active principles and therapeutic uses of adrenal extract.

The monograph of Quinke and Hoppe-Seyler upon diseases of the liver was edited by F. A. Packard, whose untimely death occurred while the volume was going through the press. His additions, drawn from the more recent literature and especially from his own wide clinical experience, bring the subject fully up to date; and, to use the words of the general editor, Prof. Stengel, the resulting work has "no equal in our language." E. W. A.

DISEASES OF THE STOMACH. By DR. F. RIEGEL, of Giessen. Edited, with additions, by CHARLES G. STOCKTON, M.D., Professor of Medicine in the University of Buffalo; octavo, 835 pages, illustrated, including 6 full-page plates. W. B. Saunders & Company, 1903. Cloth, \$5.00 net; half morocco, \$6.00 net. Canadian agents, J. A. Carveth & Co.

This volume forms one of the series which make up the American edition of Nothnagel's Practice of Medicine, which has been noticed so often in this journal. The German edition, "Specielle Pathologie und Therapie," has long been known as one of the most authoritative systems in existence, and it will soon be accessible in English in ten volumes. One volume is assigned to each of the following divisions: Typhoid and Typhus; Smallpox, Cholera, Erysipelas, Pertussis and Hay Fever; Diphtheria, Measles, Scarlet Fever and Röhelen; Diseases of the lungs; Diseases of the pancreas, suprarenals and liver; Diseases of the stomach; Diseases of the intestines and peritoneum; Influenza, Dengue and Malaria; Anæmia and other blood conditions; Tuberculosis. The whole series is under the general editorial direction of Alfred Stengel and each volume is sold separately, so far as published, at five dollars. One volume is, however, entirely rewritten by an American author on account of the publishers' arrangements. The volume dealing with diseases of the stomach is by Dr. Franz Riegel, of Giessen, and it is edited by Dr. Stockton, of Buffalo. The work stands pretty much as it is in the original, but something has been added to the sections in periodic vomiting of infancy, syphilis of the stomach, gastric ulcer and cancer, acute dilatation and operative procedures. It will be

readily understood that a book of over eight hundred pages, prepared by men of the highest authority, and dealing with one class of disease, leaves almost nothing to be said upon the subject of which it treats.

THE PRACTICAL APPLICATION OF THE RONTGEN RAYS IN THERAPEUTICS AND DIAGNOSIS. By WILLIAM ALLEN PUSEY, A.M., M.D., Professor of Dermatology in the University of Illinois; and EUGENE W. CALDWELL, B.S., Director of the Edward N. Gibbs X-Ray Memorial Laboratory of the University and Bellevue Hospital Medical College, New York; octavo, 591 pages, 180 illustrations. W. B. Saunders & Co., 1903. Cloth, \$4.50; sheep or half morocco, \$5.50. Canadian agents, J. A. Carveth & Co.

Since the discovery of the X-rays by William Conrad Röntgen, professor of physics at the Royal University of Würzburg, in 1895, a vast body of literature has grown up in connection with their employment in medicine and surgery. For the first time it has been gathered together and set in order by Dr. Pusey, with the assistance of Mr. Caldwell. To review the book with any thoroughness would be to enter upon the consideration of a subject, which has absorbed the attention of physicists and physicians these seven years past, and is daily growing in importance. It must suffice for the present to say, that anyone who is interested in the X-rays, either as a scientific pursuit or as a means of diagnosis and treatment, will find in this volume all that is known and much that is surmised upon the subject. The clinical reports are very full, and confirm the growing impression that in these rays we have added to our store a method of treatment which in time will have a very wide application.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1903. A yearly Digest of Scientific Progress, drawn from journals, monographs, and text-books of the leading American and foreign authors and investigators, under the editorial charge of GEORGE M. GOULD, A.M., M.D. In two volumes—Volume I., including General Medicine; octavo, 700 pages, fully illustrated; Volume II., General Surgery; octavo, 670 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Per volume: Cloth, \$3.00 net; half morocco, \$3.75 net. Canadian agents, J. A. Carveth & Co., Toronto.

This year-book bears the date of 1903. It would be more strictly descriptive if it bore the imprint 1902, and it would be no great departure from the truth if 1901 were employed. But two such handsome volumes cannot be made in a day. A rather careful search for

reference to work done in Montreal discloses mention of seven items, rodent ulcer of the nose, a new position for gynecological operations, an operation for vesico-vaginal fistula, dilatation of the heart, porencephalus, a classification of intoxicants, and goitre. If we might speak the truth in love, the impression made upon the editor, Dr. Gould, by the work done here during the past two years in respect of its importance, is slightly different from that entertained by local observers.

PRACTICAL POINTS IN NURSING. For Nurses in Private Practice. With an Appendix containing Rules for Feeding the Sick; Recipes for Invalid Food and Beverages. By EMILY A. M. STONEY, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Third Edition; 458 pages, fully illustrated. W. B. Saunders & Company, 1903. Cloth, \$1.75 net. Canadian agents, J. A. Carveth & Co.

In spite of its inapt title this book must be invaluable to a nurse. The author has a profound knowledge of the nature of a nurse and says many things a physician would hesitate to say, for fear of laying himself open to the charge of evil speaking. If a nurse did but follow all the counsel contained in this little book, she would be but little lower than an angel. There are many things in the book which it is not lawful for a physician to know: certainly the weaknesses of the nurse are faithfully dealt with and, as a class, they would do well to lay Miss Stoney's counsels to their hearts, for she is a faithful friend. The elaborate precautions recommended in "killing" a leech are quite justifiable from a woman's point of view. He is a fearsome beast, but salt is employed not to kill the creature, but to make him disgorge the blood and save his life for a future occasion.

MODERN MATERIA MEDICA AND THERAPEUTICS. By A. A. STEVENS, A.M., M.D., Lecturer in Physical Diagnosis, University of Pennsylvania; Physician to the Episcopal Hospital and to St. Agnes Hospital. Third Edition, entirely re-written; octavo, 663 pages. Cloth, \$3.50 net. W. B. Saunders & Co. Canadian agents, J. A. Carveth & Co.

The old method of the classification of drugs, in alphabetical order, had simplicity to recommend it, but little more, and the present author has abandoned it for an arrangement based upon pharmacological action. The work is distinctly modern, and though the old drugs receive due consideration, the newer preparations, which are becoming so familiar, have ample mention. A book of this kind has come to be a real necessity, for a searcher into the merits of new preparations.

has been largely left to manufacturers' circulars, which, as a rule, are not remarkable for calmness and scientific candor. After a course of such reading, this book will prove to be a useful corrective, for Dr. Stevens certainly displays a great lack of enthusiasm in regard to many of the new drugs.

ATLAS AND EPITOME OF HUMAN HISTOLOGY AND MICROSCOPIC ANATOMY. By PRIVATDOCENT DR. J. SOBOTTA, of Würzburg. Edited, with additions, by G. CARL HUBER, M.D., Junior Professor of Anatomy and Histology, and Director of the Histological Laboratory, University of Michigan, Ann Arbor. With 214 colored figures on 80 plates, 68 text-illustrations, and 248 pages of text. Philadelphia and London: W. B. Saunders & Co., 1903. Cloth, \$4.50 net. Canadian agents, J. A. Carveth & Co.

A work in histology is largely a matter of illustration, and the plates in this book are beautiful, besides being true. Nothing could exceed the fidelity and artistic quality of the drawings, and the work retains the concise and accurate text of the original German edition. It forms one of the series of Saunders' medical hand-atlases, and is quite up to the standard of any that has previously appeared. The same publishers issue an atlas and epitome of diseases of the mouth, pharynx and nose.

THE CARE OF THE BABY. A Manual for Mothers and Nurses. By J. P. CROZER GRIFFITH, M.D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia. Third Edition, Revised; 12mo., 436 pages, fully illustrated. W. B. Saunders & Co., 1903. Cloth, \$1.50 net. Canadian agents, J. A. Carveth & Co.

This is the third edition of a book already well known. It is intended primarily for parents, but physicians also will find much useful information, which they are very liable to underestimate or overlook.

TUBERCULOSIS: Recast from Lectures Delivered at Rush Medical College. By NORMAN BRIDGE, A.M., M.D. 302 pages, illustrated. W. B. Saunders & Company, 1903. Cloth, \$1.50 net. Canadian agents, J. A. Carveth & Co.

