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THE COMBINED SCLEROSES.

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THE organic diseases of the nervous system may be divided into four main groups: Those of the meninges; of the great lymph cavities; of the peripheral nerves; and of the central nervous system. The latter two classes are separated chiefly on the grounds that the main supporting tissue of the former is connective tissue proper, and of the latter glia tissue, and, therefore, open to different disease processes; and also because many pathological processes primarily attack and principally affect the peripheral nerves, while, on the contrary, the central nervous system bears the brunt of other morbid changes. Yet it must be added that such a separation is not wholly satisfactory, as it tends to disguise the fact that, in almost all general processes, all parts of the nervous system usually show some evidences of disease.

The primary separation also of definite pathological processes, such for example as hæmorrhage, into classes as cerebral, bulbar, spinal, while of assistance, perhaps, in collecting localizations, is nevertheless open to some criticism, as it tends to blind the student to the individuality of the morbid changes in all parts of the nervous system. The nature of the disease process should probably be the first object of inquiry, and the localization of the condition follow as the next point of importance.

The diseases of the central nervous system may be divided into two main groups: (1) the acute, and (2) the subacute and chronic. The former are characterized by the facts (1) that they are due either to some vascular disease, *e.g.*, hæmorrhage, thrombosis or embolism, or to some form of inflammation, and (2) that all the tissues of the region of the nervous system affected—neurones, glia, and blood vessels—are primarily and simultaneously affected. (Reference may here be added that some authorities claim the blood vessels are first affected in inflammation); (3) the conditions tend rather to be local than general.

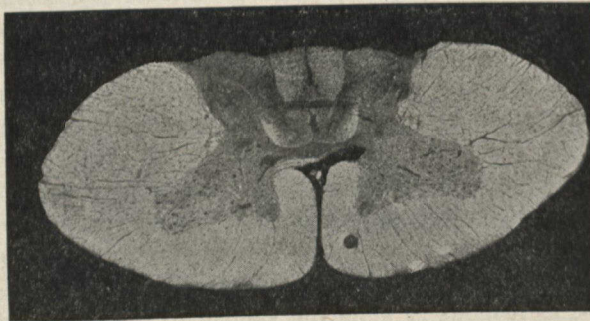
The chronic diseases are of two classes: (1) those in which some local cause, such as tumors, and compression by spinal caries, produce local disease, affecting, like the acute diseases, all the tissues of the nervous system, and at times inducing the acute conditions themselves; (2) the great class of the subacute and chronic degenerative diseases of the nervous system, which, in varying degrees, affect the whole cerebrospinal axis throughout its extent, and in which either the neurones, the glia, or the

blood vessels may be the tissue primarily affected,—in strong contrast to the other classes.

This great group of the chronic degenerative diseases may be divided, therefore, on this ground into three main divisions: the *neuronic*, when the nervous tissue is first affected; the *glionic*, when the glia tissue is first affected; and the *vascular*, when the blood vessels are first affected.

I. The *neuronic* class may be subdivided into five main groups, according to the selective nature of the degenerations: (a) *Sensory*, in which the sensory columns are first affected; (b) *Motor*, in which the motor neurones are first affected; (c) *Cortical*, in which the cortical neurones are first affected; (d) *Combined and Diffuse*, in which both sensory and motor

I.



Neuronic Degeneration.—(a) Sensory.

A case of Tabes, showing the disease localized in the posterior columns.

tracts are affected together, and (e) *Disseminated*, in which the neurones are affected in disseminated and non-systemic areas. (This class is dependent on the pathological position of Disseminated sclerosis. If *neuronic*, it may be placed here; if *glionic* in origin, this class (e) is not required.)

II. The *vascular* class includes (1) arteriosclerotic and senile types; (2) syphilitic.

III. The *glionic* class includes (1) (disseminated sclerosis), (2) diffuse interstitial (alcohol), (3) senile diffuse, and (4) syringo myelia.

IV. Finally, to complete the classification, types secondary to meningeal origin must be recalled.

The combined sclerosis are the subject of this paper, and already a good deal of discussion has taken place over the groups included and several classifications proposed for individual groups, so that a preliminary discussion concerning the extent of these sclerosis is necessary.

In the first place, the term must be used on a pathological basis only, as its present use as a clinical definition leads to great confusion. Clinically, "combined sclerosis" is used, to define chronic diseases in which both motor and sensory signs are present, and, therefore, includes, under such a method of usage, a vast number of diseases, which are pathologically entirely different, being either neuronie, glionic, or vascular in origin, and including both local and diffuse degenerative diseases.

Pathologically, the term demands three distinct qualifications:—

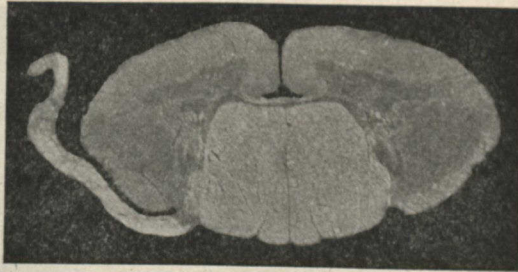
(1) The disease must be primarily neuronie, for degenerations occurring in both motor and sensory tracts, if of secondary origin, are not called combined scleroses.

(2) The degeneration must lie to some extent in two or more tracts of different conducting direction.

(3) The degeneration in these tracts must be of the neuronie type, that is, the nerve fibres should show to some extent continuous degeneration of the axones towards their terminals.

Two difficulties in such a classification must be noted, as particularly the latter of these must widen this definition:—

II.



Neuronie Degeneration (b) Motor.

A case of Amyotrophic Lateral Sclerosis, showing the degeneration in the crossed pyramidal tract with some diffuse degeneration in the adjoining part of lateral column.

(1) That the tracts of the cord, and especially the crossed pyramidal, are not definitely limited, but fibres belonging to them run in a comparatively wide area of the lateral columns.

(2) That while the degeneration mainly lies in the recognized tracts in these combined scleroses, yet particularly in the toxic cases, the degeneration tends to show in places the characters of a more diffuse combined degeneration, and a relationship to the blood vessels is frequently an associated condition, and apparently to some degree defines the course of the sclerosis.

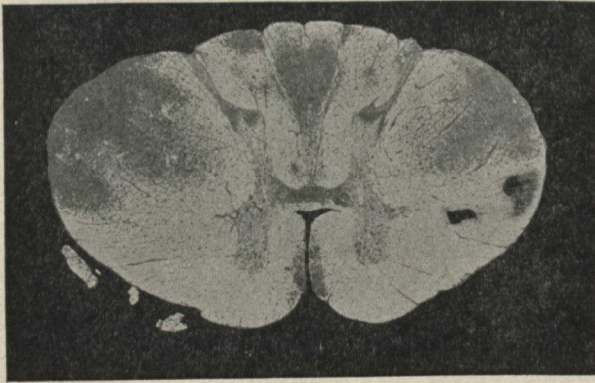
The combined scleroses are divided into two classes: (1) the inherited and (2) the acquired.

The inherited include all those types of congenital scleroses of which the main types are Friedreich's ataxia, Hereditary cerebellar, and Familial spastic, but which also include many cases which, while not even definitely transmitted, yet fall clinically and pathologically into these classes, and also include cases which, while not definitely conforming to these classes, yet are definitely allied. These congenital forms will not be discussed at this time.

The acquired forms may be classified as follows:—

- (1) Tabetic ataxic paraplegia.
 - (2) Ataxic spastic paraplegias—Tabetic spastic, ataxic spastic, ataxic cerebellar spastic, amyotrophic, spastic.
 - (3) Paretic ataxic paraplegia.
 - (4) Senile ataxic paraplegia.
 - (5) Anæmic and toxic types—Pellagic, ergot, anæmic, toxic.
- (1) The type, tabetic ataxic paraplegia, was outlined by Crouzon, of Paris, as a distinct and separate division from the other four groups;

III.



Neuronic Degeneration (d) Combined.

A case of toxic degeneration, showing in the cervical region the sclerosis in Goll's column and the diffuse character of the disease in the crossed pyramidal.

and, in doing so, he delimited groups of cases of tabes possessing all the radical signs of that disease, but, in addition, evidencing an extensor plantar response, showing that the pyramidal tracts were involved.

The pathological basis showed that the lateral tracts were to some degree affected by sclerosis advancing from the posterior columns, and

making the condition rather a secondary degeneration so far as the motor tracts were concerned.

But in addition to this class of Crouzon's, there appear to be other types which follow the same nomenclature. Two cases of this sort may be cited here, one personally seen and one observed through the kindness of Dr. Chambers. Both followed gradually after confinement, with a gradual increase of symptoms for four or five years (time observed). The age was between 19 and 24, with no history of syphilis, alcohol or exposure. Clinical signs were marked ataxia of the legs, in which the disease began, and slight of the arms. There was no sensory disturbance to pain, touch or temperature. Hypotonus was marked in one case, but no objective pain or paræsthesia, beyond a cold feeling in the feet; speech in both cases was peculiar, thick or slightly ataxic in one. There was slight nystagmus at times. The ataxia of the limbs was so marked as to prevent walking. The deep reflexes of both extremities were absent, the superficial present, and some tendency in both cases to talipes.

These cases are both isolated cases of Friedreich's ataxic type, and, with a non-hereditary history and the similarity of the cases, it is evident that a class may either be formed for this type of case under the acquired types, or they may be left as aberrant cases of Friedreich's.

Pathologically, they will probably conform to these hereditary diseases, rather than to the overgrowth cited by Crouzon.

(2) The ataxic spastic paraplegias, or posterior lateral group, are the most characteristic class of this series. They may be said to include all intermediate diseases, both clinically and pathologically, between the purely sensory group, "tabes," and the motor neurone group, "amyotrophic lateral sclerosis." Clinically, Sir William Gowers gave a general description of the whole group under the name "ataxic paraplegia," and the several sub-classes, under this group, conform to his description, and to some of the less common signs which he partly mentions.

These diseases have a gradual onset and are essentially chronic in their course. Men are attacked more frequently than women, and thirty to forty is the principal age period. Alcohol is in frequent evidence, but syphilis is rarely acknowledged. Strain and exposure to weather may also be of great importance.

Tabetic spastic paraplegia is clinically represented by types of disease in which the deep reflexes are markedly increased, both of the lower and upper extremities. Slight variations between the two sides may be present. The visceral reflexes—bladder and rectum—are usually only affected in the final stages. The motor signs are of little note, since the natural spasticity of the legs is altered by the ataxia of the sensory side. No wasting of the muscles occurs, the paresis may gradually increase.

The sensory signs are akin to those of tabes, so that subjective pains and anæsthesias may occur, although the pain complained of is mainly rhachialgic. Anæsthesia of limbs and of trunk, of tabetic type, may be present. Ataxia is the main sensory sign and is more pronounced in the legs than in the arms; and, in the former, is shown more on turning or in the dark. Naturally, rhombergism is present. The pupil reactions are usually sluggish or lost. The speech is frequently ataxic or slightly altered.

Such may be considered as the tabetic spastic paraplegia, and a comparison with the next class, or the ataxic division, is simply a grade of the same disease with less pronounced sensory signs. Tabetic pains and anæsthesias are absent, while the ataxia and spastic paralysis remain, as the main signs of involvement of both posterior and lateral columns.

Between these classes and a simple spastic paraplegia, in which the ataxia is hardly evidenced, or the posterior column only proved post-mortem to be affected, several varieties may occur, and types may be found in which some wasting of muscles show the anterior horn cells to be involved.

Pathologically the symptom complex, ataxic spastic paraplegia, calls for degeneration in the posterior columns and direct pyramidal tracts, while other tracts may be affected or not. Occasionally a peripheral zone of sclerosis occurs. The posterior column degeneration, according to Gowers, is dissimilar to tabes in the more marked involvement of the dorsal rather than the lumbo-sacral region, and in the more frequent escape of the root zone. The lateral column degeneration is frequently rather more diffuse in its gliosis than systematized, since it includes the zones internal to the usually outlined pyramidal tract, besides the diffuse areas found in more typical motor neuronc degeneration. The connective tissue of the cord may be generally increased. This class must also perhaps be considered rather a clinical than a pathological entity, since the great number of cases described pathologically appears to be very large of late years. Many of the cases formerly diagnosed under this class have proved to be examples either of disseminated sclerosis or of the toxic group of these ataxic paraplegias. Dr. Crouzon, of Paris, in 1904, has given a very exact account of these various disease complexes.

(3) The third group of the ataxic paraplegias, that occurring in general paresis, requires but little notice here. The relation between tabes and general paresis is such a common subject of discussion, and the occurrence of tabetic signs, both clinically and pathologically, so well known, that it is only necessary to refer to them. Likewise, the occurrence of signs of lateral sclerosis is well known. In general paresis signs of ataxic paraplegia may also be concurrent, and they may vary in intensity in all prob-

ability according to the respective degree in which the posterior and lateral column are involved. In all cases of ataxic paraplegia, the examination for other signs of general paresis is important, and, at times, the diagnosis may be decidedly difficult.

(4) The senile combined sclerosis may likewise be briefly dealt with. In old age spastic phenomena of the legs, frequently leading to total paresis, are often found, and are occasionally accompanied by slight sensory disturbance, as exhibited by ataxia. Pathological examination of senile cases has shown the existence of three main types of disease:—

(a) A diffuse sclerosis of the whole cord, due to extensive glia overgrowth, and, therefore, of glionic origin and comparable to the general tendency to sclerotic processes in old age.

(b) Sclerosis, secondary to arterio sclerosis of the blood vessels.

(c) A true combined sclerosis, showing definite systematized degeneration in the postero-lateral column, and, therefore, comparable to ataxic paraplegia.

Naturally, also, conditions may be found in which the process mainly or only affects one of these columns separately.

(5) The last and most interesting class includes the anæmic and toxic cases.

(1) *Anæmia*. In severe and pernicious anæmia lesions of the cord may be found without clinical signs during life. Usually, however, in these cases the patient complains of paræsthesias of the fingers and feet, numbness, sensations of coldness. Motor signs are less common, but may occur, including some degree of paresis; and the reflexes may show diminution or increase. Mental symptoms also may occur. Such cases as those are dependent on the anæmia, and occur when the latter is well marked, and in patients whose neurones are more susceptible to chemical and qualitative changes in the blood, and, lastly, may, as far as clinical signs are concerned, wholly disappear with recovery from the anæmia.

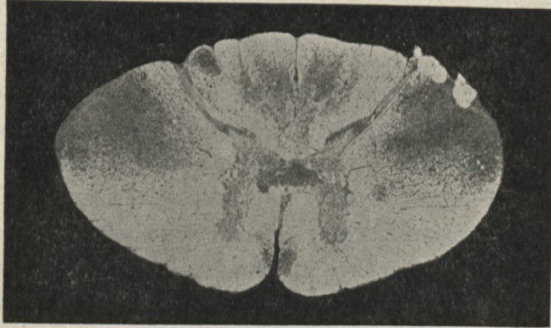
Pathological examination shows systematized degeneration of the posterior columns of the cord, neuronie in origin, most marked in the intermediate area between the columns of Goll and Burdach, and in severe cases involving the whole posterior columns apart from a boundary zone surrounding the posterior horns and commissure.

It is earliest and most severe in the cervical region, and diminishes as one passes towards the lumbar region. It is characteristic also of the pure anæmic type that the pyramidal tracts are very slightly affected, if at all, and, again, degeneration is most marked in the cervical region.

(2) Concerning pellagra and ergotism, attention may be called to the fact that in those conditions a combined sclerosis occurs.

(3) The third subdivision is that of the toxic or subacute combined diseases, which are usually associated also with anæmia, but which differ from the anæmic class in that the cause, whatever that may be, produces both the anæmia and the neurone degeneration; and, therefore, it is be-

IV.



Neuronic Degeneration (*d*) Combined.

A case of toxic degeneration, shewing on the dorsal region the systemic appearance of the disease.

lieved to be due to some toxine, *not* from purely the condition of the blood. The similar appearances of the cord in many cases and the parallel nature of the clinical signs have urged many of the best observers to class it as a separate and distinct disease.

Regarding the name, one may add that it is rather an unfortunate one, since we believe nearly all chronic nervous degenerations to be due to toxic processes, which select different orders of neurones.

Clinically, the cases are found more commonly in females, and occur between the ages of thirty to fifty. Hereditary influence is probably of little importance, and the actual cause cannot be said to be yet distinguished. Usually subacute in its course, yet observers note acute cases with pyrexia, languor, faintness, malaise, vomiting, etc., which lead to an early fatal termination.

The sensory signs in the early stages of the disease are similar to those which occur in anæmia, or in the mild toxæmias of intestinal origin, such as tingling of the feet, coldness, numbness, burning sensations, pins and needles, with, perhaps, a slight degree of ataxia, exhibited by slight awkwardness in movement. Some pain in the back and occasionally shooting pains are present. As the disease advances—and it is decidedly typical of this affection—there appear to be periods in which the toxic action is latent and, again, periods of marked severity and advance, a feature which is not only evidenced clinically, but in some pathological observations. There develops anæsthesia, objective to some degree, af-

fecting all forms of sensation, usually first intensified on the lower lumbar and sacral segments, but when typically marked extending from the toes to the trunk, and in cases such as that described by Dr. Taylor, advancing as high as the upper dorsal region. Naturally with this the ataxia becomes more marked, as a greater degree of posterior column affection is also present, and co-existent with the ataxia, the sense of position is greatly affected.

The motor tracts exhibit early signs of involvement in a slight stiffness of the legs, with deep reflexes exaggerated, perhaps unequal, and plantar extensor response; later, this stiffness may develop into definite rigidity and prevent active movement. Cramps frequently occur and that common painful symptom dependent thereon, namely, sudden drawing up of the legs. In the later stages, particularly common after a sudden advance in the disease, the legs become flaccid, the reflexes disappear, and the paresis of the legs becomes total paralysis.

The sphincters are seldom affected early, but usually late in the disease some degree of partial or complete incontinence occurs. Œdema of the legs and bed sores are usual occurrences.

Lastly, observers have noted the extension of the toxic affection to the upper neurones, with consequent paresis, and ataxia of the larynx, facial paralysis, diplopia and nystagmus, while, prior to death, pyrexia, drowsiness, mental depreciation, and delirium show the cortical neurones to be also poisoned.

Pathologically, the gross appearance of the brain and cord may show some general wasting, while the enlarged spleen and softened bone marrow evince the anæmic and toxic origin.

The mid-dorsal region is most affected and here the degeneration is frequently diffuse, affecting not only the systemic regions, but causing degeneration of all neurones except those which are close to the grey matter, and probably more actively protected by being near their neurones of origin. The appearance is at times as if a toxine had infiltrated inwards from the exterior of the cord and gradually destroyed the neurones in this way. This is the myelitic area of many authors.

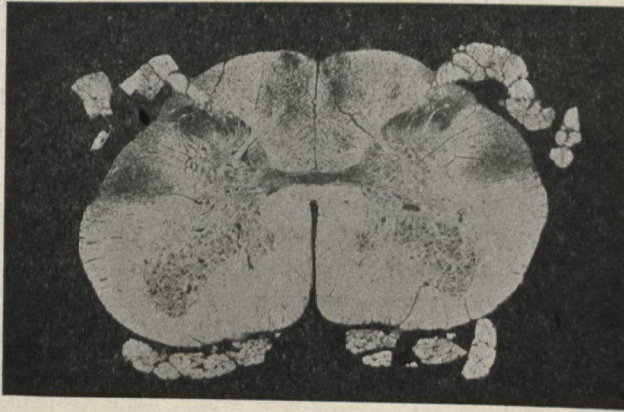
Following the posterior columns upwards, the primary neuronc degeneration, due to the toxine, becomes less marked, and a definitely secondary degeneration with gliosis due to the degeneration of the fibres so injured is found present in the upper cervical region, mainly in the column of Goll. Outside of the older degeneration, the definite intermittent character of the disease is in case evidenced by areas of more recent softening (staining by Marchi methods outside the older area).

In the lumbar region one meets with a more patchy and irregular degeneration in the posterior columns.

The degeneration in the lateral columns, extending in cases from pons to sacral region, proves the primary neuronc character of the process. The other columns may be also affected, but less regularly so, and more so when the process is of a severe character.

Histologically, we have the effects of some toxine acting mainly and most diffusely in the dorsal region, causing swelling and degeneration of

V.



Neuronc Degeneration (*d*) Combined.

A case of toxic degeneration, shewing the irregular degeneration of the posterior columns and the more marked pyramidal affection in the lumbar region.

the fibres, which results, in microscopical preparations, in the formation frequently of large spaces limited by strands of glia and connective tissue. Later, secondary degeneration of the continuation of the neurones involved occurs, and gliosis follows. Gliosis of the primarily affected areas appears to be frequently much slower, and in some cases has advanced very little before a fatal termination.

Clark's column is usually considerably affected, and some peripheral nerve changes are common, although the roots are usually normal.

A great deal of discussion has taken place as to the origin of this degeneration and its relation to the blood vessels and to anæmia. In regard to anæmia, some further work is still necessary, but it must be emphasized that so far the anæmic and the toxic combined appear to place their principal areas of localization in different parts of the cord, and that the former usually omits severe attack on the lateral tracts, although some cases are described in advanced conditions which do not quite parallel the observation. Also, one must note that anæmia may be absent in the acute com-

bined, and when present is usually not of the pernicious type. On the contrary, the histological signs are similar in many respects.

As to the relation of the disease to the blood vessels, more difference of opinion is found and the question to be answered finally is this, Does the toxine primarily affect the neurone or the blood vessels; is the disease a neuronie, or a vascular one, primarily?

Too little importance has been laid on one fact, and that is, the exact blood vessels which are affected in the disease. If the larger cortical vessels of the cord are affected by arterio-sclerosis, causing, for example, anæmia of the areas they supply, perhaps, of increased intensity, if the blood itself is impoverished, a clinical picture will be found pathologically which cannot be mistaken for a toxic process, as the degeneration, while histologically similar, is definitely in the patchy areas clearly supplied by the cortical vessels, and probably representing their capillary terminations. Secondary degeneration naturally will also be present, and the clinical symptoms will be probably "ataxic paraplegia." A case of this kind I intend publishing shortly.

When, however, the degenerations become more definitely systematic and one has to limit the vascular cause to sclerosis of the posterior spinal vessels, and in even less diffuse cases to vascular change in the vessels of the posterior and pyramidal columns, it is placing a great deal too much stress on the possibility of any *local* vascular affection.

Another fact of importance is that while the vessels in these degenerated parts frequently show some hyaline change, yet they are normal in other cases.

The conclusion appears to be justified that certain toxic processes cause degeneration of neurones primarily, and particularly those of the posterior columns and pyramidal tracts, but diffusely of many neurones under other conditions. They also frequently cause toxic changes in the coats of the very small arterioles of the cord, which will, in measure as they are affected, tend to increase the degenerative process in the area they supply, and frequently serve as the originating points for the following sclerosis. In other cases this vascular affection may be even more marked and grade the way to those chronic degenerative diseases of the nervous system which are dependent on arterial changes in which the neuronie degeneration is wholly secondary.

In conclusion, I desire to express my acknowledgment to Dr. Holmes of the National Hospital, Queen's Square, for the cuts which illustrate this paper.

ACUTE OR SPONTANEOUS HÆMORRHAGES IN THE NEWLY-BORN.

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Hospital for Sick Children and the Infants' Home.

TWO varieties of hæmorrhage in newly-born babies are met with occasionally: 1st, traumatic, or accidental, due to external causes or injuries, such as forceps or long-continued pressure on the head in the pelvic canal; 2nd, spontaneous or acute hæmorrhage, and not caused by any apparent injury during birth. The bleeding is, as far as can be seen, spontaneous or without cause.

It is only the latter hæmorrhage to which I wish to draw your attention to-night.

Within the last ten years I have seen several cases in my own practice, and have the notes of other cases seen in the practice of my confreres.

The disease is characterized by hæmorrhages from widely different parts of the body, as: Umbilicus, bowels, stomach, bladder, the skin, cellular tissue, muscles; internal organs, as liver, spleen, suprarenal glands, etc. There may be one or several locations from which the blood comes. It may be merely an oozing, or there may be sufficient blood lost in the space of a few hours to blanch a baby. It usually appears between the first and seventh day, and a large proportion of cases end fatally.

Case I. Baby W., born 12th January, 1896, full term, normal labor, female; weight, $8\frac{1}{2}$ lbs. Father and mother well and healthy. Five other children, well and strong. Baby nursed well. In 36 hours after birth blood was noticed on binder. It was to be seen coming from around the cord at the skin margin, where some clotting had already taken place. Slight pressure stopped it, but on removing the pressure oozing continued. Within 12 hours blood was seen coming from the vagina, and within 12 hours more, or 24 hours from onset of bleeding, vomiting of bloody mucus, which continued almost until the baby died on the fifth day, three days from the commencement of hæmorrhage.

Treatment. Tannic acid compresses, and hot tannic acid solution as a vaginal injection.

The major portion of the blood came from the stomach; even this was small in amount.

The late Dr. Martin, Carlton street, saw the baby in consultation on the fourth day. Slight jaundice noticed after the third day. Temperature not taken. No autopsy. No history of hæmorrhage in either family.

Case II. Baby S., female, born 10th June, 1897, the second child. The first is alive and well now. Forceps used. Weight $8\frac{1}{2}$ lbs. Puerperium normal. Father and mother healthy. Mother died last year (nine

years after), of tuberculosis of the kidney. Hæmorrhage began about 36 hours after birth, and came from the bowels and bladder in small amounts and continued for two days. Temperature not noted. Child never seemed very ill, failed little in weight or plumpness, but became anæmic. The only treatment for the hæmorrhage was rectal injections of salt solution. Did well for six months, when she was found smothered in a hammock. No history of hæmorrhages on either side.

Case III. Baby G., born 10th May, 1900, full term, male; weight, 10 lbs. Father well, but mother somewhat nervous, but never had any serious illness. One sister alive and healthy. Baby nursed and seemed well until hæmorrhage began at the end of the second day. It came from the bowel and 12 hours later from the stomach. Nose-bleed and purpuric spots on arms and legs occurred before the end of the third day. Temperature, 100 to 101. No jaundice. Seen by Dr. Starr on the fourth day.

Treatment. Normal salt solution injected into the bowel and tannic acid solution into the nostrils.

Died on the fifth day.

No hæmorrhage on father's or mother's side.

Uneventful recovery from the confinement. Confined 30th December, 1903, of a healthy child.

Case IV. Baby H., born 25th February, 1901, full term. Chloroform given by Dr. F. N. G. Starr, and forceps applied; female, weight, 8½ lbs. Nursed within a few hours. Father and mother healthy. One brother alive and well. Hæmorrhage first noticed on third day, from the bowel. At first it was blackish, with faint pink tinge at the margin of the mass; later it was a mixture of black and red blood. Within 12 hours vomiting of fairly red blood began. By that time baby was unable to nurse. Vomiting occurred whether baby nursed or not. More blood was lost by the bowel than by the stomach. On the fourth and fifth days the baby looked positively bloodless and seemed on several occasions *in extremis*. Lost weight very noticeably. In three days after the first appearance of blood it ceased somewhat suddenly. The baby began to improve very slowly. It was fed mother's milk by a dropper, and in a few days by a spoon. In a week after the cessation of bleeding she began to nurse again. Temperature at no time over 101° F. Slight jaundice after a week. The cord dropped on the seventh day. No bleeding from the stump occurred.

Treatment. Ergot internally and rectal injections of normal salt solution.

No hæmorrhage in father's or mother's family.

Case V. Baby C., born 9th December, 1903, full term, first baby, male; weight, 10 lbs.; chloroform and forceps. Father and mother well

and healthy. Baby well and strong and nursed within a few hours. Early in the second day hæmorrhage was noticed coming from the margin of the cord, where it was beginning to separate from the abdominal wall. At first it was only a slight ooze. Within six hours it was oozing freely, in spite of compresses of tannic acid, and, later, styptic cotton, changed frequently. Within twelve hours blood was seen in the stools and petechial spots on the legs. Temperature never less than 103 F. from the time bleeding was first noticed.

Treatment. Calcium chloride, given internally, and rectal injections of normal salt solution.

Death in twenty-four hours from the beginning of the hæmorrhage. Most of the hæmorrhage seemed to come from the umbilicus. All told, there did not appear to be sufficient to cause the baby's death.

The short illness, the persistently high temperature, and the comparatively small amount of blood lost, are suggestive of an infection.

No hæmorrhage on either side of the family.

Case VI. Baby M., born 19th March, 1906, full term; chloroform and forceps; male, first child; weight, 6 $\frac{3}{4}$ lbs. Father and mother of highly neurotic temperament. Baby nursed within six hours and seemed strong and healthy. A small abrasion was made by the blade of the forceps over right frontal bone, about one-third of an inch long. Only the outer cuticle was cut through. Little or no bleeding occurred from it. Both eyelids seemed swollen and everted, as if from intrapelvic pressure. Baby cried when slapped. In the afternoon of the same day a small cephal-hæmatoma was noticed over most of the right parietal bone and also some slight discoloration over the left upper eyelid. The discoloration was thought to be due to the trauma of labor.

20th. Baby nursed and seemed well, though cross and fretful at night. Hæmatoma well within margin of parietal bone, but larger, more freely fluctuating and tender to touch, stain over left upper eyelid more marked.

21st. Baby cross and fretful and apparently in pain all night and markedly so on touching the tumor of the scalp. Tumor increased in size, stain of eyelid more marked, but no thickening, swelling or boggy-ness.

22nd. Baby did not sleep all night. He kept up a constant fret all night, and while he took water readily would not nurse. At 9.30 a.m. both upper and lower lids of left eye were much discolored, swollen and boggy and a thin bloody discharge was oozing between them. Found free fluctuation over whole of right parietal, part of temporal, part of left parietal, and the right two-thirds of occipital bones. There was marked tenderness over this area. He flinched and cried on the least pressure.

Several new foci were to be seen this morning : A newly discolored area, $1\frac{1}{2} \times 2\frac{1}{2}$ inches, on the outer surface of the humerus, three or four small discolored areas about the knuckles, some discoloration and blood on the roof of the mouth, a large dark patch below and behind the left ear, some bleeding from the left nostril, a trace of blood in one vomit, slight bleeding from around the cord. Temperature, 101° F. Calcium chloride was ordered by the mouth. Later in the day Dr. Reeve, Dr. W. P. Caven, and Dr. Adam Wright saw the case with me. As the calcium chloride had by this time upset the stomach, it was decided to give it per rectum, and adrenalin solution in gtt. i. doses by the mouth and gelatin 2 per cent. solution every hour or two, also by the mouth.

9.30 p.m. Eyelids were more swollen and bursting in appearance, everted, and oozing. Vomiting began after a few doses of gelatin. This preparation was not a nice one. It was yellowish, thick, gluey and smelled like a glue-pot. It was therefore ordered to be injected into the bowel, $\frac{1}{2}$ oz. every hour. Face very pale and in marked contrast to the discolored (almost black) and bulging left eyelid. Temperature, 102° F.

23rd, 9 a.m. Had hæmorrhage from the bowel, probably not more than a couple of drams, but almost immediately afterwards he became very quiet and seemed to the nurse to be dying. I had to look closely to see that he was breathing. Saline injection, 1 oz. to be given every hour. Swelling over lids possibly not so tense as yesterday. Scalp apparently stripped up more, so much so that the lobe of right ear was pushed upward and forward. Temperature, 100° F. Gelatin according to the following formula, taken from Frühwald, was ordered and found to be much more palatable than the first lot :

R	Gelatin alb. (Merck)	gr. xxx.
	Sod. chlorid.	gr. ii.
	Aq. destil.	$\frac{3}{4}$ iii.
	3 i o. h. 1, vel. 2.	

Skin dry, rough, and parched over the whole body. 3 p.m. : Taking gelatin and keeping it down. Ordered 1 oz. also to be injected into the bowel every three hours. Some new dark spots (blood) noticed on palms and backs of hands. 10 p.m. : Lies quietly except when scalp is touched, then cries as if in pain. Temperature, 101° F.

24th, 10 a.m. Temperature, $100\ 2-5^{\circ}$ F. Had three mild convulsions during the night. Vomited after each dose of gelatin, which was discontinued, and saline enemata to be tried again. Lies quiescent; only apparent sign of life is an occasional movement of lips. 5 p.m. : Swelling over lids less, showing eyeball between—hazy, lustreless and pushed forward from behind about $\frac{1}{2}$ inch. Temperature, 100° F.

25th, 9 a.m. Temperature, 100° F. Right eyelid discolored, though not swollen now. To have whey by mouth and normal saline by bowel to

be continued. 9 p.m. : Temperature, 100° F. Two dropperfuls of whey was all baby could be induced to take at any one time. Scarcely moves a hand or foot, but the color in the lips is possibly a shade better. Has wasted very markedly.

26th, 10 a.m. Takes six or seven dropperfuls of whey at one time. More bluish discoloration about forehead above and in front of the right ear. Temperature, 100½° F. 6 p.m. : Temperature, 101° F. Nurse said that at 11.30 a.m. he seemed in much pain and kept crying out at times, was restless, pale and kept lower jaw moving up and down with each inspiration. Almost collapsed again at 3 p.m., making the same movement with the lower jaw. Soon after this a red-colored patch, 1½ x ¾ of an inch, appeared on the left forearm, which fluctuated. Ordered gelatin solution 2 drams by the mouth and 1 oz. by the rectum.

27th, 10 a.m. Temperature, 99° F. Urinates three or four times a day, and usually only with suprapubic pressure. Eye less protruding, but hazy. Lids less swollen, but black as ink. Cord dropped off; no hæmorrhage followed.

28th. Much stronger, moves legs and arms freely.

29th. Takes 4 drams whey every two hours and digesting it. No fresh hæmorrhages.

31st. Takes 6 drams of whey every two hours. Lips, cheeks and fingers a better color.

April 2nd. To try baby at mother's breast twice daily after first emptying them. Hæmatoma under scalp becoming circumscribed and less fluctuating. Small dark or bluish areas on fingers, arms and back of neck and shoulders fading.

5th. Baby able to get little or none from its mother and become cross and fretful. The nipples become inflamed.

10th. Baby's digestion upset as a result of trying to make him nurse his mother, who was markedly nervous. To have one of the condensed milk preparations for a few days until a wet-nurse can be secured.

25th. Wet-nurse obtained. Baby nurses vigorously.

May 3rd. No fluctuation under the scalp. Discoloration of eyelids has disappeared. Lids quite normal in appearance. Corneal opacity marked.

No history of hæmorrhage in either family.

Case VII. (Practice of Dr. A. H. Wright.) Baby D., born May 3rd, 1904, with forceps. Healthy and well nourished. Hæmorrhages began when baby was twenty-four hours old. Purpuric spots were seen to be dotted over almost the whole body, the trunk as well as all the extremities. Within a short time blood was passed per rectum, and later vomiting of blood occurred. Died on the fourth day.

Case VIII. (Reported by Mr. E. D. Gillies, medical student.) Baby W., female. Mother strong and healthy. Father living and well. Seven brothers and sisters living and well. One twin brother died at twelve months, cause unknown. One infant died two years ago of hæmorrhage from the bowels when two days old. The hæmorrhage continued during the last twenty-four hours of its life. This baby was born on January 8th, 1906, at 5.35 a.m. It was an easy, rapid birth and cord was not cut nor tied until 6.10 a.m., and placenta expelled shortly after. Child well developed and viable. On the morning of the 9th some bright red blood was noticed in the stools, which increased in quantity during the day. During that afternoon a black-looking material containing blood was vomited. It again vomited on the morning of the 10th, and there was a slight ecchymosis on the under part of the upper left eyelid, which increased in size until it almost covered half the upper lid. The child nursed well, slept well, cried very little. Respirations, 24, sometimes sighing in character. Temperature, normal.

Treatment. Gave calcium chloride, 1 gr. every four hours for thirty-six hours, but movements were more frequent and seemed to contain more blood. Child cried more. Then just gave nurse and 5 m. spts. frumenti well diluted every three hours. Frequency of stools and also quantity of blood passed seemed to diminish gradually from the time the calcium chloride was stopped. Child has no blood in stools and doing well for past four days.