Each disease is now having a book to itself, instead of summary mention with all other diseases. This volume by Norman Bridge deals with Tuberculosis in a comprehensive way. Taking account of the theories of the condition and of its treatment, as well as of the neces-

sity for the protection of the community against infection the discussion of diagnosis is thoroughly sound; the tuberculin and agglutination tests are fully considered as well as the weightier matters of auscultation and general clinical observations. The folly of a tuberculous patient changing his habitat for the sake of a change, and enduring the misery of travel and residence in strange places apart from comforts and good advice, is well brought out. The book is marked by good sense in every page.

Medical News.

MARITIME MEDICAL ASSOCIATION.

The thirteenth annual meeting of the Maritime Medical Association was held in St. John, N.B., Wednesday and Thursday, 22nd and 23rd July, 1903. The following are the officers under whose direction the meeting was held: President, Murray MacLaren, M.D., M.R.C.S., St. John; vice-president, for New Brunswick—R. L. Botsford, M.D., Moncton; for Nova Scotia—G. M. Campbell, M.D., Halifax; for P. E. Island—P. C. Murphy, M.D., Tignish; hon.-treasurer, C. A. Macphail, M.D., Summerside; honorary secretary, T. D. Walker, M.B., St. John. Local committee: W. W. White, M.D., J. R. McIntosh, M.D., W. A. Christie, M.D., J. W. Daniel, M.D., J. P. McInerney, M.D., G. A. B. Addy, M. D. Local secretary, J. H. Seammell, M.D.

There were 113 members present; their names and addresses being as follow:—

Alex. Murray, Leonardville; J. G. Nugent, Briggs Corner; S. O. Murray, Albert; F. E. Norris, St. John; M. Chisholm, Halifax; A. R. Myers, Moncton; J. P. McManus, Blackville; W. E. Crockett, Fredericton; A. P. Crockett, St. John; H. Geo. Addey, St. John; M. E. MacLeod, St. John; L. W. Johnston, Sidney Mines; Thos. Treaman, Halifax; Wm. Bayard, St. John; Smith Anderson, Pictou; J. W. Daniel, St. John; F. S. Ford, New Germany; John Stewart, Halifax; Fred. White, Moncton; A. B. Atherton, Fredericton; F. H. Wetmore, Hampton; G. D. Rarkin, Woodstock; W. A. Christie, St. John; O. Y. McCarry, St. John; E. B. Fisher, Fredericton; G. M. Duncan, Bathurst; P. R. Inches, St. John; Geo. Meloin, St. John; W. E. Armstrong, Bridgetown; J. A. McIntyre, St. John; Wm. Christie, St. John; J. H. McIntosh, St. John; J. C. Dixie Murray, Halifax; Stewart Skinner, St. John; F. L. Kenney, St. John; T. E. Bishop, St. John; J. A. Macnaughton, Salisbury; R. R. Richardson, Boston; R. G. Day, St. John; D. G. Berryman, St. John; M. Sheffield, St. John; J. H. May,

St. John; B. M. Mullin, Fredericton; G. V. McNally, Fredericton; R. H. McGrath, Fredericton; G. C. Van Wort, Fredericton; W. L. Morrison, St. John; W. W. White, St. John; G. G. Corbet, Fairville; W. M. Deinstask, St. Stephen; A. M. Hebb, Chester; J. F. McCaulay, St. John; P. H. Warneford, Hampton; J. P. Reynolds, Lepeau; C. MacL. Arnold, Amherst; F. H. Wheeler, St. John; J. E. Deyas, Amherst; H. D. Fritz, St. John; H. G. Folkins, Belleisle Creek; D. D. McDonald, Petitecodiac; Jno. C. Mott, St. John; J. W. Macneill, Keswick Ridge; Geo. O. Dibben, Moore Mills; M. Case, St. John, N.B.; J. W. Bridges, St. John, N.B.; F. F. Kelly, St. John, N. B.; L. A. Macalpine, St. John; C. J. Robert, St. John; Thos. Lunney, St. John; J. E. M. Cornwath, Riverside; J. A. McKenzie, Halifax; Wm. J. Barton, Pubruco; L. R. Morse, Lawrencetown; W. B. Moore, Kentville; O. R. Salbi, Orford; A. Ross, Alberton; Chas. Fox, Pubruco; C. L. Purdy, Moncton; A. F. Emery, St. John; R. W. Earle, Newcastle; N. E. Mackay, Halifax; W. H. McDonald, Rose Bay; L. M. Curran, Westfield; L. W. Heart, Norton; Jas. Ross, Halifax; Harry McNally, Fredericton; S. C. Primrose, Annapolis; Thomas Walker, St. John; Clara Olding, St. John; Margaret Parks, St. John; A. Gallant, Meteghan; F. S. Wade, Port Maitland; Robt. Boisford, Moncton; Murray MacLaren, St. John; G. E. Dewitt, Wolfville; B. S. Thorne, Butternut Ridge; J. A. Turnbull, Bear River; J. M. Deacon, St. Stephen; John Sutherland, St. Stephen; J. Henry Scannell, St. John; T. D. Walker, St. John; P. C. Murphy, Tignish; S. W. Burgess, Great Shemaque; J. P. Inerney, St. John; D. T. Walker, Halifax; A. J. Corne, Halifax; Geo. Campbell, Halifax; Thos. Murphy, Halifax; G. H. B. Addy, St. John; H. R. McDonald, Lunenburg; R. H. Burrell, Lunenburg; J. A. Sponagh, Middleton; E. R. Faulkner, Mahone Bay.

The opening session began at 10 a.m. on Wednesday with the enrolling of members, the reading of minutes and the reception of delegates from sister societies. The following nominating committee was then appointed: A. B. Atherton, Fredericton; J. R. McIntosh, St. John; Dr. Duncan, Bathurst; C. D. Munro, Halifax; M. Chisholm, Halifax; George De Witt, Wolfville; P. C. Murphy, Tignish; S. R. Jenkins, Charlottetown; H. D. Johnson, Charlottetown.

A committee on by-laws was also appointed composed of Dr. T. Walker, Dr. De Witt, Wolfville, and Dr. Murphy.

The President referred in feeling terms to members who had died since last meeting. These were W. S. Harding, St. John; C. A. Macphail Johnson, Summerside; C. J. Fitzgerald, Amherst; F. J. Leery, Fredericton; Richard Johnson, Charlottetown, and Dr. W. O. Price, Havelock. Of these Dr. Macphail Johnson died in South Africa of enteric fever.

The President then read his annual address, his subject being the Maritime Medical Association, its past and present. He welcomed the visitors to St. John, and hoped that they would return to their homes cherishing pleasant memories of the meeting. He then outlined a history of the Association from its beginning and showed how well it was fulfilling its function. He commended the practice of inviting visitors from other provinces, as one of their objects was to draw closer the medical relations throughout Canada. Dr. Roddick's Bill came in for commendation as a measure which would benefit all. He urged upon the Government of New Brunswick to establish a sanitarium for tuberculous diseases, the same as that in Nova Scotia. He referred to the epidemic of smallpox in the province and made a strong plea for general vaccination. The President then took under consideration board of health matters, and urged that political influence be set at one side and that they should receive financial and other support.

Dr. William Bayard read a paper upon Pure Air as an essential to the well-being of man. Dr. Bayard has completed sixty years of practice and received a very warm reception from the members.

Dr. F. H. Wheeler's paper upon Rheumatism was postponed on account of the absence of the writer.

Dr. Geo. M. Campbell gave a case report of multiple aneurysm of the aorta and showed the specimens.

Dr. G. A. B. Addy gave some notes on a case of obstructed ureters, with presentation of pathological specimens and in the discussion which followed, Dr. P. R. Inches referred to a case, in which total suppression had occurred, due to the involvement of the ureters in an inflammatory mass. An operation was undertaken with success.

A paper on Methyl alcohol poisoning, was read by Dr. W. E. Armstrong, Bridgetown, and was discussed by Dr. Crawford, and Dr. W. P. Rankin, Woodstock. The latter spoke of two similar cases, one proving fatal in a few hours, the other recovering in a few days with loss of vision. As an outcome of the paper and discussion, Drs. Armstrong, Daniel and Murphy were appointed to confer with the Government about indiscriminate sale of this poison.

Dr. S. S. Skinner gave two case reports, the one upon Renal Fistula, the other upon methial calculus. Dr Skinner also showed an ovarian tumor removed by Dr. Cushing, of Boston. Dr. Cushing described the operation.

A paper on the sanitarium treatment of tuberculosis was read by Dr. De Witt. He thought infection occurred altogether too frequently and suggested that public institutions be constructed.

It was moved by Dr. Cowie, Halifax, and seconded by Dr. B. S.

Thorne, that in view of the importance of obtaining proper legislation for the public health there is a necessity for the establishment of a bureau of vital statistics. Therefore, resolved, that a committee of five members be appointed from the provinces of New Brunswick and P. E. Island to act in concert with a committee already appointed by the Nova Scotia Medical Society to obtain the passing of such act by their respective governments, as will result in the establishment of such a bureau, and also to have power to make such changes and additions to the Health Act as will place tuberculosis on the list of contagious diseases and make the act effectual for stamping out the disease.

Dr. Cowie explained that the Health Act is a dead letter in Halifax, except, when smallpox crops up around the city. He strongly urged that the desired legislation regarding tuberculosis be speedily obtained.

Dr. Murphy thought that a board for each of the provinces was the only feasible plan, not one for the three provinces.

Dr. Cowie said that the intention was to have separate provincial boards, but said that Nova Scotia already had such a committee, appointed by the Nova Scotia Medical Society. A committee of five: Dr. F. W. Daniel, Dr. W. D. Rankine, Woodstock; Dr. Smith, Moncton; Dr. Lawson, St. Stephen; Dr. W. A. Christie, was appointed for New Brunswick.

For Prince Edward Island the committee is Dr. Warburton, Dr. S. R. Jenkins, Dr. Connolly, Dr. Robertson and Dr. Johnson.

AFTERNOON SESSION.

Dr. Geo. Neville, St. John, read a paper on Differential Diagnosis of Smallpox. He considered smallpox due to a protozoa, and essentially, a disease of the skin. He thought that measles, scarlatina, chickenpox and smallpox all come from one primeval congenitor and were not so sharply defined in olden times as at present. He quoted Councilman as proving smallpox a disease of the skin. He gave a good clinical picture of the appearance of the rash and laid stress upon the papules appearing upon the palms of the hands and the soles of the feet. He advocated compulsory vaccination very strongly.

Dr. E. B. Fisher, Fredericton, read a paper on Smallpox. As a health officer he said the amount of money spent in stamping out epidemics had brought unjustifiable criticism. He thought the disease was becoming milder, due to progressive vaccination of several generations, and he advocated compulsory vaccination. He noted cases in the recent epidemic in which unvaccinated members of a family took

the disease, while those vaccinated escaped. He showed several photos taken at different stages of the disease.

Drs. Chisholm and Morris discussed both the foregoing papers, the former not agreeing that smallpox was a skin disease, the latter saying that pain in the back was not always present and that faulty vaccine was productive of much harm.

Dr. Murphy said pain in the back was not peculiar to smallpox alone and Dr. McNally, Fredericton said he had produced successful vaccination in some of the so-called smallpox cases. Dr. Christie said it was impossible to diagnose some of the cases in the early stages, in the recent outbreak. Dr. Daniel, St. John, quoted cases where persons who had smallpox and a few years afterwards were successfully vaccinated. The action of the Health Board should be sustained, he thought. Dr. Wetmore also quoted cases.

Dr. Murphy, Tignish, discussed two cases: (1). an unusual termination of perforating appendicitis; (2). an unexplained Brady-cordia. In the first case patient had all the symptoms of perforation and recovered without surgical interference. In the second, the patient's pulse went down to 15 with pseudo-epileptic attack and remained at 25 for some days and then came back to normal.

Dr. Murray knew of a patient who suffered from Brady-cordia and at post-mortem showed degenerated heart, and coronary arteries very small. Drs. T. D. Walker and Murphy, advocated operation in cases of appendicitis.

Dr. W. C. Crockett, Fredericton, read a paper on Extra Uterine Gestation, with account of three cases operated upon by abdominal incision and all made good recoveries.

A paper on Tuberculous Cystitis, was read by Dr. John Stewart, Halifax. He said this was a condition hard to diagnose, tedious in course, and in treatment unsatisfactory. The condition usually came from ureters, vesiculi seminales or prostate by lymphatics. The trigone was usually first affected and with miliary type. Perforation was rare but fistulae might form. Death was brought about by spreading of the disease. The symptoms were: increased frequency, diminished expulsive force, hematuria with low specific gravity pyuria in later stages. Many cases have been treated when the disease was in the kidney. The bacillus was best found by culture medium. For treatment, he recommended irrigation with bichloride, or silver nitrate. Some authors were against local treatment, methylene blue and salol might be taken internally; when these failed a suprapubic cystotomy was the best operation.

Dr. O. J. McCully, St. John, read a paper on "The Clinical Signi-

ficance of Vertigo." He considered most cases due to affections of semicircular canals, but also found in affections of eye in which case he found nystagmus, and double vision. There was also a dyspeptic form due to indigestion in which a patient might lose consciousness. It might be central due to intercranial tumor, or softening, or it might be reflex coming from any part of the body. In any given case one should examine the eye, the ear, the digestive and nervous systems.

Dr. T. Walker referred to vertigo found in aged persons with arteriosclerosis, due to weak circulation in the brain.

Dr. MacLaren laid emphasis on worms being the cause.

Dr. McCully said it was found also in gouty subjects.

The by-laws drawn up by the committee governing the association were then read and taken up separately and passed.

EVENING SESSION.

Borderland Mental Conditions was considered by Dr. J. A. McKenzie, Halifax. He said it was very difficult to draw the line between sanity and insanity, as everyone had insane impulses at times. Geniuses were very often nearer the borderline than those of less mental capacity. Authorities divided these cases into three classes: Those suffering from doubt or indecision; those from fear; those subject to morbid impulses. They must not come to a conclusion too hastily, and in case of crime they should give the patient the benefit of the doubt. Paresis could be diagnosed from hysteria, as in the former marked symptoms soon appear. As to treatment it should be general and local. Prognosis was bad if general health was bad. Treatment should be varied, tonic one week and sedative the next. He recommended outdoor exercise, change of scene, hydrotherapy, massage and electricity.

Renal Calculus and Pyonephrosis was treated by Dr. N. S. McKay, Halifax. He gave an account of a case of a pregnant woman, who showed symptoms of pyonephrosis. After confinement she was operated upon and left kidney found to be a bag of pus. This was removed and a drainage tube inserted. The secreting substance of the kidney was all gone. About a month later the patient had pain and tenderness over the right kidney which on palpation appeared three times the normal size. Patient was operated upon a second time and a calculus weighing 13 oz. was removed from pelvis of right kidney. It was about 4 in. long, $\frac{3}{4}$ in. thick and $2\frac{1}{2}$ in. wide. Great hæmorrhage followed, and the patient was saved only by the greatest care and attention.

The case was of interest on account of the size of the stone and the

small amount of secreting kidney substance left, as the left kidney was all gone and the right nearly so.

A discussion was held upon "The Early Manifestations of Pulmonary Tuberculosis." Dr. P. R. Inches laid stress on the use of tuberculin test and X-ray as well as general examination.

Dr. T. Walker followed and quoted figures to show that tuberculosis was on the wane in Germany and the United States. He thought diminution was due to early diagnosis, and considered hæmoptosis hoarseness as important diagnostic signs, but he was afraid of the tuberculin test.

Dr. J. P. McInerney discussed the confusion between the early stages of phthisis and typhoid fever.

Dr. Dewitt brought up the question as to whether or not pleurisy was always caused by tuberculosis, and considerable discussion followed. The tuberculin test was discussed by Drs. Chisholm, Inches, Walker, MacLaren, and McInerney.

The next paper was upon "Puerperal Eclampsia," by Dr. A. Ross, Alberton. He gave the many theories as to the causation of the condition. He laid particular stress upon early and frequent examinations of urine, for if condition is diagnosed early, he said, the life of the patient might be saved. He gave the treatment and recommended early emptying of the uterus, and gave an account of ten cases with only one death where this method was followed. Drs. More, Deacon and others, spoke highly of the benefits derived in these cases from *veratrum viride* even where all other means had failed.

The members were given a reception by the president at 75 Cobourg street, after the evening meeting.

SECOND DAY. THURSDAY, JULY 23RD.

A letter from Dr. McNeill was read, suggesting that the Association take some action in assisting Dr. Roddick with his registration bill. This led to a discussion, and finally a motion was carried to have the secretary draft a resolution to be sent to the Dominion Government, asking that Dr. Roddick's bill be put in force in those provinces which approved of it.

The secretary read the treasurer's report, which showed that the Association had a balance on hand.

The nominating committee presented its report and the following officers were declared elected:—President, Dr. Geo. M. Campbell, Halifax; Vice-Presidents, Dr. W. H. McDonald, Rose Bay, N.S.; Dr. A. F. Emery, St. John; Dr. Alex. McNeil, Summerside, P.E.I.; Treasurer,

Dr. John Sutherland, Bedeque, P.E.I.; Secretary, Dr. T. D. Walker, St. John.