Case IX. (Practice of Dr. G. E. Smith.) Baby D., mother aged 30, primipara, lame. Called on February 5th, 1906, at 8 p.m. Pains not very effectual. Applied forceps at 10 p.m. Delivered child at 11.30 p.m. Feb. 6th, at 10 p.m. (22 hours after birth), nurse thought swelling existed in region of stomach. Child vomited shortly after, the vomit consisting of a great deal of clotted blood and also some fresh blood; filled a teacup. Child had cramps before vomiting and movement of bowels later. Child continued to vomit up clots and blood. No blood in stools. Feb. 7th.: Blood in stools. From 10 p.m. to 4 a.m. (on Feb. 8th), i.e., in six hours, had to change diaper four times; about $1\frac{1}{2}$ teacupfuls in clots and red blood. Baby refused nurse and fluids. No subcutaneous hæmorrhages; none in mouth. Looks very anæmic; much like a marasmic baby. Scarcely any pulse. Feb. 8th: Started to give saline and calcium chloride by bowel. Very little vomit or melena. Feb. 9th: Pulse better. No vomit or melena. Child looks bad, weak, and anæmic. Feb. 10th: Child nursing again; no blood. Child continued in this condition for three or four days. Looked as though it might recover if it were not so weak from loss of blood. No blood appearing, stopped the calcium chloride and saline. About the 10th day died suddenly, about half an

hour after nursing as usual. Possibly fresh hæmorrhage may have occurred. (Intraperitoneal?)

Case X. (Practice of Dr. A. H. Wright.) Baby —, born 30th December, 1906. Apparently healthy. Hæmorrhages commenced in latter part of first day, especially under the skin, from the mouth and from intestines.

Treatment. Gelatin by mouth, calomel, castor oil, adrenalin in minim doses of 1-1000 solution (also by mouth). After two weeks much improved. Apparently recovering rapidly for several days. In fourth week grew worse, had general jaundice, gradually sank and died twenty-nine days after birth.

I have to thank Dr. K. H. VanNorman, house physician, Toronto General Hospital, for the notes of the four cases which occurred at the Burnside.

Case XI. (At Burnside Hospital.) Mother confined on March 21st, 1906. Labor twenty-one hours' duration. Mother Russian, married, 25 years of age; forceps delivery.

March 23rd. Child vomited black fluid. Temperature, 98 1-5° F. There was also large submucous hæmorrhage.

25th. Vomited black fluid containing blood. Normal saline given per rectum, also injection 15 c.c. gelatin (two per cent. solution). Blood in stools.

26th. Again vomited black fluid. Temperature, 101 4-5°

27th. No vomiting. Temperature, 99 4-5°. Stools more normal.

28th. Rapidly improving. Before administration of gelatin child was jaundiced, sinking rapidly, but left the hospital greatly improved. Discharged April 5th. April 29th, reported well.

Case XII. (At Burnside Hospital.) Mother was confined April 29th, 1906. The liquor amnii was discharged two days before delivery. Mother, 37 years, married, English. Child delivered by version—fourth child. The first two were delivered by forceps, the third by Cæsarean section. At time of delivery child was noticed to have paralysis of right arm and a groove on the right side of the head at about the posterior region of the parietal bone. Post-mortem showed extensive subdural hæmorrhages, especially at base of skull extending downwards into spinal canal. Hæmorrhage about brachial plexus on right side. Fracture of right humerus, involving musculo-spiral nerve. Abdomen contained considerable quantity of fluid, apparently a rupture of a hæmatoma on under surface of liver. There was a second unruptured hæmatoma. Hæmorrhage in both suprarenal capsules. Notwithstanding the above, the baby seemed comparatively well till it died suddenly on May 3rd, 1906.

Case XIII. (At Burnside Hospital.) Mother confined May 29th. In labor thirty-six hours; 34 years old; married; Canadian; forceps delivery, which were applied for thirty minutes. When baby was twelve hours old began to vomit blood, became weak and breathed poorly. Improved slightly in the next twelve hours. No more hæmorrhages, but weakened gradually, and died about forty hours after birth.

Case XIV. (At Burnside Hospital.) Mother delivered May 30th; seven hours in labor; forceps applied for twenty-one minutes; mother Canadian; married; 22 years old. June 4th, baby had hæmorrhage from the bowel.

Causation.—The following have been mentioned: Hæmophilia; septic infection; syphilis; injuries to head, which result in cerebral hæmorrhages; too early ligation of cord; plethora; debility; ulcer of stomach or bowel; acute fatty degeneration of the new-born; jaundice; feeble coagulability of the blood; deficiency or defect in the walls of the capillary vessels.

Onset.—It will be seen that with two exceptions (Cases IX. and X.), the bleeding began before the end of the third day. In six it began on the second day; in one on the third day, and in two before the end of the first day. The infants had all been well with the exception of Case X., and as far as could be seen there was nothing abnormal until bleeding began.

Character.—In all the cases the bleeding began in a gradual manner.

Amount.—It is difficult to estimate the amount of blood lost in any given case. In some of the cases the amount to be seen was not enough to blanch a child, let alone destroy it. In two the amount lost was large, notably in Cases IV. and VI. In the latter, while little blood came away externally, a great quantity must have leaked from the vessels to produce such free fluctuation under the scalp, in the sterno-mastoid muscle, in the cellular tissue of the arm, around the eyeball, etc.

Site of Hæmorrhage.—It may come from any part of the body: In two cases it came from the umbilicus; in six cases from the stomach; in eight cases from the bowel; in six cases under the skin; in one case from the mouth; in one case into muscle; in one case under the scalp; in one case under cellular tissue around eyeball; in one case into abdominal cavity; in one case into suprarenal capsules, etc. The bleeding may, and usually does, come from more than one source. In none of the above cases was it confined to one site. In three cases there were two sources, and in five cases three sources, and in Case No. VI. from very many points, nearly all of which were confined to head, neck and upper extremities.

Quality of Blood.—In only two cases was there any clotting of blood, Case IV., where bright blood came from the bowel and clotted in

small clots on the napkin, and Case I., where it oozed from around the stump of the cord and there clotted on the pad.

Temperature.—In nine cases it was not taken. In one it was normal, in three it was 98 1-5° to 102°, and in one it was over 103° F.

Loss of Weight.—Every baby seemed to shrink very soon after the beginning of hæmorrhage. The shrinking seemed to be out of all proportion to the amount of blood lost. This was noticed in the cases in which no elevation of temperature occurred, as well as in those with a fairly high fever.

Cases IV. and VI. lost weight very rapidly, and some weeks passed before any material increase took place.

Duration of Disease.—It is usually of brief and definite duration: One case died on the third day, ill one day; one case died on the fourth day, ill three days; two cases died on the fifth day, ill three days; one case died on the tenth day, ill nine days; one case died on the twenty-ninth day, ill twenty-eight days. The baby who died on the twenty-ninth day had marked jaundice during the last week. It is possible that the condition which gave rise to the jaundice, rather than the hæmorrhagic condition, caused its death.

Frequency.—The disease is not of frequent occurrence. I had been in practice fifteen years before I saw my first case, or, perhaps I might correctly say, before I recognized one. I have seen two cases in my own practice in the last three years.

It appears to be more frequent in hospital than in private practice. "Out of 6,700 deliveries at the Boston Lying-in Hospital, 45 cases occurred, a percentage of .67, or about $\frac{2}{3}$ of 1 per cent., while in the outpatient department among 4,000 deliveries, there were 4 cases, or 1-10 of 1 per cent.

"This comparative prevalence in the hospital has no connection with puerperal septicæmia, as the disease is practically free from the Boston Lying-in Hospital, but it occurs independently of it, just as thrush may get a foothold and flourish in a hospital although not common in outside practice."

In the Burnside Hospital, Toronto, there are records of four cases, particulars of which have just been given.

Only one case has been noted at Grace Hospital, Case X.

St. Michael's Hospital has apparently not had a case.

Post-mortem Examinations.—None were allowed in my own cases. In one, Case No. XII., at the Burnside, where a post-mortem was obtained, subdural hæmorrhages at the base of the skull (the child was delivered by version), hæmorrhage about the brachial plexus on the right side, hæmorrhage into the abdomen from rupture of a hæmatoma on the

under surface of the liver, also an unruptured hæmatoma and hæmorrhage into both suprarenal capsules.

Townsend had looked up the records of 81 autopsies. In the majority of cases nothing abnormal was found, except the hæmorrhages and the resulting anæmia. In a very small number of cases the following diseased conditions were found: Syphilis, enlarged spleen, enlarged liver, inflammation of the umbilical and portal veins, and acute fatty degeneration.

Bacteriology.—Abt found the colon bacillus in cultures from the spleen, kidneys, liver, heart, etc., in two cases.

Kilham and Mercelis found streptococcus alone or with the diplococcus of pneumonia, bacillus pyocyaneus, bacillus lactis aerogenes, Friedlander's bacillus, bacillus of Gaertner, and negative results at times.

Histology.—"The smallest vessels have been closely examined without detecting any pathologic changes in their walls."

Diagnosis.—There was little difficulty in making a diagnosis in these cases. The bleeding began within 24 hours in two cases and before the end of the third day in ten cases. In the cases where it came from the umbilicus it was oozing in character rather than a free flow, as if the ligature had slipped. Bleeding from a loose ligature, moreover, practically always occurs within the first hour or two.

There was no history of syphilis in the parents and there was nothing to indicate it in the appearance of any of the infants.

In none of the cases was there any evidence of a septic condition in either mother or child.

There were no skin abrasions save a slight one over right frontal bone (Case No. VI.), from which practically no bleeding occurred, neither was there omphalitis in any case. While the forceps was used in nine cases and version in one, no apparent injury could be made out either to scalp or bones, with the exception of Case XII.

One naturally thinks of hæmophilia where there is uncontrollable hæmorrhage in young children.

The fact that hæmophilia never, or rarely ever, shows itself before the end of the first year should help one to make a diagnosis without much difficulty.

The hæmophilic tendency is commonly hereditary and occurs usually after slight or severe traumata.

In none of these cases was there any history whatever of hæmophilia. None of the parents had ever heard of the term "bleeder."

There is no reason, though, why spontaneous hæmorrhages should not occasionally occur in a hæmophilic subject. Such a case is reported by Larrabee. In his case, "A slight scratch was made on the baby's

scalp during the rupturing of the membranes and the hæmorrhage from this was never controlled. In a few hours bleeding appeared from the cut end of the cord and continued in spite of repeated ligatures.

"After this, hæmorrhage came from various parts of the body and destroyed the baby on the fifth day. This child was a descendant of a family many of whom had been bleeders for six generations."

He quotes the histories of 37 cases of hereditary hæmophilia in the newly-born. One has, therefore, to bear in mind the occasional co-existence of the two diseases. That they do occur together is proven by Larrabee's cases and by occasional cases in the practice of other physicians. That they do not occur frequently is evidenced by Grandidier, who is quoted by Koplik as having records of only 12 cases of hæmophilia in 575 cases of spontaneous hæmorrhage.

None of my patients who survived have since shown any evidence of hæmophilia. In Case IV. the cord dropped off on the seventh day, and in Case VI. on the eighth day, without bleeding from the stump in either case.

Townsend mentions two cases of acute hæmorrhage in which the cords dropped off on the eight and eleventh days, and no hæmorrhage occurred in either.

Rotch records a case of spontaneous hæmorrhage during the first few days of life and on which circumcision was performed on the eighth day without hæmorrhage.

My cases show that about an equal number of males and females are affected, while in true hæmophilia the females outnumber the males 13 to 1, judging by Townsend's 709 cases.

Prognosis.—The greater and the more sudden the hæmorrhage, the less the chance of the patient surviving. That is a broad rule which I think holds good in the large majority of cases. In Case VI. a very large amount was poured out under the scalp, how many ounces is a matter of conjecture.

On the occurrence of a hæmorrhage under the skin of the arm the baby suddenly collapsed and almost succumbed. Within a few hours after this another hæmorrhage occurred just above the wrist, with the same alarming symptoms.

While the amount under the scalp was many times larger than that in the arm, the bleeding beneath the scalp was gradual and did not seem to make as great an impression on the baby as the two more sudden but smaller masses under the arm.

One should not forget that the baby was almost moribund from the main hæmorrhage and consequently any small subsequent bleeding would have a profound effect. This was the only case in which a large amount of blood could be said to have been passed.

"The loss of blood in these cases should no more be considered the cause of the lethal result than would the purpuric spots in a morbus maculosus in a case of cerebro-spinal meningitis with purpura, or the expectoration of rusty sputum in the pneumonia of an adult." (Abt.)

Why, then, should those infants who lost very little blood have died? I think one must consider them as acute septic or toxæmic cases. Cases Nos. I. and V. were undoubtedly septic ones.

The temperature is not a correct guide as far as the prognosis is concerned. One of Abt's cases had a continuously high temperature, running up to 104° F., and recovered. Another had a subnormal one and also recovered.

Convulsions, either at the onset, as occurs in some of the septic cases or toward the end, add to the gravity of the case. On the other hand, one of my cases had three convulsions and recovered.

Townsend's cases, with a mortality of 79 per cent., should be borne in mind when questioned as to prognosis in any given case.

In these cases of spontaneous hæmorrhage one can safely predict that they will *not* have repeated hæmorrhages in after years. In the cases of hæmophilia one can just as safely assert that they *will* have recurrent hæmorrhages and that they are likely to succumb before they reach adult life.

Treatment.—In one of these cases, No. V., the course was so acute that one would not expect much relief from any form of treatment. This child seemed to die of sepsis rather than from the amount of blood lost. Whether gelatin would have afforded any relief I cannot say.

A great many remedies have been used in the past in these cases—many of them empirically. The three which are most used at the present time are calcium chloride, solution of adrenalin, and gelatin. The first-named was given in Case V., without any apparent effect. Adrenalin and gelatin were both given internally in Case VI., and he recovered, whether on account of, or in spite of, either remedy, I do not know. It was a case, however, in which septic symptoms were at a minimum and in which styptics appeared to be indicated.

Gelatin appears to be able to coagulate the blood of bleeding surfaces. A good illustration of this effect occurred at the Hospital for Sick Children in October last. Gelatin was given to a boy æt. 10 years, suffering from hæmophilia almost since infancy. Shortly after entering the hospital free nose-bleeding took place and 1 dram doses of a 2 per cent. solution were given every hour. The bleeding ceased in a few hours. In 24 or 36 hours afterward, in attempting to get a few drops of blood from the lobe of the ear for the purpose of making a blood count, it was found that blood could not be made to flow either from the ear or finger. This

was a boy who bled on the slightest provocation from a scratch, or bruise, or into the larger joints without any traumatism. Yet after the gelatin not a drop of blood could be obtained from his ear or finger.

In Case No. VI. no improvement could be seen after the persistent use of gelatin and adrenalin for about 24 hours. As soon as vomiting began, $1\frac{1}{2}$ oz. of a 2 per cent. gelatin solution were injected into the bowel and repeated three times, when the rectum became irritable. It was then given again by the mouth and about 48 hours after commencing it some little improvement was noticed, or to be more accurate, the baby appeared to cease getting thinner and paler. For external use, such as a bleeding navel, a 10 per cent. solution is advised by Abt.

The hypodermic injection of gelatin has been advised by a number of authors, but Abt sounds a warning against its use in this way. He gave a subcutaneous injection of 2 oz. of 2 per cent. solution to a feeble-minded girl *æt.* 4 years. Her temperature rose to $100\ 2\text{-}5^{\circ}$ F. and later to 101° ; the pulse increased from 92 to 140, and respirations from 24 to 36. The child was restless, greatly prostrated and extremities cold. This condition lasted for 24 hours. Two other children, aged 9 and 2 years, were also given subcutaneous injections, with a similar increase in temperature, pulse and respiration.

He then experimented with gelatin subcutaneously in rabbits. One rabbit was not inconvenienced by injections of 60 c.c., but its blood clotted 48 seconds before, and 12 seconds after, injection. One was given 60 c.c., then 250 c.c., and finally 500 c.c., and died some hours afterwards, having lost weight rapidly. One was injected with one injection of 500 c.c. of a 5 per cent. solution, and died in three hours after.

His conclusions were :

First. Subcutaneous injections of sterilized gelatin solution are capable of producing toxic symptoms in children.

Second. Large doses of 5 per cent. solution of gelatin caused the death of rabbits.

His explanation is that the gelatin is manufactured from the bones of animals; that the decomposition which takes place in these bones gives rise to cadaveric poisons; that these poisons are ptomains is evidenced by the elevation of temperature and the gradual condition of prostration and collapse; that ptomains may be contained in solutions which are subjected to high degrees of heat, the latter not altering their chemical nature nor their toxic property.

One has only to smell the gelatin to be reminded of a glue factory. Even when Mercer's white gelatin is used, though this is probably the best on the market, its odor is not suggestive of an article which is sterile.

For that reason, if for no other, one would hesitate to use it sub-

cutaneously. Abt thinks it would be difficult to state what a safe dose of gelatin would be, given subcutaneously, to a new-born infant, but that the local use and the use by the mouth are warmly recommended.

I think if the stomach rebels at prolonged dosing, as it did in Case VI., one should not forget that absorption takes place rapidly from the rectal walls.

This would seem to be a much safer method of introducing gelatin than the subcutaneous one.

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SOME OBSERVATIONS ON THE THERAPEUTICS OF CHRONIC HEART DISEASE.

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THE methods which should be adopted in the treatment of chronic heart disease are well worthy of careful attention, both on account of the number of patients afflicted with some condition accompanied with heart failure, and on account of the great relief which may be afforded to the sufferers.

The chief varieties of chronic cardiac disease met with are degeneration of the myocardium, either fatty or fibroid; valvular disease, the result of former rheumatism or due to atheromatous changes, and to these must be added the difficulties to the proper performance of its functions forced on the heart by changes in the smaller blood-vessels (*arterio-capillary fibrosis*). The symptoms complained of by the patients are somewhat similar in all cases:—Shortness of breath, pain across the upper part of the chest, more or less severe, on exertion, irregular action of the heart, sleeplessness, apprehensiveness, digestive disturbances, especially flatulence, and in the later stages œdema and ascites. These symptoms naturally vary both as regards degree and frequency. The differential diagnosis as to the nature of the cardiac lesion and between organic heart disease and functional disorder (including purely gastric trouble) is often difficult, but I do not propose to discuss these differences here, but only to offer some suggestions as to the therapeutic measures to be adopted when evidences of chronic cardiac disease manifest themselves.

The main indications for treatment are two in number, (1) to stimulate the action of the heart, and (2) to reduce the peripheral resistance—these two are of equal importance, although the latter dictum is too often forgotten. Symptomatic treatment also needs consideration, as most of the more distressing symptoms can generally be relieved by appropriate remedies.

In commencing a course of treatment the arterial tension must be carefully observed. If it is high, vaso-dilators are of importance, whereas if low tension prevails, cardiac stimulants hold the first place. In the majority of instances a combination of these two classes of drugs is called for.