Considerable discussion arose over Dr. G. A. B. Addy's motion that the proceedings of the Society be sent in pamphlet form to the members and this was finally passed.

Dr. Cushing of Boston, extended the Association an invitation to hold their meeting in Boston in 1905, but Dr. Daniel said the constitution would have to be altered to enable them to accept the invitation.

The first paper read was by Dr. Geo. K. Grimmer of Montreal, on treatment of nasal deformities by subcutaneous injection of hard paraffin. He said the results were very marked, especially in deformities resulting from specific disease. He discussed his experiments on rabbits with paraffin of different melting points. He employed a metal syringe covered with rubber, and said the operation could be done with or without anæsthetic, and that accidents were few, that of venous embolism being the one most to be dreaded. Several photographs of patients treated by the method were shown. In answer to Dr. Walker's question, Dr. Grimmer said, though he had never tried it himself, he had read accounts of prolapse of the uterus having been successfully treated with hard paraffin.

Dr. A. B. Atherton followed with reports of two cases of abdominal traumatism. The first case was that of an old man whose small intestine had been ruptured by the rebound of a musket. The gut was sewn up and drainage tube left in. Later, an abscess formed and an opening had to be made in the back to allow of drainage, but the patient was troubled for some months with a fistula discharging fecal matter. Dr. Atherton thought the fistula was due to the drainage tube, and he advised having no drainage if the abdomen could be cleaned out. Success depended upon the operation being done early, and there was much hope if it were done 36 hours after the time of accident.

The second case was one in which a man had been shot through the back, the bullet remaining in the body. The abdomen was opened and the stomach was found to have been pierced. This was sewn up and the patient recovered.

Dr. E. W. Cushing of Boston, then read a paper on the latest methods of removal of the uterus for Malignant Disease. In early operations, he said, most cases died of recurrence, owing to some diseased tissue being left. Both vaginal and abdominal operations had been tried, the former finding most favor; but there were complications, narrowness of the vagina and proximity of the tuberosities of the ischium. Through the abdominal incision he severed all connections of uterus to other parts, taking great care to include all infected tissue. The uterus was

then removed by the vagina. In very fat or weak patients palliative methods only should be used. He advocated the use of clamps, and said the great trouble was the infecting of the cut surfaces, when the abdomen was opened the hard ligaments and glands at the bifurcation of the iliac arteries should be examined, and if much involved, the operation would be useless, vaginal examination alone could not be depended upon, as he had known cases in which, what was thought to be the external os, was really the internal, the former having dilated to that extent. He tied all the arteries possible, but never the internal iliac. In bad cases, he placed a pad of gauze over the fundus and pushed uterus down without opening the vagina. In the after treatment the vagina was tamponed with gauze. By way of conclusion, Dr. Cushing said that cancers of long standing, even though small, were far more dangerous than larger ones of rapid growth. Many plates were passed around during the reading of the paper, showing various pathologic conditions.

A vote of thanks was passed, thanking Drs. Grimmer and Cushing for their papers. Dr. J. R. McIntosh, presented two cases; aneurism of the orbit and congenital nasal obstruction. Both cases were shown and examined with great interest. The first was an infant of five months. Dr. McIntosh said only 200 cases of this kind had been reported, and that it was one hard to diagnose. The tumor pulsates during sleep and does not impair the movements of the eye. Electrolysis was thought to be the only treatment. Dr. Sponagle Major, A. M.S., read a paper upon the subject, Should Military Drill be made compulsory in schools. He rather favored that view, and thought that squad and company drill at least should be taught. It favored development of the body, and helped to solve the national defense question.

Case reports of syphilis with remarks, was read by Dr. James Ross of Halifax, and he gave accounts of cases treated for different affections which recovered under anti-syphilitic treatment.

AFTERNOON SESSION,

The afternoon session opened with two short papers. A case report of extra uterine gestation, by Dr. F. Kelly, Charlottetown; and the second one on gall-stones, by Dr. T. J. F. Murphy, Halifax.

Dr. Maurice H. Richardson of Boston, followed with a paper on the surgical treatment of diseases of the biliary passages, but on account of the limited time at his disposal, he was obliged to leave out many parts. He said that stones might be present and cause no symptoms, yet suddenly cause obstruction of the intestine, a slight dyspepsia might be the

only symptom. Physicians were more careful about diagnosis than formerly, as operations were more frequently undertaken than in the past. The most important diagnostic point was discomfort in the region of the gall-bladder, which could not be accounted for. The stone might be in the common duct without any jaundice as the stone might act as a valve allowing the escape of bile.

Cancer of the head of the pancreas and chronic pancreatitis had to be eliminated. In diseases of the biliary passages, the head of the pancreas was nearly always enlarged, and cancerous looking, but both these conditions often disappear after the operation. The contra-indications for operation were few, and it should be a question of "when not whether." Stones in the cystic and hepatic ducts were often overlooked. Dr. Richardson does not sew up the bladder, but drained it, as it could not be made tight by sewing.

In discussion of this paper, Dr. Daniel asked if it was ever impossible to remove the stone from cystic duct, and if biliary fistulæ ever remained.

Dr. Chisholm quoted one case of stricture of common duct. Dr. Atherton had a case of jaundice with no pain; the stone was found in the common duct. He also asked Dr. Richardson if he used chloride of calcium in those cases. Dr. March quoted cases, and Dr. MacLaren and Dr. Murphy also joined in the discussion.

In reply, Dr. Richardson said he had seen a few cases of biliary fistulæ, and that in cases of stone of the cystic duct he removed the bladder. He did not employ chloride of calcium.

A vote of thanks was passed, and Dr. Richardson was made an honorary member of the Association.

A discussion took place about the conditions which simulate appendicitis. Dr. Daniel and Dr. Chisholm opened the discussion and were followed by Dr. Cushing, Dr. Richardson and Dr. Van Wart.

On account of the rain, an afternoon tea was given to the ladies at Dr. Scannell's residence, instead of at the Golf Club as previously arranged.

The following committee of management was reported elected:—Dr. Carleton Jones, Dr. Murray, Dr. Kirkpatrick, Dr. Curry, Dr. Murphy, with Dr. G. L. Campbell as local secretary.

Votes of thanks were passed to the Union Club, for their courtesy to the visiting members, to the president and secretary and the railway companies. The meeting then adjourned.

The members went for an excursion on River St. John after the afternoon's session, leaving at 4.30 and returning at 11 p.m.

CANADIAN MEDICAL ASSOCIATION.

The following is the preliminary programme of the thirty-sixth annual meeting of the Canadian Medical Association, to be held in London, August 25th, 26th, 27th and 28th, 1903:—

President's Address.—R. H. Morehouse, London.

Address in Medicine.—Jas. Stewart, Montreal.

Address in Surgery.—Alex. Hugh Ferguson, Chicago.

Address in Gynæcology.—Matthew D. Mann, Buffalo.

The Treatment of the Inebriate.—E. Roseburgh, Toronto.

Paper (title to be announced).—Perry O. Goldsmith, Belleville.

Total ablation of bisecting the uterus.—T. Shaw Webster, Toronto.

Inguinal Hernia of an undeveloped uterus and appendages.—H. Ferguson, London.

Paper (Title to be announced).—A. Laphorne Smith, Montreal.

Report of two cases of hour-glass contraction of stomach.—Henry Howitt, Guelph.

Cardiac affections in Influenza.—H. G. Wood, Nashville, Tenn.

Amyotrophic Lateral Sclerosis.—A. McPhedran, Toronto.

Orthopedic Surgery.—C. W. Wilson, Montréal.

Internal medication for direct remedial effect.—Geo. M. Aylesworth, Collingwood.

The Role of eye-strain in civilization and medicine.—Geo. M. Gould, Philadelphia.

The Inter-relations of Diabetes and other constitutional states.—Geo. F. Butler, Alma, Mich.

Gunshot wound of the upper arm, with non-union of humerus and destruction of musculo-spiral nerve—operation 5 months later: Recovery. Hadley Williams, London.

Discussion on the treatment of Typhoid Fever.—W. P. Caven, Toronto; J. Herald, Kingston; W. B. Thistle, Toronto; H. A. McCallum, London.

Discussion on the Diagnosis and treatment of Tubercular Peritonitis.—A. B. Atherton, Fredericton, N.B.; A. Groves, Fergus; Herbert A. Bruce, Toronto, and L. Coyteux Prevost, Ottawa.