The most popular cardiac stimulant is probably digitalis, administered either in the form of the tincture or of the fresh infusion. If cardiac failure is marked, digitalis is certainly called for, whatever the lesion may be, but in the majority of instances it should be given in combination with drugs which will cause dilatation of the smaller vessels. The particular drug to be used must depend upon the degree of pulse tension. Iodide of sodium or potassium in doses of from 3 to 5 grains will be found useful in this respect, as will also the bicarbonates of potash and soda. A prescription I have found of considerable value under such circumstances is:—Tinct. Digitalis, m. 5 (to 15), Sodii. Bicarb., gr. 10; Potass. Bicarb., gr. 5; Sodii Iodidi, gr. 3; Tinct. Card. Co., 3 m.; Aq. Cinnamonomi ad 1 oz. T.D.S. If the arterial tension is considerable, Liq. Trinitrini gr. $\frac{1}{4}$ to gr. 1 will be found useful. In the case of elderly patients particularly, a vaso-dilator is indicated when giving digitalis. When

digitalis is being continually employed, the effect of its action can be to a large extent estimated and regulated by the amount of urine passed. An increase in the secretion may not be apparent for three or four days, but subsequently the diuretic action of the drug manifests itself.

Strophanthus in the form of tincture may with advantage be occasionally substituted for digitalis. If the latter drug causes vomiting, Strophanthus may be well borne. It is in those cases, however, in which a cardiac stimulant is required which does not markedly raise the blood pressure that Strophanthus is of value, as for instance in cases of chronic renal disease with evidences of heart failure. I regard Strophanthus, however, as rather a dangerous drug, at any rate, as one that has to be given with caution when large and repeated doses are employed. Digitalis gives warning when too large quantities are being given, and the drug can therefore be withdrawn. But very serious symptoms occasionally arise without any warning when large doses of Strophanthus have been administered.

Citrate of caffeine is also valuable, being a cardiac stimulant which does not raise peripheral tension. The employment of squills in cases of heart disease is often of value, and the beneficial effects are speedily apparent. Of convallaria I have had but little experience, although its value is highly estimated by some physicians. In old age strychnine administered either by the mouth or by hypodermic injection, or tincture of nux vomica, are useful adjuncts or substitutes for the drugs previously mentioned, but their use causes a rise of arterial tension which must be carefully regulated. Before leaving the subject of the purely drug treatment of chronic heart disease, the old method of prescribing a "blue pill" occasionally must not be forgotten, for it is a therapeutic measure of considerable value.

Turning now to other points in the treatment of chronic heart disease, the mechanical form of treatment has for some years claimed a considerable amount of attention. The hill-climbing of Oertel, the apparatus designed by Zander, the resistance exercises introduced by the brothers Schott, and the effervescing baths first elaborated at Nauheim have all from time to time had their adherents. At the present day the employment of natural or artificial effervescing baths has been strongly advocated by some physicians in this country, as well as by Continental authorities. Many theories have been expounded as to the cause of the undoubted benefits derived from a course of baths in certain forms of chronic heart disease, but personally I believe that the stimulating effects on the skin of the bubbles of carbonic acid gas cause a general dilatation of the superficial vessels, so acting as a vaso-dilator. I have not found the same benefits from the artificial baths that I had from the actual baths at Nauheim.

A similar explanation applies to exercises such as those of the brothers Schott. A muscle in action requires more blood than a muscle at rest. By the sustained action of the muscles such as is brought about during the performance of these exercises a considerable amount of blood is retained in the muscles, with consequent relief to the heart. Combined with the exercises and baths a strict *regime* of the general course of life must be maintained. The diet, amount and kind of exercise, and hours of rest must be duly regulated, and these precautions form an all-important part of the treatment at Nauheim and other resorts where these therapeutic measures are carried out. The same precautions may with advantage be taken in the management of patients in their own homes. Care must naturally be taken in the selection of cases for "baths and exercises." Those which do best in my experience are those in which there has been some cardiac overstrain but in which the acute symptoms have subsided; cases in which there is a strong neurotic element; instances of early fatty or fibroid degeneration, and cases of mitral regurgitation in which compensation is not quite satisfactory. I can add but few words here about diet, suffice it to say that as a general rule it should be as dry as possible, and that only the most easily digestible articles of food must be allowed.

Much may be done by symptomatic treatment, that is to say by giving drugs designed to relieve special symptoms.

Sleeplessness is often one of the most prominent causes of distress in chronic cardiac disease. Of all drugs I have found Chloralamide the most satisfactory. It may be given at first in doses of from 20 to 30 grains, suspended in mucilage or dissolved in rectified spirit. The dose may be increased until from 60 to 70 grains are given nightly. The use of the drug should, however, be suspended at intervals, and of course, if possible, the dose should be gradually lowered. Veronal (gr. 5) I have also found useful in cardiac cases. Sulphonal, trional and tetronal have not yielded such uniform results in the cases in which I have prescribed them. Sleep is essential in cardiac cases, and occasionally resort must be had to opium or morphia, although symptoms giving rise to anxiety are sometimes manifested, particularly if there are pulmonary complications. Apprehensiveness, irritability, and restlessness are prominent symptoms of failing heart. The addition of bromide of sodium or hydrobromic acid to the treatment suggested above will often have a calming effect.

Dyspnœa may be relieved either by increasing the cardiac stimulant, or by a mixture of carbonate of ammonia and spirits of ether. Inhalation of oxygen gas at frequent intervals will assist the oxygenization of the blood and also tend to induce a feeling of restfulness or even sleep.

The occurrence of œdema or ascites must be treated by rest, the administration of cardiac stimulants, and if necessary by removing the fluid from the legs and abdomen.

Pain in cardiac disease may of course be a prominent symptom, but the differential diagnosis between pain due to the heart and to that caused by digestive disturbances may be difficult. For the relief of pain due to the heart, inhalation of nitrite of amyl, nitro-glycerine, or some preparation of opium, are generally employed according to the nature of the affection.

Digestive disturbances may be relieved by regulation of the diet and the use of drugs which aid digestion and prevent fermentation.

In this short article I have only been able to consider very briefly the means which may be employed in cases of chronic heart disease, and need scarcely say that each case must be carefully studied both as regards the lesion present and the individual nature of the patient. To bring about ease in working and so combat the effect of disease must be the aim of the practitioner. This may be accomplished by the aid of the medicines suggested above, together with careful advice and guidance with regard to the daily life of the sufferer.

A SUGGESTION *RE* THE TREATMENT OF ANAL FISTULA.

By E. A. HALL, M.D., Victoria, B.C.

ALTHOUGH the accepted operation for the relief of fistula in ano is usually attended with excellent results, it has seemed to me to be unnecessarily severe. In adherence to one of the cardinal rules of surgery to do the least amount of cutting with the attainment of the object, I have, for the last few years, after cutting through the sphincters and thoroughly curetting all granulation tissue, left the rectal mucous membrane intact while the parts are given rest by the section of the muscles. The mucous membrane affords excellent protection to the raw surfaces, while the dressings are more easily retained in position and the wound thus kept cleaner than where the section is made through both muscles and membrane. In complete fistula the small opening into the bowel being thoroughly curetted, heals readily without any appreciable leakage. The post-operative attendance is much simplified, the dressings are not so frequently soiled, the packing can be left in longer, and the healing is more rapid under this method.

SCIATICA: THERAPEUTIC POINTS.

By W. C. ABBOTT, M.D., Chicago, Ill.

LOOK first for the excitant cause in disease of the pelvis, the rectum being most frequently to blame.

Flush the large bowel, dilate spasmodic anal sphincters, cure piles, fissures, fistulas, pockets and papillæ, and any other ailment found.

A small fly-blisters exactly over the sacrosciatic notch does wonders when the nerve is pinched in passing through it.

Obstinate subacute cases do well under macrotin, gr. 1 three to seven times a day, best in hot water.

Obstinate recurrent attacks are benefited by the persistent use of strychnine arsenate gr. 1-67 every hour till full tonicity is secured.

A hypodermic of atropine close to the nerve needs no morphine to cause speedy and complete relief in acute attacks.

Rheumatoid cases—and others as yet undistinguished—are quickly benefited by rhus tox., small frequent doses to effect.

Solanine gr. 1-12 and theine gr. 1 to 5, injected close to the affected part of the nerve, have been praised highly.

When the nerve is encumbered with exudative masses massage is useful; or absorb with phytolaccin gr. 1 three times a day for months.

The absorption of encumbering debris is usually if not always indicated in every chronic case; examine and note the exudative masses.

The most powerful absorbent mixture is mercury biniodide gr. 3-67, iodoform and phytolaccin gr. $\frac{1}{8}$ each, arsenic iodide gr. 1-67, 3 to 7 times a day.

Robust forms with fever and defective elimination do surprisingly well on veratrine, gr. 1-134 often enough to cause slight nausea or diarrhœa.

To break up an acute attack quickly: Zinc phosphide, quinine arsenate, ext. cannabis, aa gr. $\frac{1}{8}$; strychnine arsenate gr. 1-30; 4 times a day.

Sciatica is neither rheumatism nor neuralgia; generally a material lesion may be found, impinging on the affected nerve trunk.

It is doubtful if massage causes absorption of exudative masses as quickly as the powerful absorbent combination given; the former costs far more.

Those who have secured a good specimen of rhus and used it most are by far the most enthusiastic over this remedy.

Tracing sciatica to pelvic maladies is a beautiful example of the advantages of thorough physical examination instead of simply prescribing blindly.

Never forget that the principal cause of chronic disease of the nervous tissues is feeding them impure blood, fæcal poisons.

The advance of years brings wisdom, knowledge; and also grief for the cases of earlier years we could have relieved had we but known.

ANGIONEUROTIC ŒDEMA COMPLICATING ERYTHEMA MULTIFORME.

(REPORT OF A CASE.)

By NOAH E. ARONSTAM, M.D., Detroit, Michigan.

Professor of Dermatology and Genito-Urinary Diseases, Michigan College of Medicine and Surgery;
Member Northern Tri-State Medical Society, Michigan State Medical Society,
Medico-Legal Society (New York), etc.

THAT there exists an intimate relation between these two cutaneous affections will become apparent by perusing the report of the subjoined case. Furthermore, that these diseases are closely allied with urticaria and are occasioned by identical etiological factors may be readily adduced from the same source. In the writer's opinion the various disorders of the skin characterized by multiform lesions, œdema, intense subjective symptoms and appreciable evanescence are but different degrees of the same process, the result of certain metabolic errors or autotoxic influences, which give rise to this train of symptoms.

M. J., æt. 29, white, male Russian, married, merchant. Family history negative. Past history: Gastric derangement several years and an attack of the present condition about two years ago; otherwise negative. St. pr. Physical examination revealed nothing abnormal. He is a medium-sized, healthy looking individual, inclining somewhat towards neurasthenia. When the writer was called in he was suffering agonizing pain in the right hypochondriac region, with marked tenderness on pressure. Pulse 90 and temperature normal. Bowels were constipated and he was micturating frequently. In order to relieve the intense pain, morphine hypodermatically was resorted to and high rectal enemata of saline solutions given simultaneously. Only after some time and after several attempts at the evacuation of the bowels, did it prove satisfactory. The stools were very offensive and of a greyish-yellow tinge, unlike that of healthy fæces. The distress in the region of the liver kept on with moderate severity the entire afternoon, necessitating the administration of anodynes in order to allay it. Towards evening the pain subsided and the patient spent a comparatively restful night. Neither were the general surface of the body nor the sclera jaundiced at any time. Next morning the patient complained of aching sensations over the entire body, a feeling as if beaten or bruised. There were arthritic pains, but no œdema or inflammation in any of the joints. The patient was nauseated and

vomited several times the same morning, after partaking of some liquid food. He also complained of a sore throat; there was a slightly congested pharynx and the uvula was relaxed and œdematous. In the afternoon of the same day the interesting cutaneous manifestations made their appearance. The uvula at this time was surrounded by a gigantic bleb and thrice its normal size and the tongue was enormously swollen. Mastication and deglutition were utterly impossible. The whole face, lids, lips and upper extremities, prominently so the dorsal surfaces of the hands were the seat of considerable œdema, with areas of pronounced lividity here and there. It did not pit on pressure and was accompanied by intractable pruritus, tingling and burning. The knuckles were greatly swollen and the dorsal aspect of the hands exhibited erythematous patches and papules variously shaped and sized, interspersed between these livid areas. The lower extremities were covered with erythematous patches and gigantic papules, grouped, ringed, confluent, circinate or displaying variable configurations. The skin of the abdomen was covered with livid and dark red efflorescences, variously shaped and sized. The itching was extreme and incontrollable and the annoying glossitis was a source of much suffering to the patient. The eruption lasted several days, when it gradually began to involute and the distinct concentric or ringed shape of the lesions became apparent, while the œdema slowly decreased. At no time did the temperature exceed 100.5 F. The patient complained of intense thirst, but every attempt at swallowing was distressing. Ice was resorted to to keep this morbid longing for water in abeyance.

The treatment consisted, aside from what has already been mentioned before, in the external use of alkaline washes, such as Dobell's solution, with the addition of menthol, cocain and adrenalin solution, which was repeatedly dabbed on the affected integument. The same mixture was utilized as a mouth wash and gargle. The uvula was with great difficulty scarified and the escape of a serous fluid thus facilitated. The bowels were kept active with calomel, followed by saline cathartics, and large doses of salicylate of sodium in conjunction with extr. belladonna was exhibited. The diet was restricted to fluids and fruit acids. After ten days' confinement to bed, the patient was strong enough to leave it, greatly emaciated and anæmic, which called for the administration of bitter tonics and mineral acids.

The theory the author would like to advance for the cycle of phenomena as presented by this case is as follows: The process was originally the outcome of an autointoxication; what the toxine was thus absorbed—and absorption must have taken place from the alimentary canal—is unfortunately a matter of conjecture. Whether it was indol or scatol or else the product of albuminous decomposition cannot very well

be determined. The toxalbumin entering the circulation, engendered a change in the normal metabolic steps, or in other words caused a check in the complete cycle of ultimate elimination. The toxic principle coming in contact with the vaso-motor nervous system exerted its deleterious effects upon it, thus eventuating into a paralysis of the vaso-contractors of the peripheral vessels of the skin and mucous membrane; this would explain the pronounced œdema of both the skin and the buccal and pharyngeal mucosa. Whether the obnoxious substance has been ingested with the food or the result of distinct microbic action *per se* is another question. That an unstable nervous constitution may have been at the bottom of it, acting as a predisposing factor, must also be taken into consideration. This case is of unusual interest not alone to the dermatologist, but also to the general practitioner. But few cases have been recorded in the literature on this subject, and the etiology has been studied by Quincke and others, who have devoted their energies in clearing up the obscure origin of angioneurotic œdema and other allied affections of the skin.

166 East High street.

ECHINACEA.

In the *Medical Council*, March, there is a description of this drug plant by French. *Echinacea angustifolia*, variously known in different localities as Black Sampson, Nigger Head and Purple Corn-Flower, is a perennial herb belonging to the natural order Compositæ, which grows abundantly on the marshes, prairies and elevated table-lands of the central and western portions of the United States. It has a stout, erect stem, which attains the height of two or three feet, alternate leaves varying from lanceolate to lance-linear, rose-purple composite flowers appearing from May to July, and thick, black roots, having a pungent taste, which are the parts used in medicine. It is reported to have been used for a long time by the Indians as a remedy for snake-bite and other septic conditions. It has been prepared as the tincture, fluid extract, and powder. Absorbed into the system, it acts as a glandular stimulant, promotes the flow of saliva, causes increased diaphoresis and diuresis, stimulates tissue metamorphosis and improves the general condition of the blood. Very few regular writers say anything of this drug, but by eclectics and in journal reports it has cured almost everything from snake-bite to sexual inability. The writer reports no trustworthy results from the experimental standpoint which would support the extravagant claims made for its value, especially in septic conditions such as puerperal infection and furunculosis.

PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D., Windsor Mills, Quebec.

The attention of all the medical men in the Province has been taken up during the past month with the situation at Quebec. The Legislature has been dealing with the Medical Bill and several important amendments have been made to the bill as presented by the College of Physicians and Surgeons. Dr. Jobin has been in charge of the bill, and Dr. Bissonnette vigorous in opposition to a certain clause therein. Dr. Bissonnette cannot be reconciled to the five years' clause, and the representatives of the general public, who would benefit most by the change, showed a majority in favor of the amendment. The debate was long and heated. Dr. Bissonnette was determined to have the student study four years instead of five before granting a license. Hon. Mr. Gouin read a letter from the Rector of Laval University, favoring the longer term. The position of McGill is of course fixed, as the course in future is to be five years. All the doctors in the House, with the exception of Dr. Bissonnette, supported the five-year clause, but notwithstanding their united efforts the new clause was struck out by a vote of 32 to 22. The bill was then finally passed. The osteopaths made a determined effort to defeat certain portions of the bill, and a delegation went down to Quebec to protest against some of the clauses dealing with illegal practice which included their work.

Dr. Edouard Laberge's report upon the medical inspection of schools in Montreal goes to show how much it has been required. Of 43,241 children in attendance, 20,682 have some physical defect or illness. Of the 124 schools only about 20 may be considered in first-class order from every point of view. The following diseases were found in children attending school: Chorea, 22 cases; heart troubles, 62 cases; lung troubles, 108 cases; skin diseases, 379 cases; eye diseases, 311 cases; enlarged tonsils, 2,107 cases; diphtheria, 4 cases; scarlet fever, 2 cases; measles, 7 cases; whooping cough, 7 cases; mumps, 8 cases; erysipelas, 12 cases. The following defects were found among those examined: Badly nourished, 931; deformity of vertebral column, 160; deformity of chest, 110; deformity of limbs, 155; defects of vision, 1,023; defects of hearing, 417; difficulty in nasal breathing, 887; decayed teeth, 9,393.

The following cases and reports were submitted to the Montreal Medico-Chirurgical Society:—

Living case of gall stones, cancer of stomach, operations and recovery, by Drs. Garrow and Peters.

Living case of cervical rib with pressure on brachial plexus, by Dr. C. K. Russel.

Hysterical paraplegia cured by hypnosis, Dr. Shiner.

More recent methods in the diagnosis of renal and ureteral conditions, Dr. Geo. Armstrong.

Rupture of subclavian artery and brachial plexus by direct violence, Dr. Bell.

Cerebellar cyst operated upon with recurrent symptoms, Dr. Robins.

Heart, showing four aortic cusps, Dr. White.

Notes on pathology of adenoids, with report of cases of tuberculous adenoids, Dr. E. H. White.

Unusual umbilical hernia, Dr. Armstrong.

The March meeting of the District of St. Francis Medical Association was held in the Monument National. In the absence of the president, Dr. Banfill, the chair was taken by Dr. Edgar.