The Technique of Gastro-Enterostomy.—Theodore A. McCraw, Detroit.

The relation between the general practitioner and the specialist in regard to intra-nasal work.—J. Price Brown, Toronto.

Personal experience with Alexander's operation.—H. Meek, London.

Auto-infection.—Z. Hornibrook, Cherokee, Iowa.

The Country Doctor.—J. S. Sprague, Stirling.

A lantern lecture on open air life in the treatment of Pulmonary Tuberculosis.—J. H. Elliott, Gravenhurst.

The size of the pupil as an aid to diagnosis.—T. G. Duncan, Toronto.

Thrombosis of the femoral vein following aseptic Laparotomy.—E. B. Secord, Brantford.

Gastro-Enterostomy with report of cases.—Ingersoll Olmstead, Hamilton.

Radical Cure of Hernia.—A. Groves, Fergus.

In regard to railway arrangements, all a delegate has to do is to purchase a single first-class ticket to London at the same time asking the agent at starting point for a standard convention certificate. These certificates when signed by the general secretary will entitle holders to return fare free, providing there are 300 or more at the meeting holding certificates. These arrangements also apply to the wives and daughters of physicians.

Delegates travelling to London on the standard certificate plan via the Intercolonial Railway to Montreal will be given return fare free from Montreal east, provided that there are ten or more delegates in attendance at the meeting holding said certificates.

From Manitoba and the Canadian Northwest one way tickets to be purchased in London and standard certificate being secured at the time of purchase, these certificates when presented at London duly signed by the general secretary, will entitle the holder to return free if 300 or more paying railroad fare, are in attendance. If less than 300 and more than 50, the same arrangements as for Ontario and Quebec: one-third fare return will be in vogue. Tickets purchased west of Port Arthur in time to reach London for the convention will be accepted for return up to and including September 15th. Delegates taking the Superior and Huron Lake routes one way will, on presentation of certificate, be charged \$4.25 extra. If Lake route is used both ways the charge will be \$8.50 extra.

The Canadian Pacific Railway officials at Winnipeg have not been able to make arrangements for British Columbia up to the present time. Announcement of these will be made in the daily papers of Vancouver and Victoria, if secured, some time during the first week in August.

The Entertainment Committee proposes to entertain visiting delegates somewhat as follows: On Wednesday afternoon a reception will be held at the Kennels for the visiting ladies by the ladies of London. On the same afternoon at about 4 p.m. the members of the Association will be entertained at Springbank, London's pleasure resort. Leaving

Springbank at about 3.30 p.m. the delegates will be taken to the London Asylum grounds, where they will be entertained by the Provincial Government for the balance of the evening. On Thursday the entertainment committee have provided for an excursion to the laboratories of Parke Davis & Co., at Walkerville and Detroit. Arrangements have been made for a special vestibuled train, to leave London at 8 a.m., Thursday. Walkerville will be reached at about 10.30 a.m. The delegates will then be taken for a trip up the river, luncheon to be served on board. They will be landed at Detroit at 2.30 p.m. Other arrangements will be made for the entertainment of the members until 6.30 p.m., when a banquet will be tendered to the members at the Russell House, Detroit. Between 9.30 p.m. and 10.30 p.m. the physicians will be taken to the depot and returned to London by special train.

During the meeting the several large hotels will be able to accommodate most of the visiting members, and in addition to this the Reception Committee having charge of receiving the visiting delegates will have lists of good boarding-houses where those wishing them may have rooms. The reception committee at London hopes that no one will stay away fearing the lack of accommodation as the London medical men will do their utmost to make their stay agreeable. Dr. J. S. Niven, 423 Colborne St., who is chairman of the reception committee, will be pleased to secure rooms for anyone writing for them in advance. Any one desiring any further information should address either the local secretary, Dr. Hadley Williams, Park Avenue, London, or the general secretary, Dr. George Elliott, 129 John St., Toronto.

BRITISH MEDICAL ASSOCIATION.

The seventy-first annual meeting of the British Medical Association was held at Swansea, Wales, on Tuesday, Wednesday, Thursday and Friday, July 28th, 29th, 30th and 31st, 1903, under the presidency of Thomas Dryslin Griffiths. The address in Medicine was delivered by Frederick J. Roberts; that in Surgery, by A. W. Mayo Robson. In the section of medicine the subjects down for discussion were: the medical treatment of inflammation in the caecal regions; susceptibility and infection, and the treatment of gastric ulcer. Under the Surgical Section the discussions turned upon: practical experiences regarding the most satisfactory methods of performing intra-abdominal anastomosis and the treatment of advanced tuberculous disease of the knee joint. In Obstetrics and Gynaecology the discussion was upon the management of pregnancy complicated with uterine fibroids, and upon

the diagnosis and treatment of tuberculosis of the uterus and adnexa. In the subject of State Medicine, smallpox prevention, rivers and sea-shore pollution and food adulteration were all up for discussion. In the section of Psychology, the pathology of general paralysis, alcohol in its relation to mental diseases and the care and treatment of incipient insanity were all discussed. In Pathology, splenic anæmia and the pathology of miner's diseases were considered. In Ophthalmology the subjects were: eye changes in relation to renal disease, the operative treatment of conical cornea and the treatment of strabismus. In the section for Diseases of Children the pathology and treatment of chorea and congenital dislocation of the hip with especial reference to the Hoppa-Lorenz operation, were down for discussion along with tuberculosis in children and its relation to bovine tuberculosis. In Laryngology and Otology, the operative treatment for malignant disease of the larynx was introduced by Sir Felix Semon and the technique of operation on the temporal bone in suppurative middle ear disease by P. McBride and Arthur Hartmann, of Berlin. In matters proper to the Navy, Army and Ambulance, a discussion was held on Mediterranean fever, and on the equipment and training of medical units attached to volunteer infantry brigade. In the section on Tropical Diseases the examination of blood for micro-organisms received full discussion and Mr. Hutchison elaborated his well known views upon leprosy.

Numerous papers were read upon all these and cognate subjects and, judging from the programme, the meeting of this venerable association must have been a very satisfactory one.

NOVA SCOTIA MEDICAL SOCIETY,

The annual meeting of the Medical Society of Nova Scotia, was held on the first and second of July, in Antigonish, with two of the local physicians, Drs. J. J. Cameron and W. Huntley Macdonald, as President and Secretary respectively. It proved a great success in every way, for though the number of members present was not equal to what has been recorded, when the gathering has been held in one of the cities, there were representatives from the farthest extremes of the province and the papers, as a whole, were of exceptionally high order. The President's address was delivered at an evening session to which the public were invited, and his comprehensive review of what medicine has done, and hopes still to do for the public welfare, proved of the greatest interest to the large audience present. The address in surgery was delivered by Dr. H. C. Marcy, of Boston, on the buried absorbable suture, its value in surgery, a subject with which Dr. Marcy's name has been connected for many years. Dr. G. G. Campbell of

Montreal, read the address in medicine, taking for his subject, some common errors in diagnosis. An interesting historical paper by Dr. D. A. Campbell of Halifax, one of the past presidents, traced the history of the society from its foundation, and proved conclusively that the present, instead of being the thirty-fifth was the fiftieth annual meeting, thus ranking the society as one of the oldest in the Dominion.

The social side of the meeting was made most enjoyable, by the many hospitalities extended to the visiting physicians by many of the prominent men of the town, and the last evening session was concluded by a smoking concert.

The John McKellar Memorial Hospital at Fort William has recently been opened. The cost of the building was \$16,000; of this amount \$7,000 was borrowed and \$3,500 has been subscribed, leaving a balance of \$5,000 yet to be raised.

The Royal Victoria Hospital makes the following report for June: Admitted during the month, 281; discharged during the month, 284; died during the month, 13; daily average, 206; highest number any one day, 217; ambulance calls, 61; outdoor consultations, \$2,014; visitors to patients, Sunday, June 28, 403.

The Montreal General Hospital in June admitted to the wards 272 patients, and 252 were discharged; there were 22 deaths. The average daily sick in residence was 188; the largest number on any one day, 206. The ambulance calls for the month were 109. The outdoor consultations for the same period were 3,806.

The next annual meeting of the Academy of Ophthalmology and Oto-Laryngology, formerly the Western Ophthalmologic and Oto-Laryngologic Association, will take place in Denver; Wednesday, Thursday and Friday, August 24th, 25th, 26th, 1904. Dr. Edward Jackson, Denver, is president, and Dr. Derrick T. Vail, 4 W. 7th Street, Cincinnati, secretary.