After the routine business, a notice of motion was handed in by Dr. Rioux, proposing a change in the tariff for several items, namely: that for all certificates for benefits, sick claims, etc., a charge of fifty cents shall be made; that for death claims a charge of three dollars shall be made; for insurance examinations in friendly societies, two dollars, and in regular companies, five dollars. A long discussion followed, and one matter after another was brought up in which fees were ridiculously small, for example, two dollars for an anæsthetic during a dental operation. It was finally decided to appoint a committee to revise the whole tariff, with special attention given to the above-mentioned particulars, the committee being intrusted to draw up a circular letter to be posted to the medical men of the district, in order that an intelligent discussion might be carried on at the next meeting. Drs. Edgar, Camirand, Darche and Austin were selected for this duty.

Dr. Williams then read a paper upon the important symptoms in appendicitis, with their special bearing upon the prognosis. The pulse and the general appearance of the patient were pointed out as being probably the most reliable guides. Operation should follow the diagnosis as soon as possible. The paper was practical and vigorous, with clear-cut ideas, and the physician was advised to use every modern aid to clinch the diagnosis, and when certain, or practically so, operate at once.

Dr. Darche followed with a paper on adenoids. He showed the bad effect upon the growing child and urged the family physician to be more particular about advising operation early. The facts were known to all, it seemed unnecessary to repeat them, but the number of cases neglected or overlooked by the general practitioner was still far too large. The curette was the best instrument for removal and ethyl bromide the best anæsthetic. In very small children an anæsthetic might be dispensed with.

Several interesting cases were reported by members. Dr. Williams reported a case of direct inguinal hernia and another of encysted hernia in a man of 35 years of age.

Dr. Ledoux mentioned a case of post-operative bleeding in vaginal hysterectomy. It came on in the first place two hours after operation, and was easily controlled by pressure. A second hæmorrhage commenced on the tenth day and was controlled in the same way. At the end of the third week, when the patient was up and about and ready to go home, the third hæmorrhage took place. In each case the bleeding was of a capillary nature from the lateral wounds, and not from the stumps. There was no trouble during the operation with hæmorrhage, and no history pointing to hæmophilia.

Dr. Amedée Marien, professor of histology at Laval University, has been appointed head surgeon of the Hotel Dieu in the place of the late Sir William Hingston, a notice of whose death was given in the CANADA LANCET last month. Dr. Marien, who has been connected with the staff of the Hotel Dieu for the past six years, studied surgery in Paris for a considerable time, and was a contributor to the treatise on gynæcology published by Professor Leguen in 1898. He is president of the Société Medicale de Montreal, a director of the Union Medical du Canada, and corresponding member of the Société Anatomique de Paris.

ŒDEMA OF THE PHARYNX.

In the *Medical Record*, March 2nd, there is a description of a case by Link, of Indianapolis, in which rapid œdema of the pharynx required a tracheotomy. The patient was found at 12 o'clock at night, apparently choking; one hour before he had had a tonsil lanced, but on examination of the throat the pharynx was found to be almost occluded by swelling, which protruded upon it from the sides and front. An attempt to reduce it by adrenalin solution was followed by an attempt at intubation with a hard rubber vaginal syringe, the only instrument at hand, but in vain. Then a tracheotomy was done, the patient having become unconscious and no anæsthetic being required. The rubber tip was inserted into the tracheal wound, artificial breathing used, and soon the patient became conscious and was able to speak, the œdema very rapidly disappearing. Whether there was œdema of the larynx, it was impossible, of course, to say, but the œdema of the pharynx seems to have been the real cause of the obstruction to respiration, and it arose as a concomitant to an infective process in the tonsil, which was inflammatory, but in which pus was not formed.

CURRENT MEDICAL LITERATURE

MEDICINE.

Under the charge of A. J. MACKENZIE, B.A., M.B., Toronto.

PROGNOSIS IN THE CONSUMPTIVE.

In the *Medical Record*, Jan. 19th, Bleyer, of New York, discusses the determining factors in the prognosis of cases of consumption; in this the whole question turns upon the recognition of the disease in its earliest manifestations, as it is admittedly practically incurable in its later stages, and that there is a stage when it is practicable to recognize it indubitably before it has reached a critical condition. The conditions under which we may hold out a good prognosis for the early stage of the tuberculous are the following:

1. The disease in the stage preceding any evidence of a lesion, or when the tuberculous lesion is very small and isolated at the apex of one lung.
2. The progress of the disease has been slow, so that there have been slight evidences of failure of the general system during many months, and with no evidence of a recently accelerated rate.
3. The original state of the constitution was moderately good.
4. The age of the patient is from about twenty years to middle life.
5. The existing state of the health is moderately good, so that, by careful regulation, a due amount of nitrogenous food and of exercise may be taken with comfort.
6. The rates of pulsation and respiration do not vary materially from those in health.
7. Cheerful willingness to obey the prescribed directions, and such pecuniary and domestic circumstances that the whole arrangement necessary to the treatment of the case may be carried out.
8. Due freedom from anxiety, and removal from whatever conditions are unfavorable to the restoration of health.
9. Continuous breathing of fresh air, with all hygienic accompaniments, etc.

The conditions which, on the other hand, may be considered as unfavorable are (1) when in the lung the lesion can be detected below the clavicle, the extent of the lesion is important because of the interference with the vital functions of the lungs and the circulation; (2) when the lesion is present in both apices, as indicating a tendency to a more general diffusion; (3) when softening and breaking down of tissue has taken place, in these cases if very limited it may be possible to find reason for

a hopeful prognosis after careful watching of the case for some time if there is disappearance of the signs with re-establishment of the normal vesicular breathing in the surrounding tissues; (4) when the feebleness of respiration is very great, so that there is general flattening of the chest wall, this is particularly noticed in females and in those of sedentary occupation or of poor development; (5) when the patient cannot fully pursue the system of deep respiration from want either of respiratory power or of appreciation as to the right method of performing it, in many from old habit, in others from nasal or other obstruction; (6) when hæmoptysis is present even though there is no evidence of progress of the disease or at least very slow progress; the importance of this sign is that it evidences continued want of freedom of the circulation in the lungs as a whole.

The following conditions in the general system unfavorably affect the prognosis :

1. When the powers of the general system are greatly enfeebled.
2. When the capability of reaction is found by experience to be very small.
3. When the appetite, digestion, or assimilation is very defective, and particularly when certain kinds of fats, milk, and other kinds of animal food cannot be sufficiently taken, even after careful training.
4. When food, clothing, or proper shelter is deficient in any marked degree.
5. When there is oppressing anxiety.
6. When such a patient cannot be removed from injurious conditions, such as foul or heated air, exposure to cold, and sedentary occupations.
7. When self-abuse or other degenerate practice in either sex is or has been largely practised, or when there are confirmed habits of excessive indulgence in alcoholic liquors or tobacco.
8. When the system is highly sensitive, so that the whole organization is in a state of perpetual unrest, or when it is so deficient in nervous sensibility and activity that it does not respond readily to the ordinary stimuli.

As to the numerical argument with regard to prognosis, there can be no doubt that as in all general diseases it can be only suggestive, at the same time it affords data that may always be useful in forming and supporting a judgment. The writer examines the history of a series of one thousand cases extending over a period of twenty years, six hundred and twenty-one were males and three hundred and seventy-nine females, and the following data are given :

Fifty-four per cent. had lost father, 46 per cent. the mother, and 28 per cent. had lost both parents. In 25 per cent. only were both parents

living. Their average at death was 50.8 years, with an increased duration of 4.7 years on the part of the fathers. The most frequent age at death was 35 to 55 years, whilst only 11 per cent. died under the age of 35, and some lived to the age of 95. Eighteen per cent. had experienced feeble health before birth of the patient, and 34 per cent. throughout life. In 22.7 per cent. one or both of the parents had led unsteady lives; 21.7 per cent. of the parents had died of consumption, whilst in 2.8 per cent. the grandparents, in 23.3 per cent. the brothers or sisters, and in 9.1 per cent. the uncles or aunts had died of the same disease. They had suffered from rheumatism in 22 per cent., from asthma in 9.4 per cent., from liver disease and gout in 9 and 7.2 per cent., and from fevers, ague, insanity, and diabetes in between 4 and 5 per cent. Presumed scrofulous and syphilitic affections were extremely few and difficult to compute.

The age of the parents at the birth of the patients was, in half of the cases, between 25 and 35 years, and only in 2 per cent. was it less than 20 years. The number of children was very large, viz., an average of 7.5 to a family, and in some families there were 23 children. The patient was the first child in 20 per cent., and the first, second, or third in half of the whole cases; 40 per cent. of the parents' children had died.

The average age of the patients at the period of the inquiry was 28.8 years, and 44 per cent. of the whole were between 20 and 30 years of age. In only 13 per cent. were they under the age of 20, and a few were at the age of 60. Twenty per cent. had been feeble at birth, but only 22 per cent. had suffered from feebleness of the general health, and 17 per cent. from generally defective appetite. In 12.6 per cent. the lungs had always been delicate. Only 2.5 per cent. had been dry nursed, 25.4 per cent. had perspired very freely, and 25 per cent. had never worn flannel next the body. Sixteen, 65.4, 60, and 41 per cent. respectively, had not had measles, scarlet fever, smallpox, whooping-cough, or nose and throat affections of various kinds and the frequency of any long-continued ill effects from these diseases was insignificant. Twelve and one-eighth per cent. had suffered from enlarged glands, and 4.5 per cent. from affections of the eyes, but otherwise the evidences of scrofulous diseases existed in a very small per cent. Sixteen and one-seventh per cent. had suffered from acute conditions of the lungs, and 14.8 per cent. from rheumatism, whilst typhoid fever and frequently diarrhoea had occurred in 8.0 per cent. Malaria had occurred in 5.6 per cent., and liver disease in 4.3 per cent. of the patients.

Forty and one-fifth per cent. were married, and of these up to the time of inquiry 13 per cent. were childless. Their average age at the time of the birth of their first child was from 20 to 25 years, and in only 9 per cent. were they under the age of 20. The number of children was

one and two in 44 per cent. and one, two and three in 55 per cent; 38 per cent. of the children had died, and in 43 per cent. the general state of the health of the children was bad. Abortion had occurred in 46.2 per cent. of the child-bearing married women, and some had suffered eight abortions.

Eleven and one-sixth per cent. had committed sexual excesses, 18.2 per cent. had masturbated, 22 per cent. had suffered from involuntary emissions, 16 per cent. had had syphilis and 38.5 per cent. gonorrhœa, 29 $\frac{1}{8}$ per cent. had led a hard life at some period, 24.5 per cent. had drunk to excess, and 48 per cent. had smoked tobacco, 19 $\frac{1}{8}$ per cent. had kept late hours, and 22.2 per cent. had suffered some anxiety. In 70 per cent. there was complaint as to the nature of their employment or conditions, as exposure, long hours, close rooms, bending posture, fumes, dust, etc.

Thus a large proportion of the patients had been born with feeble constitutions, had had feeble short-lived children, had suffered from the effects of injurious occupations, and had been injured by the anxieties and immoralities of life. They were thus influenced by the original and acquired causes of disease, and the latter would seem to be the more important.

Generally speaking, then, whatever conditions will so affect the constitution as to induce a disease will, when the disease occurs, be so many reasons against the cure. So in forming our judgment as to prognosis we must first take into consideration the leading conditions to which the disease may have been due, with a view to ascertaining the degree of their influence over the constitution and the probability of their removal. The first place must be given to those originally affecting the system, and to the sex, the prognosis is less favorable in those whose parents manifested defective constitution or this special disease, and in females all conditions, and this particularly, are more serious. The relation of acquired causes of disease must be considered in the proportion to their effect on the constitution as giving a key to the resisting powers; their effects are, however, of the first importance, as also are those habits which are the cause of or are usually associated with weak resistance.

THE CAUSES OF COMMON BALDNESS.

In the *Medical Record*, Feb. 9th, there is a discussion of this subject by Parker, of Detroit, embodying the results of an investigation carried on for twenty years. Baldness may be divided into three classes, alopecia vulgaris, alopecia areata, where there are circumscribed and

generally circular patches of baldness on the sides or back of the head, and alopecia secundaria, due to other diseases. The first division is common baldness, the loss of hair from the top of the head, forming 90 per cent. of all cases.

The writer finds the cause of common baldness in the absence of upper chest breathing, the connection being as follows: the residual air is the air left undisturbed in the lungs by respiration; it is warm, saturated with moisture; it is five times greater in amount than the tidal air; it contains among its constituents oxygen, carbon dioxide, nitrogen, argon, and organic matter. Whenever residual air or expired air is kept chambered in the presence of warmth and moisture it undergoes change, and develops a soluble poison which is capable, when present in the blood, of exerting a disturbing influence on the growth of the hair. Respiration may be carried on without embarrassment by the lower parts of the lungs, and so there may be residual air unchanged in the apices. The hair on the top of the head is more easily affected inasmuch as it lies over the hard non-vascular aponeurosis, and its supply of blood is limited.

In support of his contention the writer evidences observations over many years, that persons afflicted with baldness do not use upper chest breathing, and he has never seen a case who properly used the upper part of the chest who was bald. In addition to this, the results of treatment are quoted, which were in direct proportion to the thoroughness with which directions as to respiration were carried out; the following is given as a typical case:—

“After one week dandruff, when present (and this affection is present in about 80 per cent. of all cases of common baldness) entirely disappeared. At this time, too, the hair, which is frequently either dry and harsh, or unusually oily when common baldness is present, assumed a natural appearance. Then some weeks later, usually five or six weeks from the time of starting the treatment, new hair began to make its appearance. The new growth as a rule appeared first among the hairs about the margins of the bald areas, and after multiplying there invaded the bald patches by extension. The new hair growth, even after being well started, developed slowly, so that months or even years were passed before even a moderately sized patch of uncovered scalp became covered with new hair.”

Interruption in the treatment was accompanied by a corresponding interruption in the progress of the case toward recovery.

On the supposition that if the expired air could be kept chambered in the presence of moisture and warmth outside the lungs there would be developed the same conditions as those within, a 2-litre flask was filled with distilled water and sterilized, then all but a little of the water

was displaced by expired air, agitated and then incubated at body temperature for ten days. The resulting mixture had all the appearances of distilled water, was neutral in reaction, colorless and odorless. The animals used for the experiments were dogs, hens and pigeons. 5 to 10 c.c. were injected under the skin of each animal per day with an ordinary syringe. This was done once a day for five months. At the end of this period the hens and pigeons had lost completely their coat of feathers, while in the case of the dog the abdomen, sides and hind legs were denuded of hair. Controls with similar animals were made, the injection being distilled water, water impregnated with atmospheric air, and water impregnated with freshly expired air. They were continued daily for five months. No effect of any kind was observed. Experiments on fur-bearing animals were negative. The anatomical relations of hair and fur are quite different. These investigations seemed to justify the conclusion that there was developed in warm expired air an organic substance having a special toxic effect. This is called "trichotoxin."

Since that time this substance has been investigated and it has been found that it can be extracted from watery solution by ether, that it appeared as feathery crystals, that it was not precipitated by the precipitants used for ptomaines, that there were apparent no bacteria either in the solution or for that matter in expired air as a rule. This seemed to give support to the position that trichotoxin was not a decomposition product of the organic matter of expired air, as no bacteria were found.

It was found impossible to isolate it by evaporation. Then by test with absolute alcohol it was found that it consisted of two substances, one of which was soluble and the other not. The latter was proven to be the active agent. It was found that trichotoxin begins to develop in about 6 days, one gallon of expired air develops 1-53 grain of trichotoxin and 1-300 grain of stærotoxin, the soluble part of the mixture. By forcing air to bubble through a column of distilled water it was found that the water takes from the air the constituents that go to form the substance. It is precipitated by various barium solutions. While a definite temperature is not necessary to its development it was proved that a temperature of 80 C. destroyed the trichotoxin, as it does all ferments.

Experiments are being undertaken to determine the chemical and physical characteristics with greater definiteness, and further clinical evidence will be welcomed.

GYNÆCOLOGY.

Under the charge of S. M. HAY, M.D., C.M., Gynecologist Toronto Western Hospital, and Consulting Surgeon Toronto Orthopedic Hospital.

PERITONEAL DRAINAGE.

John L. Yates (*Surg. Gyn. and Obst.*, Dec.), after a series of experiments on the local effects of peritoneal drainage, comes to the following conclusions: Drainage of the general peritoneal cavity is physically and physiologically impossible. The relative encapsulation of the drain is immediate, and the absolute encapsulation occurs early and can be retarded but not prevented. The serous external discharge is an exudate due to the irritation of contiguous peritoneum by the drain. There is a similar inward current from the potential into the general cavity. The external exudate diminishes remarkably with the formation of encapsulating adhesions. The adhesions, under normal conditions, form about any foreign body, and their extent and density depends on the degree and duration of the irritation. Primarily fibrinous, the adhesions become organized in a few days (three days in dogs). After irritation ceases, their disappearance depends principally upon a mechanical factor—the ability of the involved surfaces to pull themselves, or to be pulled, loose. Drains should be the least irritating, and should gradually and finally be removed as soon as possible. After a drain is inserted all intraabdominal movements should be reduced to a minimum. After their removal, intraabdominal movements should be stimulated, to aid the disappearance of remaining adhesions. A drain in the presence of infection is deleterious to peritoneal resistance. Postural methods, unless destined to facilitate encapsulation, are both dangerous and futile, as far as drainage is concerned. Peritoneal drainage must be local, and unless there is something to be gained by rendering an area extra-peritoneal, or by making from such an area a safe path of least resistance leading outside the body, there is, aside from hæmostasis, no justification for its use.

PELVIC SUPPURATION.

In the treatment of pelvic suppuration, Ralph Worrall (*Brit. Gyn. Jour.*, Nov.) advocates the systematic employment of both routes. In all cases in which it is evident from the symptoms and physical signs, that pus exists in the pelvis, the treatment should be operative. When the patient is desperately ill, operate at once. When it appears that the patient is likely to improve with rest and supporting measures, postpone operation until the symptoms have subsided and the temperature becomes

normal. Opening of the abdominal cavity should always be preceded by curettage at the same sitting. Always open the abdominal cavity first through the posterior vaginal fornix. If serious constitutional symptoms are present at the time of operation, and if the pus can be evacuated through the posterior fornix, the pelvis should be thoroughly cleansed, powdered with iodoform and the pus sacs lightly packed with gauze. In a week the patient's condition usually is so much improved that abdominal section may be performed and the pus sacs removed. If there are no constitutional symptoms, remove the pus sacs at the time of the first operation. If the uterus or appendix appears to be involved in the septic process, it should be removed. Flushing should be omitted, except when there is general purulent peritonitis.

OPERATIVE TREATMENT OF TOTAL UTERINE PROLAPSE.

Holst (*Centralbl. f. Gynak.*, Leipzig, 1905, No. 51) recommends that in women past the menopause, who suffer from total prolapse, the uterus should be removed by supra-vaginal amputation, the stump covered by peritoneum, and then stitched to the abdominal wall. In this way the anterior and posterior vaginal walls are held up higher than in the ordinary ventri-fixation. Any cystocele remaining could be treated by a limited anterior colporrhaphy.

TUBERCULOUS PERITONITIS IN THE FEMALE.

In the February number of *Surgery, Gynecology and Obstetrics*, the above subject is treated by Dr. Addison Bybee, of Chicago, and his conclusions are somewhat at variance with those generally accepted by the profession. He has studied 872 autopsies which showed 30 cases of tuberculous peritonitis. His percentage showed 2.2 males to 1 female, which is just about the reverse of reports made by other observers. The Mayos find tuberculous peritonitis four times as frequent in the female as in the male, and Osler finds the statistics from a similar source showing a relation of 131 females to 60 males. Continuing, the writer says that:—

1. The female peritoneum is relatively immune to tuberculosis.
2. Infection of the peritoneum through the genital tract is rare, or never occurs, at least not with computable frequency, but it is possible to be misled by figures.

The writer further says that if the genital tract is an important factor in tuberculous peritonitis in the female, as it is in the suppurative type of peritonitis, we would probably conclude that there is an ascending infection. And this does not seem to be the case. In the pus cases, in the infection with the gonococcus for example, there is:—

1. A vulvitis.
2. A vaginitis.
3. An endocervicitis.
4. An endometritis.
5. An infection of the Fallopian tube.

In genital tuberculosis, according to authors, it is the other way around, the upper portion of the genital tract being more frequently affected.

Dr. Bybee finally concludes that:—

1. Peritoneal tuberculosis is two to four times as frequent in the male as in the female.
2. The genital tract of the female is not a factor in the ætiology of peritoneal tuberculosis.
3. The genital tract of the female furnishes a degree of immunity to peritoneal tuberculosis above that of the male.

OPHTHALMOLOGY AND OTOTOLOGY.

Under the charge of G. STERLING RYERSON, M.D., L.R.C.S., Professor of Ophthalmology and Otology Medical Faculty of the University of Toronto.

THE RESULTS OBTAINED FROM THE RADICAL OPERATION FOR CHRONIC PURULENT OTITIS MEDIA.

Dench, of New York, in the *Laryngoscope* for October, gives his results of the radical mastoid operation under the following heads:—(1) The efficiency of the operation in protecting the patient from intracranial suppuration. He has records of 193 cases of his own, and in none of them has there been any evidence of any intracranial lesion after the suppuration has been relieved. He concludes, therefore, that the radical operation does truly protect the patient from the dangerous sequelæ of middle ear suppuration. (2) The efficiency of the operation in causing a permanent cessation of the ear discharge. In this regard his results have been most satisfactory. He has found that even where a small amount of discharge has persisted for weeks or even months after the operation, that under simple measures of cleanliness it has all eventually disappeared. He points out in this connection that the cavity left after this

operation, when all discharge has ceased, is lined by integument closely applied to its bony walls with very little connective tissue substance intervening; that, further, the cavity is a blind pouch in which desquamation of epithelium takes place and accumulates. If this accumulation remains in the cavity for any length of time the sublying epithelium may be made sodden, and on removing by syringing this accumulated epithelium some pus may be seen, and the cavity look far from healthy. In these cases the operation is not a failure, the apparent relapse is due simply to the fact that the skin lining the operation cavity has been improperly nourished. Simple irrigation from time to time and sterilization with an alcoholic solution of perchloride of mercury, and subsequent dusting with some bland non-irritating powder, as boric acid, xeroform or zinc oxide, will cause the cavity to become quite dry. He says—and in this he must be borne out by those having large experience in this operation—that these attacks of desquamation, if so treated, occur less and less frequently as time goes on, because the integument gradually adapts itself to its new habitat, and becomes better nourished and therefore stronger. (3) The immediate and remote effect of the operation on the function of hearing. Dench has had in this respect excellent results. Out of 111 cases in which the hearing records were kept, the hearing after the operation was good in 99, was fair in 9, and only was bad in 3. By "good hearing" he means when the whispered voice was heard anywhere from 5 to 15 feet; "fair hearing" when a whisper was heard from 3 feet to 6 feet; and in the remaining three cases the hearing was worse than it was before the operation. He says that the hearing will not be greatly interfered with as a result of the operation if the operator is careful neither to dislodge the stapes nor to impact it in its oral window. He does not mention at all the extreme importance of keeping down the growth of granulations in the tibinal wall of the tympanum either by judicious packing or other measures during the after treatment. He makes an interesting observation which does not appear to have been mentioned before, and that is that in his practice he has a number of cases which had been subjected to this operation some years ago. In these cases, he says, the hearing has steadily improved, and believes it is owing to the gradual mobilization of the stapes by the sound waves. If this be so, it may indicate the possibility of the radical operation being in use in cases of deafness from purely middle ear causes. (4) The effect upon the integrity of the facial nerve. In 15 cases he had facial paralysis; he does not say of what degree, or whether it came on immediately or some days afterwards, but they all recovered their functions entirely.—*The Australian Medical Gazette*, Jan. 21, 1907.

AUTOINTOXICATION IN RELATION TO THE EYE.

G. E. de Schweinitz, Philadelphia (*Journal A. M. A.*, February 9), discusses the question of autointoxication, more especially that from the gastrointestinal tract, in relation to the eye. He finds that a number of morbid ocular conditions, including optic neuritis and retinitis, ocular muscle anomalies, affections of the cornea and sclera and diseases of the uvea, may possibly or probably be referred to this cause, and points out the importance of accurate and thorough urine investigation by the latest clinical methods of diagnosis in these cases. He summarizes as follows: "Although we do not know the entity of a single autointoxication, except the acidosis of diabetic coma, and although we know that no known auto-intoxication is to be attributed to any known end-product of any known metabolism, to quote Alonzo Taylor, we do know, from clinical analogy at least, that 'autointoxications exist, even if their true nature is as yet a secret.' We do know, too, that after food is swallowed and before the end-products of assimilation are eliminated there may be processes arising under abnormal conditions which yield poisonous products foreign to normal metabolism, the reabsorption of which may be followed by definite symptoms. We have reason to believe, in the absence of other causes, that ocular troubles may also arise largely in the corneoscleral and uveal tracts, and probably in so far as the nervous apparatus is concerned, in manifestations to which we apply the term acute or chronic retrobulbar neuritis. We do not know whether these toxins, whatever they may be, actually are the only and sole cause of these conditions, but such examinations as have been made by Elschnig, by Kraus, by Grayer, by Edsall and by myself at least indicate that, to use Elschnig's term, they may be considered accessory causes. As Edsall and I have said, they may be able to play a certain part in the production of the symptoms, and at times are probably the direct cause of their continuance, even when other more commonly accepted etiological factors have ceased to be active."

TREATMENT OF TRACHOMA.

Smith has had excellent results in the treatment of trachoma from the use of boric acid and protargol, the former for its mechanical effects, the latter for its chemical. After instilling cocain, a probe or match is mounted with absorbent wool twisted into a firm olivary knob. This is soaked in a 25 per cent. solution of protargol and then dipped in boric acid, which coats it over. The eyelids are everted and the swab is rubbed

over the whole surface of the palpebral conjunctiva until bleeding is produced. This causes a uniform scarification of sufficient intensity and little likely to cause scarring. The treatment is repeated daily. As the condition improves and the lids get smoother, the use of the boric acid is abandoned. Smith condemns the use of copper sulphate and silver nitrate. —*Australasian Med. Gaz. and Jour. A. M. A.*

FOR EARACHE.

Dr. Solt, of Mitau, recommends the following :—

Ichthyol	1 part
Glycerini	7.50 parts
Aquæ destillatæ	7.50 parts

M. S. : Instil, three times a day, a few drops of this mixture into the ear.

EYESTRAIN IN EARLY PRESBYOPIA.

A. Emmerson (*N. Y. Med. Jour.*, Dec. 29th, 1906), in discussing eyestrain as a factor in headaches, says that there is a class of cases which frequently fail to receive proper treatment namely, the early presbyopias. The individual with normal eyes and health goes to the age of 45 before glasses are required for near work. But if there is a moderate impairment of health or latent hyperopia is present, the patient begins to have headaches at 40 or even sooner. One of the principal reasons why the eye condition is overlooked is because the mind of the layman associates the use of glasses for near work with oncoming senility, and as a woman is only as old as she looks and a man as old as he feels, the imputation of getting old is sharply resented. That the power of accommodation fails rapidly after the age of 25 is unknown to the patient.

There is such a condition as premature presbyopia, and in many instances we are obliged to give glasses for near work even in the twenties. Among women all the head symptoms occurring between the ages of 40 and 50 are generally attributed to the menopause. Many of these cases would be markedly relieved of their troublesome head symptoms by the proper use of glasses for near work.

LARYNGOLOGY AND RHINOLOGY.

Under the charge of PERRY G. GOLDSMITH, M.D., C.M., Toronto, Fellow of the British Society of Laryngology, Otology and Rhinology.

A PRELIMINARY NOTE ON RINNE'S TEST.

Richard Lake (*Lancet*, Feb. 23, 1907) expresses his regret that there should be an impression that British aurists have an incomplete knowledge of tuning fork tests. Stern's brochure, published in 1903, has not a single reference to any British aurist. Lake advises the younger aurists to study carefully the tuning fork tests, as the advantages to be gained are enormous. Speaking of Weber's test, he says it is quite useless and often misleading, except in cases of hysteria and malingering. Rinne's test alone is not sufficient. We must take in conjunction with the proportional test, the conversational voice, the lowest whispered voice, and the acoumeter. The acoumeter is preferred to the watch, because the tick of the watch varies in both pitch and volume, whereas the acoumeter gives forth an unmusical sound, and, being mechanically incapable of more than a certain volume, will give the same results in everyone's hands.

AN OPERATIVE METHOD FOR THE REDUCTION OF HYPERTROPHY OF THE INFERIOR TURBINATE.

D. A. Kuyk, M.D. (*Jour. A. M. A.*, March 2, 1907), writes on turbinal hypertrophy in which a method of treatment is advocated which gives not only permanent results, but relieves with a minimum of instrumentation. He is convinced that there is an association between collapse of the *alæ nasi* and the turbinated body, since he has never seen collapse when it is present; and almost invariably finds it follow removal of the turbinated body. (Surely Kuyk has seen turbinal hypertrophy associated with collapse of the *alæ*.—P.G.G.)

Kuyk's method is as follows: One or two incisions through the mucous membrane are made well down to the bone with a broad nasal saw, the bone being cut into to a depth depending on the nature of the bone, whether cancellous or vitreous, which is easily detected by the sensation imparted to the hand. The edges of the incised mucous membrane are then packed into the incision in the bone and the flaps held in place by cotton wool saturated in tincture of benzoin and flexible collodion. The advantages claimed are as follows:—

1. Preservation of physiologically active tissue.
2. Freedom from disagreeable reaction or complications.
3. Absence of shock, since light local anæsthesia only is necessary.
4. Freedom from aggravation of existent disease in related cavities.
5. Ease and speed in performance, the instruments used being few and simple.

THE NASO-PHARYNX AND THE THROAT IN THE DEAF-MUTE.

Dr. J. Kerr Love, of Glasgow, writing in the *Fraenkel Festschrift* number of the *Annals of O. R. L.*, says we are on the eve of a revolution in the education of the deaf and dumb, and that revolution will be based on the examination of deaf mutes by the clinical observer. There is at present no scientific classification of the deaf for educational purposes. The State in Germany and the individual teacher in Britain and America settle the deaf mute's education much as his religion and his politics are settled for him. It is necessary that the deaf-mute be carefully examined a year after he has been at school in order to determine the method by which he may be best taught. About 20 per cent. of deaf mutes hear vowels, consonants, or words when loudly spoken into the ears. These are the semi-deaf. A much smaller class hear nothing, but because they have lost hearing after three years of age, speak a good deal. These are the semi-mute.

Nose and throat affections have a special importance in the semi-deaf and semi-mute. All semi-deaf and semi-mute children should be taught orally. Oral teaching will be much more successful if the resonating cavities in the throat and nose are cleared of obstruction. Attention is drawn to the *lamentable* (italics reviewer's) fact that there is scarcely a deaf-mute institution in the world where this is regularly and systematically done. Love examined the pupils at the Glasgow institution ten years ago and found 70 per cent. had enlarged tonsils with or without adenoids. In 33 per cent. operative measures were found advisable. In orally taught pupils the nose and naso-pharynx should be cleared up, whether the growths are causing general symptoms or not. Love makes the following strong and pointed remarks. (The reviewer, who has been in a position to observe deaf mutes for some years, but who has through ignorant prejudice been prevented from doing anything to help these children, thinks Love's remarks quite proper): "It is useless to attempt to educate an intellectually dull child, who is totally deaf, by the oral method; it is educationally a crime to neglect the hearing and remaining speech of the semi-deaf and semi-mute and to educate these by any but the oral method."

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EDITORIAL.

CANADIAN MEDICAL JOURNALS.

It has been said that to contribute to the pages of a Canadian medical journal is tantamount to consigning the article to the fire. This is a strong indictment, and should be examined on its merits.

1. In the first place, Canadians are deservedly proud of their country. It occupies a front place in education and commerce, and her people are among the sanest of nations,—and we use the word “nation” advisedly. It would appear that we should have a national literature. The monthly, weekly, and daily publications of Canada stand high when compared with similar publications in other countries. We are now becoming proud of our writers on history, the sciences, and we can point to poets that do credit to the land of their birth or adoption. The man would be recreant to his country that would wish that these had not written, or had given all their writings to a foreign market.

2. But Canadians should be supplied with literature from their own writers. Burns is Burns pre-eminently to Scotland, as Byron is Byron to England, and Moore is Moore to Ireland. So Lampman and Campbell are Canadians to the Canadian. We admire Hawthorne and Longfellow, but we admire and love Lampman, Campbell and Lighthall. Nothing tends more to make a nation than her literature. *Velut arbor crescat!*

3. What is true in these general phases of literature is doubly true when we come to that special form of literature known as medical literature. The medical men of Canada are not inferior to the medical men of any country. It is true that large centres like Paris, Berlin, Vienna, London, and New York may afford greater opportunities for study than Toronto or Montreal, but that does not justify us in not doing our best, and, when that best is done, it may prove equal to the work done in these larger centres.

4. When we have done our best and put that best on paper, we should publish in our own country. In this way better than in any other will the name of Canadian medicine become known to the world. A Canadian writer produces an able article on some medical subject and

sends it to a medical journal in the United States, where it appears. This act loses it to Canada, and it becomes submerged in the great mass of literature of the United States. So far as Canada is concerned, the country gains but little. It is not building up a Canadian medical literature. Good work done in Canada and published in Canada will soon find attentive readers abroad, and the country will gain immensely in medical standing. We should study for Canadians, write for Canadians, and publish for Canadians, and let the rest of the world learn from us, for we have much that we can teach.

5. The medical profession in the United States, in Great Britain, in France, in Germany, would scarcely have recognition abroad from their own countries were it not for their medical journals. It is surely not saying too much when we claim that the Canadian medical journals have done much to carry the name and fame of Canadian medicine and Canadian medical men abroad. Our good work is freely quoted wherever our Canadian journals go, and that means all over the world, either by subscription or by exchange.

6. One might well ask what would the practitioners of South Africa do without *The Transvaal Medical Journal*, or those of Australia without *The Australasian Medical Gazette*, or the doctors of India without *Indian Hygiene*, or *The Antiseptic*. So here in Canada we have *The Maritime Medical News*, *The Montreal Medical Journal*, *The Queen's Quarterly*, *The Canadian Practitioner*, *The Canadian Journal of Medicine and Surgery*, several journals published in the French language, and THE CANADA LANCET. These journals are doing a splendid work in building up a national medical literature, for their pages are ever open to the Canadian practitioner. In these pages he may freely express himself on any subject of interest to the profession or the health and weal of the country. In them he may publish the results of his investigations, or the report of his cases. These journals need the support of the Canadian doctor. He should take these journals, one or more, and read them. He should contribute to their pages, and thus do what in him lies to pass his knowledge on from hand to hand, as the bucket is in Schiller's beautiful poem.

We may have failed, but we certainly have tried to show that we have a worthy medical profession in Canada, and that some of us are trying to build up a Canadian medical literature worthy that profession. What we need is the co-operation of that profession. We wish your papers, we wish the report of your cases, we wish an account of your medical meetings, and we wish to hear your "well done" to our humble efforts. Then we will all be able to say, with good old Roman, *Felix faustumque sit*.

CHILD LABOR.

“Senator Beveridge, of the United States Senate, and several others, are putting up an earnest fight for the protection of children in the United States. Within the last year child labor laws have been enacted in the States of Delaware, Iowa, Illinois, Kentucky, Kansas, Louisiana and Rhode Island. Believing that Ontario is well in the vanguard of civilization, it is only natural to expect that Mr. Whitney and his colleagues will, without any unnecessary delay, enact such legislation as will assure the children of Ontario absolute protection and safety. The growth of the evil of child labor is one of the phases of our industrial development, and shows what many companies or corporations will do to cheapen their products, that they may be able to undersell other competitors. Child labor is employed for one reason only, and that is, it is cheap labor, and labor that is always passive and unresisting. No one will object to the lessening of the cost of any product, though lowering the cost at the expense of the labor employed is usually the most destructive and deceptive fact in industrial life. People should, and always will, buy as cheaply as they can, but the form of commercialism that tends to physically maim or mentally stunt the coming generations should be stamped out of our industrial system.”

With the above comment we heartily concur. It was reported by the inspector of factories a short time ago that a boy of 8 years was found in charge of an elevator. This should not be allowed for a moment. Since children cannot protect themselves, it is the duty of the State to protect them. Parents and guardians cannot always be trusted to do it.

DR. W. T. GRENFELL'S WORK.

The recent visit of Dr. Grenfell has taught the people a number of wholesome lessons. One of these is that his missionary work is of a most utilitarian character, and is carrying good to a great many poor people.

Another feature of his work is that while he is teaching and preaching he is also healing their ailments, and finding ways and means to secure hospitals for the people of Labrador. This is a most commendable work, and should meet with a ready response in many a breast.