The half yearly medical report of the Western Hospital was issued with commendable promptness, eight days after the closing of the term. In the in-door department there were treated 90 medical cases; 168 surgical, and 55 gynæcological, making a total of 313 cases.

In the out-door department, the total consultations given were 3,349.

The total number of consultations for the second quarter in 1902. was 1,621, while for 1903 it was 1,847.

The Board of Governors of McGill University has made the following appointments in the Faculty of Medicine:—Dr. J. G. McCarthy, to be assistant professor of anatomy; Dr. J. T. Halsey, to be assistant professor of pharmacology and therapeutics; Dr. R. A. Kerry, to be lecturer in pharmacology and therapeutics; Dr. S. Ridley Mackenzie, to be lecturer in clinical surgery; Dr. John McCrae, to be lecturer in pathology; Dr. D. A. Shirres, to be lecturer in neuro-pathology; Dr. D. D. McTaggart, to be lecturer in medico-legal pathology.

A deputation, representing the medical faculties of Toronto and Trinity University waited on the Ontario Government on the 15th July, on the subject of the federation of the universities. The deputation expressed themselves as favorable to the union of the two institutions, and asked that the Government assure the medical faculty of the endowment of chairs of preventive science, medical jurisprudence, sanitary science, anatomy, pathology and therapeutics. The Premier on behalf of the Government assured the deputation that the subject would have favourable consideration.

A final decision in the case of the town of Windsor against the estate of Godfrey Payzant has been rendered by the Supreme Court of Nova Scotia. The testator left \$20,000 to the town to assist in building and maintaining a hospital on condition that the corporation should procure a like sum by a tax on the citizens or from private donations or otherwise, to be added to this bequest.

Apparently \$6,000 had been raised in accordance with the terms, but in respect to the \$14,000 which, under an act of the legislature of the province the Provincial Government had granted to the town to enable it to comply with the requirements, it was disputed that the contribution was within the terms of the will. The seven years are just expiring, and in the judge's opinion, the words of the bequest are broad enough to cover the amount procured from the Government.

The Medical Council of the Ontario College of Physicians and Surgeons met in Toronto on 7th July. The following officers were elected:—President, Dr. J. A. Robertson, Stratford; vice-president, Hon. Senator Sullivan, Kingston; treasurer, Dr. H. Wilberforce Atkins, Toronto; registrar, Dr. R. A. Pyne, Toronto; solicitor, Christopher Robinson, K.C., Toronto; prosecutor, Charles Rose, Toronto.

The question of matriculation was referred to a small select committee as the attempt made last year to raise the standard from the

present pass matriculation examination with chemistry and physics to the honor standing was objected to by the Education Department.

The prosecutor reported that he had investigated 71 cases. In fifty-three cases informations were laid against persons violating the medical laws; in 31 he secured convictions; fourteen cases were dismissed and six withdrawn; five persons were warned to cease practising. He recommended that the council ask the Legislature for a short amendment to the medical act, in order to protect the public from the persons who call themselves osteopaths, magnetic healers, electric healers, and others who did not flourish when the present medical act was passed.

Retrospect of Current Literature.

MEDICINE.

UNDER THE CHARGE OF JAMES STEWART, F. G. FINLEY AND H. A. LAFLEUR.

On the Influence of the Dwelling on the Development of Tuberculosis.

PROF. ROMBERG AND DR. HAEDICKE. "On the Influence of the Dwelling on the Development of Tuberculosis. *Deut. Arch. Klin. Med. Bd. 76, 309.*

The authors have taken advantage of the conditions in the small town of Marburg, where the great majority of the poorer classes of the population is treated in the polyclinic, as a basis for the study of the origin and frequency of tuberculosis.

From the observations of Biggs, of New York, it is very generally accepted that pulmonary tuberculosis is chiefly promulgated by house infection. As the authors point out, however, Biggs's communication is the only important investigation carried out in this important subject.

According to Biggs, many houses in the poor quarters of New York, remain free from tuberculosis, whilst about half the total number of cases of tuberculosis came from less than 10 per cent. of houses. The writers' observations in Marburg are strongly confirmatory of Biggs's view that tuberculosis is chiefly a house infection; their arguments and figures, set out at considerable length, form convincing evidence of their views.

The Marburg enquiry extends over a period of eleven and a half years, houses were selected from which a considerable number of persons had been treated for various maladies at the polyclinic. During the period referred to 116 houses, sheltered 1,693 people, of whom

1,431 received treatment at the clinics. Of these tuberculosis occurred in 262 individuals or in 18.3 per cent. of all classes treated.

In twenty houses during eleven and a half years there were no cases of it.

In a second group of twenty-four houses tuberculosis was rare, i.e., in the two groups together, the frequency of tuberculosis amongst those treated for all conditions was only 8.1 per cent.

In contrast to this a group of thirty-nine houses presented a frequency of 36.1 per cent., of cases of tuberculosis amongst those treated, and in some of these houses six or eight cases occurred.

In the poorer quarters of the town 59.2 per cent. of all cases of tuberculosis came from 33.6 per cent. of houses. The figures are much more striking when the tuberculous houses are selected for comparison. In 2.6 per cent. of these houses there live 34 per cent. of the total number of cases of tuberculosis in the town.

The writers go on to exclude other conditions as responsible for the extraordinary collection of tuberculosis in certain houses. Filth, overcrowding and closely built dwellings are not alone responsible, as the disease occurs in new houses, and in a district where the buildings are surrounded by fields. Although the disease does not necessarily occur in dirty houses, it was found that it did not arise in well-kept and cleanly buildings,

That the disease is most prevalent amongst the poorest classes is proved by the Marburg observations.

The average frequency of the disease in the town is 1.1 per cent.; amongst the poorest fifth of the population the percentage of cases is 4.7, while amongst the better situated four-fifths it is only .2 per cent.

The writers clearly show that the struggle against tuberculosis must be waged in the dwellings of the poor, and that the greatest danger exists in a dirty house with a careless, expectorating tubercular patient.

SURGERY.

UNDER THE CHARGE OF GEORGE E. ARMSTRONG.

Comparative Value of Dry and Moist Dressing.

DR. CARL GONTERMANN. "Experiments Concerning the Increase or Decrease of Microorganisms in Accidental Wounds under Dry Aseptic and Moist Antiseptic Dressings. *Archiv. f. Klin. Chir.* Bd. 70. Heft. 2, 1903.

This investigation, carried out in the Surgical Polyclinic, of von

Bergmann, in Berlin, has for its object the comparison of dry and moist methods in wound-dressings. Daily cultures were taken from wounds, sown in gelatine, plated, and the colonies counted one day later. The dressings used were (1) dry aseptic gauze; (2) iodoform gauze; (3) moist sublimate gauze 1—2,000; (4) moist carbolic 3%. The organism found was in most cases the staphylococcus albus; occasionally the aureus.

The work seems to have been thoroughly and reliably done; and so far as it goes (51 cases divided between the four methods) justifies the author's conclusions, which are as follows:—

1. No continued bactericidal after-effect of antiseptics with which wounds have been washed, can be shown.

2. The number of micro-organisms in non-suppurating accidental wounds is increased to a greater degree by the use of impervious moist antiseptic dressings than by that of dry dressings.

3. Iodoform gauze is to be preferred in the dressing of accidental wounds, because, besides its important properties of drainage and hæmostasis, it possesses a decided inhibitive action on bacteria.

4. Moist dressings readily induce eczema and hair-follicle suppuration in the vicinity of the wound by reason of the maceration of the skin.

5. Moist dressings form no certain preventative of suppuration in accidental wounds.

6. In suppurating wounds dry dressings bring about a more rapid disappearance of bacteria than do moist ones.

7. Many accidental wounds heal without the least clinical sign of inflammation in spite of the presence of large numbers of bacteria.

Potassium Permanganate in the Treatment of Lupus.

J. HALL-EDWARDS, Surgeon-Radiographer to the General Hospital, Birmingham. "Potassium Permanganate in the Treatment of Lupus." *British Medical Journal*, June 27, 1903.

The author calls attention to the fact that "in many cases of lupus treated by the X-rays, the centres of the patches rapidly get well, whilst the edges continue to spread slowly." In these cases he claims to have greatly improved the results by combining the local use of permanganate of potash with the X-rays. Several cases treated with the permanganate alone yielded, however, surprisingly good results also.

His method is as follows:—A saturated solution of the salt is used (1 drachm in 1 oz. aq.-dest). In non-ulcerative cases, the patch is washed, dried with alcohol, and then the permanganate solution is brushed on.

In cases covered with crusts, the part is cleansed as well as possible without removing these, and the crusts themselves are saturated with the solution. The applications are repeated every day or every other day till relief is obtained. Healing takes place under a scab; and the scar is said to be extremely good.

The Surgical Treatment of Smallpox.

LAUREL B. SANDALL, M.D. "The Surgical Treatment of Smallpox."
The Physician and Surgeon, March, 1903.

The writer, for three years surgeon in the American army in the Philippines, has had a very extensive experience with smallpox, which is more or less epidemic in those islands. Dismayed by the appalling mortality, among both natives and Americans, and believing the main cause of death to be absorption from the pustules, he resolved to adopt elementary surgical principles in treatment; and, in this idea, proceeded with the help of the ordinary hospital attendants, to evacuate every vesicle or pustule and disinfect its base with swabs dipped in carbolic 1-40 or sublimate 1-1000. There is no pain, and seldom any bleeding in the operation. In addition an antiseptic bath is given twice a day. Statistics do not appear in the article, but the claim is made that the disease is shortened, lives saved, and pitting largely prevented.

OBSTETRICS.

UNDER THE CHARGE OF J. C. CAMERON AND D. J. EVANS.

Twin-Pregnancy—Statistics and Diagnosis.

SEEGERT. "Twin Pregnancy—Statistics and Diagnosis." *Zeitschrift f. Geb. und Gyn. Bd. XLIX., s. 206.*

From January 1st, 1890, to January 31st, 1902, in Olshausen's Frauen-Klinik, at Berlin, out of 15,997 deliveries, there were 233 of twins, *i.e.*, one out of every 68.6. In 33, delivery occurred before eight months. In 101, the diagnosis was made out positively before labor, and in 94, not before the birth of the first child. Twin births were more common in primiparae: 116 I-parae, 51 II-parae, 23 IV-parae, 5 V-parae, etc. The largest children were those of a XV-para, they weighed respectively 4,220 gram. ($9\frac{1}{4}$ lbs.), and 3,900 gram. ($8\frac{1}{2}$ lbs.). In 46 per cent., the head presented in both children; in 8 per cent. the breech in both; in 34 per cent. one by the head and the other by the breech; in 8 per cent., one by the head and the other transversely; in 4 per cent., one by the breech and the other transversely. In 67.3 per cent., both children were of the same sex; in 32.7 per cent., of different sex. Of 191 in which the ovum development was accurately

determined, 24.6 per cent. were from one ovum, and 75.4 per cent. from two ova. Operation was required in 41.6 per cent, as follows:—Forceps, 51 times; external cephalic version, 5; podalic version alone, 4; version and extraction, 23; extraction alone, 35; delivery of arms alone, 6. The complications were p.p. hæmorrhage after the birth of first twin, 9 times; hæmorrhage from atony after the birth of second twin, 17 times; in all, hæmorrhage, 26 times (11.16 per cent.). Eclampsia occurred in 30 cases (12.88 per cent.).

Diagnosis.—In the 101 cases in which a certain diagnosis was made before labor, it was based upon:—

1. At least 3 large foetal parts, 28 cases.
2. 2-3 large foetal parts, and double heartbeat, 27 cases.
3. Double heartbeat (of different rate), 27 cases.
4. 2 large foetal parts, of same kind, 18 cases; (a) 2 backs in 7 cases; (b) 2 heads in 11 cases.
5. 2 large foetal parts in the fundus, 3 cases.
6. Abnormally large number of small foetal parts, 4 cases.
7. Cystic feel of uterus after escape of liquor amnii, 3 cases.
8. Heart sounds, with loose movable cranial bones, 1 case.
9. Internally, 2 amniotic sacs, one containing a head, the other a foot, 1 case.
10. On the same side as the small parts, a large round part which could be ballotted, 1 case.

For the further establishment of the diagnosis there were employed:—

11. Ahlfeld's measurement. A distance of over 30 cm. between the presenting large part of the foetus and that which lay furthest off in the fundus.
12. Fluctuation in the fundus. According to Keilmann fluctuation can be felt in the unruptured amniotic sac at the os uteri in hydramnios, but it is absent in twin pregnancy.
13. Prolapse of funis, one amniotic sac being unruptured.

From the consideration of the above table, it is evident what a large number of signs are available for diagnosis of twin pregnancies.

Hyperemesis Gravidarum.

BEHM. "Hyperemesis Gravidarum." *Archiv. f. Gynaekologie. Bd. LXIX., s. 410.*

In a severe case of puerperal pyæmia from thrombophlebitis, Behm obtained excellent results from the use of rectal injections of salt solution (0.6 per cent.) as recommended by Wernitz, of Odessa. He gave 4 to 5 litres daily, and after eleven days treatment the temperature was normal and the patient was passing 3-4 litres of urine in the twenty-four hours. It was evident that the salt solution power-

fully excited the action of the bowels, kidneys and sweat-glands, thereby helping the elimination of toxic matters. Encouraged by his success, Behm determined to use the same method in measles, scarlatina, diphtheria, etc., as well as in uræmia and eclampsia. Shortly afterwards he met with a bad case of vomiting in a strong, well-built primipara, 19 years of age. Vomiting began in the second week of pregnancy. By the end of the third month she could retain no nourishment, and vomited night and day. The usual methods of treatment having given no relief, the salt injections were tried. Every morning the bowel was washed out with an enema, and then at intervals of two hours $\frac{1}{2}$ - $\frac{1}{3}$ litre of warm salt solution (82° - 86° F.) was injected per rectum. The good effect was immediate, and in six days the vomiting had ceased entirely and the patient was able to eat ordinary food. The vomiting returned after the injections were stopped, but a further treatment of fourteen days completed the cure. Six cases of vomiting have been treated according to this method, all successfully, five patients being primiparæ. In two of Behm's cases the induction of labor had been advised by consultants. In the first case, the pulse was 120, and the patient had lost 25 lbs. in weight in five weeks. In the second case, 10 lbs. had been lost in three weeks. After discussing the various theories which have been proposed in explanation of pernicious vomiting, the author defines hyperemesis gravidarum as "an intoxication of the blood of pregnant women, proceeding from the periphery of the ovum, most probably of a syncytial nature." The treatment he lays down is rest in bed and tablespoonful doses of iced milk. If this fails, he stops all nourishment by the mouth, clears out the bowel in the morning with an enema and gives 3-5 litres of salt solution in the course of every twenty-four hours. If the bowel becomes irritable and rejects the solution, he adds Tinct. opii gtt xv-xx per litre. When no nourishment is retained, milk may be added to the salt solution, in the proportion of half and half. A salt solution of 0.65 per cent. seems to be more easily absorbed than the stronger 0.85 per cent. solution which Ehrlich states to be normal. If the bowel becomes too irritable to bear the injections, he gives the salt solution subcutaneously, and washes out the stomach with a weak solution of sod. bicarb. By these measures he hopes that in the future hyperemesis gravidarum will be controlled without resorting to the arrest of gestation. He agrees with Pinard in laying down as the formal indication for operative interference, a continuous pulse rate of over 100 along with marked loss of body weight. In the matter of technique he insists that the physician should show the nurse how the injections are to be given. An elastic rectal tube is used, the temperature of

the fluid is 82°-86° F., the injection is given without force, the irrigator being held not higher than three feet above the level of the bed. If any straining is felt, the irrigator is lowered until the peristalsis of the bowel has quieted down. If any fecal matter returns with the salt solution into the irrigator, fresh solution is used. In the primary cleansing it may take an hour to clear out the rectum and colon, and it may need another hour before the peristalsis is quieted and the bowel is in condition for the first injection of salt solution. Sometimes not more than $\frac{1}{3}$ - $\frac{1}{2}$ litre can be given at once; after a couple of hours another can be given; 4-6 litres should be given in the course of twenty-four hours. Considerable patience, perseverance and dexterity are necessary to ensure good results, but so far the author has not failed to cure the vomiting.

Excessive Size of Fœtus.

"Excessive Size of Fœtus."—*Bulletin de la Société d'Obstétrique de Paris, 1903, p. 235.*

At a recent session of the Paris Obstetrical Society, several cases of unusual foetal development were presented. *Dr. Delcamp* reported the delivery of a child 61½ cm. long, weighing 9,900 grammes (21 lbs.—13½ oz.). The mother aet 42, x-gravida, was a robust peasant woman. Her nine previous confinements had been normal, the children being a little above the average size. In the tenth labor, the head was extracted with difficulty by means of forceps, and the delivery of the shoulders gave considerable trouble. The measurements of the head were as follows:—

Diameters—O.M.	17 cm.	Circumferences—	
O.F.	14.8 cm.	O.M.	46 cm.
S.O.B.	12 cm.	S.O.B.	37 cm.
B.P.	13 cm.	S.O.F.	40 cm.
B.T.	10.5 cm.		