He has also taught us much about the diseases of Labrador fishermen, and the conditions under which they live. Through his efforts much has been done to improve these conditions by the introduction of stores and the supply of needed goods at reasonable prices.

His suggestion of introducing the reindeer into the district, and protecting these animals against reckless slaughter, is a most valuable one. A proper supply of milk and meat would do much to lessen disease.

It would seem that the medical missionary is one of the great factors in the spread of modern civilization.

SMALLPOX AT BRANTFORD.

“Two cases of smallpox have been discovered in this city by Dr. Pearson, Medical Health Officer. The patients, who are two men named Failor and Gour, have been removed to the smallpox hospital on the outskirts of the city. They contracted the disease while boarding at the Imperial Hotel with a barber who had smallpox, but who got out of the city before it was discovered. The authorities have closed up the hotel and placed all the boarders in quarantine. The Medical Health Officer says there will be no spread of the disease in the city, although he expects a couple more cases to develop among those under quarantine.”

How much better it would be were people to only learn the simple but important lesson of having themselves and their children vaccinated. There are now in Canada an alarmingly large number of people who have not the protection which vaccination is capable of yielding. There will some day be an epidemic of a virulent type of smallpox, with much sickness and many deaths.

So far the health authorities have been able to cope with the small outbreaks of the disease, but a time will come, with a large number unvaccinated, and many points of attack, when the disease will outstrip the most vigilant health officers. When such an event does happen, then the people will realize what a valuable protector vaccination is, and to neglect it is little short of criminal. In spite of all that can be said on the value of vaccination, there are many who drown reason in their false theories about personal liberty and individual rights. Nothing is said about the public rights.

THE TYPHOID FEVER SPINE.

The complication to which this name has been given is a rare occurrence in enteric fever. It is only of recent years that any attention has been directed to it. There is no reference to it in the older works, either English, French or German.

In Professor Osler's text-book we meet with the statement that after the patient has been up and about he may be taken with severe pains in the back and on moving his legs. The condition may last for weeks, without evidence of organic disease of the column or neuritis. Osler is rather inclined to the view that it is some form of neurosis. In some cases there may be degeneration of the muscles of the back or an abscess may form. There seems to be dependence in the condition to some slight injury or shock. The location of the pain in the spine may vary. All of Osler's six cases made a complete recovery.

Dr. Gibney, of New York, gave the name "typhoid spine" to the condition. He regarded it as caused by a perispondylitis, or inflammation of the periosteum and fibrous tissue which holds the spinal column together. Dr. Gibney's four cases were attacked during convalescence, and in all there was a history of a twist or injury preceding the attack of pain. In none was there any evidence of disease of the cord, nor of any organic disease of the spine. All made a perfect recovery. Fever was absent except in one case.

Pepper remarks in the American Text-Book of Medicine the possibility of pain in the spine, which he regards as due to a periostitis.

Other writers have recently called attention to the condition and have placed cases on record. Dr. Andrew has in the *Glasgow Medical Journal* reports of two typical cases, both of which came on during convalescence. In one case the patient thought he gave his back a twist. The knee-jerks were increased, there was ankle-clonus, and the sensation was normal. There was no rise of temperature and the patients gained in weight. The duration of the pain was from two to three months. Both made perfect recoveries. In discussing the subject, Dr. Love offers the following remarks:—

"An explanation of the symptoms in these cases is by no means easy. Joint and periosteal troubles are not rare sequelæ of typhoid fever, but the symptoms do not usually develop at so long a time after convalescence has been well established. Periostitis, too, proceeds, as a rule, but not necessarily, to suppuration, and in any case periosteal thickening does not commonly last for several weeks or months without suppuration. It is also difficult to conceive of attacks of pain such as described, lasting for months and due to a simple perispondylitis, and not passing on to suppuration. Nor is the condition to be ascribed merely to neurasthenia, as both patients were full-bodied, stable-minded men who had never shown any manifestation of hysteria.

"It is suggested by a consideration of the two cases reported here that there exists in cases of this kind an inflammatory condition of the nerve sheaths in the vertebral canal through which the nerves make their

exit, the situation of the pain being determined, it may be, by some slight injury. This explanation agrees with the manifestations exhibited, and accounts for the acute pain attendant on turning or movement of any kind. It also explains what cannot be accounted for by considering the condition as a neuritis or perispondylitis, namely, the exaggeration of the knee-jerks and the presence of ankle-clonus."

THE OSTEOPATH BILL.

In another part of this issue we give the text of the Osteopath bill. A careful study of its provisions will show that they are of a most sweeping character. Such legislation would completely change the Medical Act and the status of the entire medical profession. It must be remembered that there are a number of bodies which are aggressive and self-seeking, while the medical profession is taking no active interest in the acts and doings of the law-makers. It is in this way that these bodies succeed in securing privileges which they are not entitled to and that would be most injurious to the public weal, and that the medical profession may not be able to hold the safeguards for the people which now exist.

It has been said with considerable force that the medical profession should allow the Medical Act to be repealed, and throw the profession open to anyone and from any where, leaving the people to find out their true position when all sorts of incapables practised the healing art. Such a condition would be a veritable chaos, but then it might teach a useful lesson.

VACCINATION AGAIN.

At a recent meeting of the Board of Education for Toronto, Dr. W. W. Ogden introduced a resolution, "That no pupil shall be permitted to enter or remain in any school under control of this board without satisfying the teacher where such pupil is attending that he or she has been properly vaccinated or otherwise protected against an attack of small-pox."

The motion was lost, Dr. Ogden being the only one who voted for it. Dr. Hunter, a member of the board, said he did not think that vaccination should be made compulsory, and parents forced to have their children vaccinated when they did not believe in it.

Mr. Levee declared that he was a pronounced anti-vaccinationist. To this Dr. Ogden replied that he was inconsistent, as he had had his children vaccinated.

Dr. William Oldright appeared before the board and advocated the merits of vaccination and that all children in the schools should be vaccinated. Mr. McCuaig and Mr. Weir spoke against it. Drs. Becker and Richardson appeared before the board as being opposed to compulsory vaccination.

This question is becoming a very important one. There has been such a long time since an epidemic of smallpox occurred that the public has become careless and indifferent. Generally speaking, the people do not understand the merits of the case. There are now very many in the community at large who have never been vaccinated. This is the cause of the local epidemics which are appearing from time to time all over the country. Many of the cases have been mild, due to a great extent to a previous vaccination. But the public must not shut its eyes to the fact that there are so many persons now in the country who have not been vaccinated that some day there will be a widespread epidemic, causing much sickness and expense, and many deaths. Some such disaster will be necessary to teach the people.

It would appear as if the Governments of the various provinces will have to deal with this subject. It is altogether too important to be entrusted to the hands of local boards. The German law is the best in the world. It calls for vaccination in the first and revaccination in the fourteenth years of the child's life. There is no smallpox in Germany.

THE MEDICAL COUNCIL CRITICIZED.

The following specimens of the manner in which the Medical Council has been criticized by the press are interesting. They show that the tendency is to view the cause with favor which advertises.

From the *Sentinel-Review*, of Woodstock, of December 17, 1906, we take the following:—

“Dr. Crichton, of Castleton, whose name was struck from the register for “disgraceful and infamous conduct,” has been successful in his appeal. It will be remembered that Dr. Crichton professed to have discovered a cure for grip. He announced his discovery in the usual way, by advertising it. For this offence he was tried by the Medical Council, convicted of “disgraceful and infamous conduct” and sentenced to be deprived of his right to practise his profession.

"It is said that the value of his medicine was not taken into consideration at his trial. It may be what it claims to be, a cure for grip; it may not be. If it is a cure for grip, then the doctor was rendering a service to humanity by advertising it. If it was worthless, or was something other than it was represented to be, then the doctor was guilty of fraud, and deserved punishment.

"But it seems that the Medical Council was concerned with only one thing, and that was its own precious etiquette. Whether the preparation was meritorious or otherwise, the doctor had given offence by advertising it in a way which the etiquette of the Council did not sanction, and so his name was ordered to be stricken from the register.

"Chancellor Boyd, in giving judgment allowing the appeal, used these words :

" 'The conclusion I reach is that there may not have been a due enquiry in the Crichton case, and the appeal is allowed, and, in consequence, his name, if struck off, should be restored to the register. But this judgment is to be without prejudice to the question whether, in a subsequent enquiry, there may not appear to be proper grounds for erasing his name.'

"These words are about as severe an indictment of the Medical Council as any that have been heard since this now famous case began to attract public attention. 'There may not have been due enquiry in the Crichton case.' Yet, whether there was due enquiry or not, the Council was prepared to assume the responsibility of convicting Dr. Crichton of 'disgraceful and infamous conduct,' and of depriving him of his natural and legitimate means of making a living! An organization that has so little respect for its responsibilities and so little consideration for the rights of others, should not be overburdened with responsibilities.

"The whole question of the powers conferred on and the privileges enjoyed by the Medical Council, and the Law Society as well, might very properly be thrown open for further consideration and discussion in the light of modern ideas."

The Grimsby *Independent* for 12th December, 1906, gives its readers the following expressions of opinion :—

"I notice that Dr. Crichton of somewhere or other in Ontario, whose name was struck from the roll of practising physicians some time ago, by the Medical Council because he advertised his business, has brought his case before the High Court for adjudication. The judges reserved their decision, but from remarks made by them at different times throughout the trial they appeared to think that Dr. Crichton had not been fairly dealt with.

"My opinion is that the Medical Council of Ontario are badly affected with the disease known as 'swelled head' individually and collectively."

"Not only is the Medical Council affected with 'swelled head,' but it is also affected with insincerity and cowardice. It disqualified Dr. Crichton because he 'advertised,' and it was insincere enough and cowardly enough to appear in court and pretend that it disqualified him because he was selling a medicine that might not be able to perform all that he promised for it.

"As a matter of fact, the Medical Council did not care a snap whether Dr. Crichton's medicine was any good or not. The reason that they disqualified him was because he 'advertised' his medicine. The 'swelled heads' of the Medical Council wanted to make the law of the land themselves and then to enforce it themselves. The Court may not, but I hope it will, give a decision that will make the Medical Council 'sit up' and wonder where they are at."

In the *Hamilton Times* for 17th December, 1906, we are treated to some caustic remarks, thus:—

"It is not a crime legally punishable by loss of his right to practise his profession for a physician to advertise. That much has been decided by the High Court in the case of Dr. Crichton, of Castleton, whose name was struck off the register of the College of Physicians and Surgeons of Ontario, because they regarded such conduct as 'disgraceful and infamous.' Costs were not awarded, because the court found that the doctor had offended against the physician's code of so-called 'ethics,' which frowns on secret preparations and publicity seeking, but the decision compels the Council to restore Dr. Crichton's name to the register. The view of the court was that the doctor was charged with advertising, while he was punished for something entirely different—fraud or practising with secret nostrums. It was held that the evidence was not sufficient to convict of fraud, even had it been charged; the 'trial' was not conducted with the proper safeguards, and the Discipline Committee exceeded its powers.

"The judgment will give general satisfaction. It does not take away any right the Medical Council ought to have to maintain the purity, dignity and efficiency of the profession, while it asserts the innocence of a physician's advertisement *per se*, and protects him as an individual against odious corporate tyranny. Some powers granted to the Medical Council should never have been farmed out; they belong only to the courts of justice, and the Legislature should act to guard against their abuse. And there are other respects in which to secure justice and fair dealing the Medical Act requires amendment."

In our March issue we gave our readers the benefit of what was said at the Press Association. We all remember how the press acted when an attempt was made to regulate the proprietary medicine trade. What we now give still further proves that the medical profession need not expect fair treatment from the general press. It must look after its own interests.

SIR WILLIAM BROADBENT ON CANADIAN HOUSES.

In the *British Medical Journal* of February 9, 1907, Sir W. H. Broadbent contributes an article on the Toronto Hospital for Consumptives. In the article the following paragraph appears, which goes to show how other people see us; and it might be well to get this gift.

"A factor of very great importance is the method of heating dwelling houses, which seems to be almost universally employed, at any rate in the towns. The abundance of wood would lead one to look for the large open fireplaces seen in old English houses; coal, too, is found in enormous quantity, but no doubt the distances, the want of means of communication and the cost of labor make fuel expensive. The defence against cold, therefore, is to shut up houses and keep out the cold air, and to maintain a rather high temperature by means of radiators. Ventilation is reduced to a minimum, there is no compulsory influx of air by doors and windows to replace that which goes up the chimney of an open fireplace—no automatic renewal of air, which is thus rebreathed over and over again, charged with moisture and impurities from the lungs and skin, so that the dwellings are, if not actually culture media for the tubercle bacillus, perfectly adapted to protect it from adverse influences and promote its virulence. Corridors and passages are common, even in the best hotels, into which daylight never penetrates, and in which electric lights are necessary day and night."

He goes on to condemn this, but is not hopeful that it will ever be done. He thinks it is about as likely that they succeed in abolishing poverty in Britain as to modify the house architecture in Canada. In a country such as this, with so much sunshine, food, fuel, and material for building, it is a standing shame that there should be so much consumption. The late Dr. W. T. Aikens, day in and day out, taught his students the importance of fresh air in the rooms of dwelling houses. He used to teach that breathing the same air weakened and irritated the lungs, and then came the more serious condition known as consumption. He was doing all this before Koch had announced the discovery of the bacillus.

THE CHANGE IN MEDICAL EDUCATION.

In the early days of medical education in this country, the work was carried on by a number of medical gentlemen assuming the responsibility of providing accommodation and giving lectures. These were the days of the proprietary schools.

Gradually, however, the trend of opinion led to a closer union with some university than that of merely sending the students up for their examinations. One by one the medical colleges became the medical departments of some university. The progress of science demanded a more efficient equipment than those independent colleges were able to furnish.

No one wishes to decry the splendid work done by those colleges in the early days of this country. The men who took part in their promotion were great men, and have left an indelible mark on the pages of this country's history. They pointed the way, and laid down the first stepping stones. Many of them did not live to see the full fruits of their labors, but their works have followed them. Under the broader shield of some university that medical education is now carried on which they laid the foundation for in very humble places: in their back sheds, in a stable, or the "loft" of an old building, with a class of one or two earnest students. All this is an excellent fulfilment of the saying, "despise not the day of small things."

At the present moment the medical education of this country compares well with that of any country. There are now splendid colleges with modern apparatus for the teaching of the students. In connection with these there are large and well managed hospitals. Didactically, scientifically, and clinically, the students have every advantage to pursue their work to a successful finish. What a change from the primitive college with one or two students, without hospital facilities, or scientific appliances!

Nevertheless, these simple conditions produced some splendid practitioners of medicine and some bold and ingenious surgeons. As we view the modern medical curriculum it almost strikes one that there is too much time being devoted to the sciences. What the student of medicine needs most is the anatomy and physiology of man, with a good general knowledge of chemistry. On this foundation can be built a thorough knowledge of materia medica, therapeutics, pathology, clinical medicine and surgery, and their practical application to the curing of disease.

PERSONAL AND NEWS ITEMS.

After a good deal of discussion the medical societies of London, Eng., have decided to amalgamate. Sir R. D. Powell moved that the new society be called "The Royal Society of Medicine." This was carried, and so becomes the name of London's united medical society.

On a recent occasion there was an exciting debate in the British House of Commons on the subject of compulsory vaccination, and the permission given whereby objectors may decline to be vaccinated or have their children done. On the subject the *British Medical Journal* states that "the present position of vaccination in its legislative aspect is absurd and illogical. It is to be assumed that Parliament either believes or disbelieves in vaccination. If the latter, then it should act on its disbelief and abolish the entire system, central and local. From the point of view of the epidemiologist that would be an interesting experiment, but from that of the humanitarian it would be equivalent to wholesale infanticide by omission." These are strong words, and their strength is in their truth.

Dr. William Robertson, Medical Health Officer for Leith, Scotland, has reported the result of his examination of 806 school children. Of 270 examined with regard to their teeth, only 4 had sound teeth. Out of the 806 only 218 were without defect of any kind. There were 121 with some form or other of skin disease. There was no vaccination in 31, and only one mark in 239. Of the entire number, 523 had full vision, 51 had fair vision, while 128 had very bad vision. None of these had received any attention. With regard to the nose and throat, 318 had enlarged tonsils, 124 had adenoids, 115 had nasal discharges, and 6 had tonsillitis. Some 60 had only fair hearing, while 64 were deaf. There was bronchitis in 41 and phthisis in 7. The heart was diseased in 78. There were abdominal diseases in 36.

Sir James Barr, Dr. W. B. Bell and Dr. S. R. Douglas report a case of a patient aged 25 years, who had infective endocarditis. The patient was cured by the inoculation of a vaccine prepared from the organisms which were present in the blood of the patient. On one occasion too large a dose was administered and the opsonic index fell below normal and the temperature rose to 105°, but the index soon rose above normal.

The Hospital, a British medical authority, says that in England about 2,000 children are every year suffocated in bed accidentally by their parents, and 600 of these victims of parental carelessness die in London. In Germany such an accident is almost unknown. The remedy is obviously to give the child a cot for itself, but it is regarded as doubtful if

this will be adopted by the very persons for whom it would be most desirable. Perhaps before a change in practice becomes general it will be necessary to call in the aid of the law. Law settles the question in Prussia, where it is illegal to have an infant under twelve months old in bed with its parents. It may be difficult to enforce a law like this, but when a child dies in its mother's bed it is regarded as a punishable offence and the risk of punishment acts as a wholesome deterrent.

The death of Dr. Oronhyatekha removed from the view of the people of both Canada and the United States one of the most picturesque and versatile of life insurance operators. In early youth he attracted in 1860 the attention of the then Prince of Wales and his suite, and was thus afforded an opportunity to secure a better education than usually falls to the Indian's lot. Returning to Canada, he practised medicine for a time, but apparently found his true vocation in putting new life into the Independent Order of Foresters, and enormously extending its operations. He was for many years its official head, and personally did much to promote its success by his capacity for the popular exposition of a somewhat abstruse subject. One who was so long and conspicuously before the public, even if his ability were much less than Dr. Oronhyatekha's, could not fail to be greatly missed.

The Ontario Medical Library Association has practically become amalgamated with the Medical, Clinical and Pathological Societies, under the name of the Academy of Medicine, Toronto. The new organization will have its headquarters in the Library Association's building, Queen's Park, and a \$50,000 addition will be built. The object of the new organization is to advance the art and science of medicine, with its collateral branches, to promote and maintain an efficient library and museum, to improve the profession, to cultivate harmony and good feeling among the fellows and to promote the corporate influence of the profession in its relation to the community. The academy will be managed by a council of twelve. Dr. J. F. W. Ross is President of the Library Association, Dr. Rudolf President of the Medical Society, Rr. H. B. Anderson President of the Clinical Society, and Dr. J. A. Amyot President of the Pathological Society.