The diameters of the trunk were:—

Bisacromical	19 cm.
Bitrochanteric	17 cm.
Bisiliac	16 cm.

The child was a female and perished during delivery. The placenta was 3½ cm. thick in the middle, and weighed 750 grammes (1 lb.-10 oz.)

M. Schwab, reported the second case. The mother was a II-gravida, and had borne an average sized child in her first confinement. In the second pregnancy, everything went normally till about the 8th month, when the abdomen began to enlarge rapidly; considerable hydramnios was made out and active foetal movements ceased 8 days

before confinement. A macerated fœtus was delivered with great difficulty by means of forceps.

The child was 57 cm. long, and weighed 10,260 grammes (22 lbs.-10 oz. nearly). Only three measurements were taken:—

B.P.	10.5 cm.
Bisacromial	20. cm.
Bitrochanteric	14. cm.

The most striking feature was the enormous development of the thorax.

No reason was assigned in either case for the unusual size of the child.

Histological Cause of Adherence of Placenta.

EDHEM.—“Histological Cause of Adherence of Placenta.”—*Bulletin de la Société d'Obstétrique de Paris, 1903, p. 251.*

Until quite recently, the study of placental adhesion has been chiefly from the clinical and anatomico-pathological standpoint, and for the various theories which have been proposed regarding its causation, histological proof has been wanting hitherto. Edhem's investigations have been made with the view of furnishing this proof.

In 1875, Langhans stated that he found the decidual cells to be small and fusiform in adherent placenta, and that there is an increase of intercellular tissue as well as a defective development of the glandular layer. He attributed these changes to an inflammatory process which ended in the substitution of a compact tissue for the normal spongy layer in which utero-placental separation usually takes place. Subsequently Matthews Duncan, Leiss, Leopold, Neumann and more recently Hense published observations which throw more or less light upon the subject. Hense whose work is the best thought out attributed placental adherence to a defective development of the uterine mucosa, and secondarily to atrophy of the decidua. The results of Edhem's observations may be summarized as follows:—

1. Placental adhesions are due to an alteration in the uterine mucosa, and tend to recur in subsequent confinements.
2. They are not inflammatory in nature.
3. Histologically they show a hyperplasia of the interstitial tissue of the decidua (especially the Serotina), which ends in the disappearance of the spongy layer where uteroplacental separation normally takes place, either by the substitution of a layer of dense compact tissue, or by its suppression in places permitting immediate contact between the villosities and the uterine muscle.

If these conclusions are confirmed by subsequent observations, we

will have to dismiss the "inflammation" theory altogether, and accept "insufficiency of the uterine mucosa" as the true etiological factor in placental adhesion. On such a supposition it becomes easy to understand how adhesion is apt to recur in subsequent pregnancies, for insufficiency of the uterine mucosa remains constant. As a matter of fact, Hense found in 168 cases of manual separation of the placenta, that a repetition of the complication occurred in 43.55 per cent.

It is also worthy of note in these cases, that puerperal complications are usually absent. If we admit the non-inflammatory nature of the adhesions, it is evident that if the patient does not die of hæmorrhage, and if the uterus is thoroughly curetted and cleaned out, the patient will be almost sure to recover without further complication, for when once the placenta is removed, the uterus is left in the normal post-partum condition.

The Resistance to Infection and Intoxication in Pregnancy and the Puerperium.

Bossi.—"The Resistance to Infection and Intoxication in Pregnancy and the Puerperium."—*Archiv. f. Gynäkologie. Bd. LXVIII., s. 310.*

For the purpose of determining experimentally whether animals in the pregnant and puerperal state are infected more easily and more severely than when not pregnant, Professor Bossi, of Genoa, experimented upon thirty rabbits and twenty-nine guinea pigs. Inoculations were made with pure cultures of *B. Coli*, *proteus mirabilis*, *B. diphtheriæ*, *B. tuberculosis*, *pyocyaneus*, *pneumococcus*, *streptococcus pyogenes*, *staphylococcus pyogenes*, *staphylococcus pyogenes aureus*, and with mixed cultures of *streptococcus* and *staphylococcus*, and of *B. diphtheriæ* and *streptococcus*. The mixed cultures caused a larger number of acute diseases in both pregnant and non-pregnant animals. With pure as well as mixed cultures, the mortality was greater in the pregnant than in the non-pregnant; the farther advanced the pregnancy, the more pronounced was the difference. The temperature was on the average 1.5° C. higher in the pregnant animals, and abortion was of very frequent occurrence. In a proportionately large number of cases, bacteria were found in the placenta and in the blood of the fœtus. Diphtheria was the only exception, the pregnant animals showing greater resistance to the bacillus and its toxine than the non-pregnant. For tuberculin the result was uncertain. In the action of experimental infection, no special difference was noticed between puerperal and non-puerperal animals. The passage of micro-organisms into the milk seems to be established. These experiments of Bossi have an

important bearing upon the question of the advisability of interrupting pregnancy in women suffering from infectious disease. With the single exception of diphtheria, pregnancy seems to increase the severity of infectious diseases and to increase their mortality; and the further advanced the pregnancy, the more disastrous seem to be the results. If, then, pregnancy injuriously affects the course of infectious diseases in woman as it has been shown to do in rabbits and guinea-pigs, it will become a clear indication to interrupt pregnancy artificially in such cases, and to do it as early as possible.

Another point of clinical interest is, that there seems to be a great probability of the foetus being infected through the placenta as well as the possibility of infection subsequently by means of the breast-milk. Hitherto, in considering the question of the induction of premature labor in a woman suffering from some acute infectious disease, we have been in the habit of regarding the foetus as being healthy, so that the artificial interruption of pregnancy probably would involve the destruction of a healthy child. If, however, we are to regard the foetus as being in all probability already infected, and its chances of living rather poor, we may be more ready to advise the induction of labor in the interests of both mother and child. No doubt further experiments will be needed before we can lay down precise rules for the management of such anxious cases, yet Bossi's observations are valuable and suggestive.

Delivery of the After-coming Head.

"Delivery of the After-Coming Head."—*Zeitschrift f. Geb. und Gyn.*
Bd. XLIX., s. 120.

An interesting discussion took place recently in the Berlin Obstetrical Society upon this important subject. *Steffeck* read a paper in which he described a method which he considers superior to the usual Smellie-Veit and Martin methods, claiming that by it there is considerable saving of time and consequently a diminished risk of asphyxia. After the delivery of the arms he does not pass the hand into the vagina or the finger into the mouth of the child, as he considers that premature breathing may be induced thereby. He depends wholly upon the use of both hands externally to press the head down into the pelvis, no matter how it may be situated. After the delivery of the shoulders, he places the patient in the Walcher position, and, standing between the patient's thighs, he presses the head downwards and backwards with both hands, and as soon as the head has fairly entered the pelvis he delivers by the Smellie-Veit method. He thus obtains the maximum size of the inlet and much greater expressing force than;

if he used one hand only externally. When the chin is anterior and stays over the symphysis, he first pushes it backwards clear of the symphysis and then delivers as above described. After decapitation, he says that expression of the head is alone sufficient for delivery.

Olshausen prefers the older methods, but insists that the essential point is to pass one finger only into the child's mouth, and not two. He prefers the middle finger, which is longer and passes easily back to the base of the tongue; pressure by means of one finger carried well back has more effect upon the base of the skull and brings down the chin. When this has been accomplished, traction brings the head down into the pelvis. When an assistant is available, he thinks it better to have him make the external pressure with both hands, while the operator manipulates the chin. The assistant should make pressure with the flat of both hands and not with the fists, and thus considerable force may be used without injuring the uterus.

Strassmann raised the question whether it is better to grasp the head externally and make downward pressure upon it alone, or to seize the fundus and press down the uterus and placenta as well as the head. It is better but more difficult to grasp the head alone, and he has succeeded sometimes by seizing the fundus when he failed in the other manœuvre. When the chin lies forward over the symphysis, it should always be pushed over to the side or backwards before downward pressure is made.

Henkel does not consider it necessary to have the chin always backwards, but at least it should be diagonal before pressure is made upon the head.

Schülein considered it of the utmost importance to have the head in the oblique diameter of the pelvis before external pressure is made with both hands. He tries to press the occiput down deeper, so that extraction may be more easy.

J. C. C.