While in Toronto, Dr. W. T. Grenfell gave a number of most interesting addresses on the conditions and diseases of the fishermen of Labrador. He told of some of the difficulties besetting the problem of giving the Gospel to the Labrador folk. The twelve hundred miles of rock-bound coast, fringed with an endless number of islands either not charted or very poorly marked, the icebergs, the lack of roads or railways, all made it hard to reach the men, and consequently to minister to them with surgical knife or by word of mouth. The great number of cases of

sickness, suffering and death arising from preventable poverty appealed to the doctor when in 1892 he first dropped anchor off that coast after a three months' cruise, and so the work was begun. By bringing to these folk some of the blessings we enjoy, he said, we commended the Gospel to them. He was disposed to think that the chloride of ethyl, the ether and chloroform, and the aseptic treatment, were just as good gospel as tracts under those circumstances. The string of hospitals, undenominational and unsectarian, were doing a great work. Then there was the economic side of the problem, with its truck system of trade and its saloons and grog shops. So not alone by hygiene and prevention of disease as well as by its cure, but by their industrial efforts, their importation of domestic cheer, and their orphanage work, he felt that they were acceptably preaching the Gospel.

A special officer of the Provincial Board of Health has been sent to the Bruce Peninsula to help the local health authorities to fight smallpox in the Townships of St. Edmunds, Lindsay and Eastnor. There have been a large number of cases of the disease there, mostly of a mild type, and the disease seems to have made considerable headway before it was discovered. Dr. Manard, the local Medical Health Officer, reports from West Sandwich that there have been no new cases of smallpox in the twelve houses under quarantine in that township, and that all the patients are progressing favorably.

Dr. J. A. Turnbull, formerly of Goderich, has located in Listowel.

Dr. G. G. Rowe, Toronto; Dr. W. Dales, Warren, and Dr. J. T. Clarke, Toronto, have been appointed Associate Coroners for the County of York.

Dr. T. A. Davies, of Toronto, has gone to London for a period of post-graduate study.

Dr. F. E. Watts, on the staff of the Ontario Board of Health, has spent the winter among the railway and lumber camps of Northern Ontario.

Dr. W. J. Bell, who was for some time on the C.P.R. Pacific steamers and in London, Eng., has commenced practice in North Bay.

Dr. G. R. McDonagh, of Toronto, has spent two months abroad, a good part of the time being passed in Egypt.

Dr. J. J. McKenzie, of Pictou, N.S., has returned from his trip to Bermuda, greatly improved in health.

Dr. John Stewart, of Halifax, is continuing to improve in health, and is enjoying his sojourn in Bermuda.

Dr. C. D. Murray, Halifax, is taking in the round trip through the West Indies.

Throughout the County of Peel there are many cases of smallpox, and yet people can go on stupidly adhering to that shibboleth, anti-vaccination.

Selkirk, Manitoba, is making an effort to raise the requisite funds for a hospital.

The death rate in Winnipeg last year was a little over 16 per 1,000 of the population.

Dr. Hamill, Mayor of Meaford, has been appointed postmaster of that town, and has entered upon his new duties.

A partnership has been formed between Drs. McConnell and Bradford of Morden, Man.

Through the efforts of Dr. McInnis, M.P.P., of Brandon, Man., \$15,000 was collected for a provincial sanatorium.

The Women's Presbyterian Missionary Society of Canada has lost an esteemed worker in the death of Dr. Agnes Turnbull.

Dr. F. J. Shepherd, of Montreal, has been placed on the consulting surgical staff of the Royal Victoria Hospital. May he long live to do honor to the position!

Dr. A. H. Trottier, a graduate of the Western University, has gone to assist Drs. Brien and Doyle, of Essex, in their practice.

Mr. Robert Reford, of Montreal, has promised \$50,000 towards a \$1,000,000 endowment fund for McGill University.

Notre Dame Hospital has received subscriptions amounting to \$240,000, Senator Forget giving \$200,000 of the sum.

Dr. Ross, of Seaforth, Ont., is going to Europe for some months' postgraduate work.

Dr. S. T. Rutherford, formerly of Listowel, has removed to Stratford, where he has decided to resume practice.

It is a good sign to see the physicians of many of the counties forming medical societies. Recently one was started in Oxford County. Every county should have one, which should meet regularly, and do just as good work as any of the societies in the large cities. It is men that make a society. Dr. Welford is President, Dr. Rogers, Vice-president; Dr. Neff, Treasurer, and Dr. Brodie, Secretary.

The County Council and local Board of Health have decided to expend \$3,000 on the construction of an isolation hospital for St. Catharines. Action has been taken as the result of a recent case of diphtheria, the patient, a young stranger from Brantford, being left at the City Hall by a physician, and the city having no place to care for him.

The hospital governors of the Hamilton Hospital have decided to accept the offer of Mr. William Southam to give \$15,000 for the erection of a wing for incurable consumptives in connection with the city hospital.

It will be built on the Webb property opposite Copeland avenue. It may be that the new isolation hospital will be built on the hospital grounds. It was agreed that the rates charged for patients who do not live in the city be raised \$2 per week over that charged citizens.

The annual meeting of the Canadian Association for the Prevention of Tuberculosis, at Ottawa, on 13th March, was well attended and much interest taken in the proceedings. Hon. Senator Edwards was unable to attend, and Mr. J. M. Courtney, C.M.G., took his place. The executive report, which was a comprehensive review of the work of the association since its organization six years ago, was read by the secretary, Rev. Dr. Moore. Speaking of the results achieved the report says: "The vital statistics of Ontario and Québec for a nearly coincident period of five years show that notwithstanding the fact that in both provinces the decrease has not been uniform and continuous, there has been on the whole such an improvement as to show the saving of 816 lives in the last year of the selected period, as compared with the first." New branch associations were formed in a number of the cities and towns. Correspondence was opened with the women's institutes, National Council of Women, and with the Supreme Church authorities, with a view to securing closer co-operation in bringing the question of prevention and cure of consumption before the public. The replies in all cases were cordial. There was shown to be 18 persons dying annually with the disease in every 10,000 of the population. Dr. Sheard, of Toronto, gave an interesting address on "The Home Treatment of Consumption."

In the clinical room of the Toronto Western Hospital on 8th March, Mr. Soole, on behalf of the Elks, presented the splendid sum of \$1,150, made by their recent minstrel show, to the Ladies' Board of the hospital. Dr. Augusta Stowe-Gullen, president of the Ladies' Board, received the gold, and presented an illuminated address to the Elks. Speeches were made by Mr. C. A. B. Brown, Mr. Bunting, Mr. James Glanville, Mr. Crawford, M.P.P., Dr. Price Brown, Dr. Ferguson, and Dr. A. A. Macdonald. The room was decorated with palms and red roses, and at the close of the speeches small tables with refreshments were brought in. About a hundred people were present.

The ninth annual meeting of the Board of Governors of the Victorian Order of Nurses was held at Rideau Hall, Ottawa, 8th March, Earl Grey presiding. The report of the Chief Lady Superintendent, Miss Allan, showed that during the past year the 104 nurses of the order had cared for 10,501 patients and the district nurses had made 52,325 visits. Thirteen nurses had resigned and 31 had been taken on. New branches had been opened at Fort William and London, and a Victorian nurse had gone to assist Dr. Grenfell. Mr. J. M. Courtney reported \$1,572 on

hand. The following officers were elected: Patron, Earl Grey; Honorary President, Lady Grey; President, Judge Burbidge; Vice-presidents, Hon. G. A. Cox and Sir George Drummond; Treasurers, J. M. Courtney and J. T. and J. M. Fraser; Chief Superintendent, Miss Margaret Allan.

The following young ladies were presented with their graduating certificates by His Honor the Lieutenant-Governor at the Toronto Hospital for Incurables: Miss L. Scott, Miss M. Buckerfield, Miss M. Tremlin, Miss J. M. Hendry, Miss E. Johnston, Miss E. Cook, and Miss A. Scott. Miss Cook won the gold medal, Miss Johnston the silver medal, and Miss A. Scott the prize donated by Mrs. R. B. Hamilton for an essay on the nursing profession. Mr. Ambrose Kent, chairman of the Board of Directors, presided. The Lieutenant-Governor, in making the presentations, referred to the good the Home had done in the past. He was glad it would be classed as an hospital in the future, so that it might be assured of a larger Government grant than formerly. To his mind the greatest of all improvements had been the establishment of the school for nurses. A reception was afterwards held, at which Miss Gray, the superintendent of the Home, was assisted by Mrs. Mortimer Clark and Mrs. Ambrose Kent.

A serious epidemic of black smallpox has broken out at Dunkirk, France, and has spread to the city of Lillie. A case of the disease is also reported to have occurred in a fashionable quarter of Brussels, Belgium. There should be no such experiences if people would only accept the teachings of experience.

Smallpox has been discovered in Southwold township, Mrs. Moses Thomas, a squaw, who lives in a shanty in the woods near Middlemarch, with six other Indians, being infected.

The Winnipeg General Hospital has recently opened a new Nurses' Home.

Dr. James H. Munro, of Greenfield, has been appointed one of the coroners for Stormont and Dundas.

Howard D. Barnes has been appointed to the professorship of Applied Sciences in McGill, made vacant by the resignation of Professor Rutherford, who accepted a position in Britain. Dr. Barnes was associate professor of physics.

Dr. J. R. Woodgates, who formerly practised at Granton and St. Mary's, Ont., died recently at his home in Axminster, Devon, England.

There is a bill before the House of Commons to regulate proprietary medicines. Every doctor should secure a copy and write the Government if he finds any objection to its provisions.

Dr. Bruce Smith has pointed out the need for an institution for weak-minded women for Ontario. He urges that these women should be removed to some place of safety away from the temptations to which they are such ready victims. This suggestion should meet with a generous support on all sides.

The 61 hospitals of Ontario are all doing excellent work. Last year there were treated in them 37,537 patients. The total cost of management was \$1,228,289. The Government grant was \$110,000. The average daily cost per patient was \$1.08. It has been frequently urged upon the Government that the grant should be substantially increased.

The *Medical Era*, of St. Louis, has acquired the *Medical Mirror*. Dr. Clarence Martin, the editor of the *Era*, continues as editor of the united journal.

All differences of opinion have been happily set aside, and Toronto has now an Academy of Medicine. The Ontario Medical Library Association, the Toronto Medical Society, the Clinical Society, and the Pathological Society, have joined hands to form the Academy. This is, no doubt, the beginning of a new era for medicine in Toronto. It is to be hoped that the present building for the library will soon be greatly enlarged.

Dr. J. A. Amyot has been doing good work by directing attention to the importance of a pure water supply for cities. He has pointed out how closely the typhoid fever rate is related to sewage contamination of the water system.

McGill has decided that henceforth medical students must spend five years in her halls, instead of four, as heretofore. The additional year will not be devoted to specializing in any particular branch of medicine, but the curriculum as adopted now will be spread out so that it may take an extra year's time to get through it. As things are at present it is claimed that the students do not have half enough time to experiment and make use of the laboratories, and it is hoped that the addition of the extra year will lend much more time to the practical side of the course, especially hospital work.

The medical profession of the West is active and progressive. There are a number of medical societies doing good work. The Northern Alberta Medical Association, the Regina Medical Society, the Calgary Medical Society, and the Winnipeg Medical Society, are deserving of special mention.

The Manitoba Medical College has adopted a five-year course of study and has adjusted the curriculum to suit the new arrangement.

The hospital at Brandon, Man., treated 120 patients last year. The trustees are considering some enlargement of the building.

The hospital at Moosomin is doing well. Last year there were in it 173 patients. The donations amounted to \$2,846. There is now only a mortgage debt of \$3,500 on the institution.

The Holy Cross Hospital, Calgary, is adding a new wing, making its capacity 100 beds. The Calgary General Hospital is making an effort to add a new surgical wing, and funds are being raised for this purpose.

An effort is being made to induce the City Council of Regina to take over the Victoria General Hospital and run it as a municipal hospital.

The hospital in Portage la Prairie is making good progress. It is estimated to be worth about \$32,000.

The Neepawa Hospital last year treated 234 patients. There were 86 operations and 10 deaths in it. It has accommodation for 16 beds.

The Queen Victoria Hospital at Yorkton last year treated 239 cases. It is to be enlarged soon and have a nurses' home added.

The number of cases of typhoid fever in Winnipeg last year was 1,426, with 109 deaths. For the year before there were 1,841 cases and 138 deaths.

The vital statistics for Calgary for 1906 showed 676 births, 375 deaths, and 378 marriages.

Dr. Lafferty, the retiring president of the Calgary Medical Society, entertained the members of the society to a delightful banquet.

Dr. Gilbert Royce has located at 12 Carlton street, Toronto, and purposes devoting his time to diseases of the eye, ear, nose, and throat.

Mr. Edward McArdle, of St. Catharines, has presented the magnificent Beadle property on Geneva street to the trustees of the General and Marine Hospital, to be used as a site for a new hospital and nurses' home. The property, which is worth about \$15,000, consists of three acres. For some time the trustees have felt that larger and better buildings were necessary, and it is expected that work will be started on the new building next year.

DR. GEORGE A. PETERS' LIFE.

Editor CANADA LANCET:

SIR,—The bowed heads and grief-stricken hearts of a great concourse of medical men paid a far more eloquent tribute to their dead comrade than pen or "word of mouth" can do. Of days and months and years, many of his fellows have a much larger number than he in the counting, but reckoning the splendid achievements crowded into his brief span of life, how many were in that host who could be named as his peers? In the special field of surgery George Peters had not been long in the running when by the common consent of his confreres he was singled out.

for the red ribbon—the symbol of supremacy. He had an innate genius for mastering details, and in arriving at a conclusion displayed in a very marked degree, that rather rare endowment—in medicine as in law—viz., the power to “sift and weigh evidence.” This characteristic was a potent factor in enabling him to gain pre-eminence as a consultant. Those consultations were few, indeed, when he was not able to render the attending physician valuable aid.

What are some of the lessons to be learned from his life? When and where the name of George Peters may be mentioned, the story of his life will prove a splendid inspiration. He consecrated his energies to medical science, and made it richer by his skill and by his contributions to its literature. To military life and to that which is “clean and manly” in sports, he gave enthusiastically his share of help and encouragement. In all his work he rendered a wholesouled, unselfish, untiring devotion. The real worth of true nobility of character; of industry; of concentration of purpose; and of high scientific attainments—was well portrayed in his life.

There is one phase of it that the writer offers no apology in referring to, because it is not only of vital importance to our profession, but also reflects the almost universal condition to be found in our ranks to-day, viz., his literary status, and what limitations this placed on the influence he was able to exert. George Peters' early literary training was doubtless the very best the financial resources and educational facilities of his boyhood days offered. The acquisition of scientific knowledge and the demands of professional life made such heavy drafts on his time, that, like hundreds of others, he found it impossible to provide sufficient leisure for procuring that broad culture which could have given a pre-eminence in scholarship as assured as that enjoyed in his profession. If conditions in early life had been such that he could have acquired, the somewhat rare but exceedingly desirable combination of wide culture and high scientific attainments, what a colossal figure he would have been, as a citizen and as a physician! But what was probably impossible in his case is open to many a young man to-day. If the story of the life of George Peters cause some of our young men to pause on the threshold of their career and to decide to combine the broadest culture our own universities and those of older lands can confer, with the highest scientific attainments our age has to bestow, they will then be in a position to exert an influence far greater than those less richly endowed, and also to become colossal figures as citizens and as physicians.

I am, etc.,

JOHN HUNTER, M.D.

8 O'Hara avenue, Toronto.

OBITUARY.

ORONHYATEKHA, M.D.

Dr. Oronhyatekha was of pure Mohawk lineage, and was born August 10, 1841, at the Six Nations' Indian reservation, near Brantford, Ont. His English education began in the industrial school on the reservation near Brantford, established for the training of young Indians, and supported and maintained by the New England Company of London, England. According to the *Encyclopædia of Canadian Biography*, Oronhyatekha when very young had a natural ambition to improve himself by education, and to gratify it he proceeded to Wilbraham, Mass., to supplement the elementary education acquired at the industrial school by a course of study at the Wesleyan Academy.

When a young man he had very little means at his command, but was blessed with great energy and pluck. He turned his hand to any ordinary duty to earn his way along. After his return to Brantford from Wilbraham, he proceeded to Kenyon College, Ohio, where he completed the four years' course in three. He then decided to study medicine and entered the University of Toronto.

While he was still a student at this seat of learning, in 1860, the visit to Canada of the Prince of Wales, now His Majesty, King Edward VII., occurred, and Oronhyatekha, then in his twentieth year, was selected by the chiefs of the Six Nations to present an address to the son and heir of their Great White Mother. The impression made upon the young Prince and his party was so favorable that Oronhyatekha was invited to continue his studies at Oxford, which he did, under the care of the Prince's physician, Sir Henry Acland, regius professor of medicine at Oxford.

A remarkable attachment, which developed with the years, sprang up between the great English physician and his pupil; Sir Henry, from the time the poor but keen-witted Indian boy arrived at Oxford, directed his studies, stimulated his energies, and cheered his life with all the tenderness of a father.

Having graduated with distinction the young doctor commenced practice at Frankford, near Belleville, and was elected first Secretary of the Hastings County Medical Association. When leaving Frankford for Stratford, his friends presented him with an address and a gold watch.

He removed to London in 1875, and built up an extensive medical practice there. While living in London he was initiated into the Inde-

pendent Order of Foresters, with which his name became so inseparably associated. He rose rapidly to the position of the chief executive of the order, and at the time of the separation in 1881 was elected to the office of Supreme Chief Ranger, which he continued to hold till his death. His devotion to Forestry necessitated the neglect and final abandonment of the active practice of his profession.

He was a prominent Mason and had attained eminence in the Royal Arch, the Scottish Rite, the Knights Templars, etc. He was identified with a number of business enterprises, such as the Union Trust and the Farmers' Harvesting Machine Company.

He was a Justice of the Peace, and Consul-General in Canada for the Republic of Liberia. His intensely patriotic character led him into the militia at the time of the Fenian raid and in 1866 he was in active service as a member of the University Rifles, or No. 9 Company of the Queen's Own Regiment. He was a member of Canada's first rifle team at Wimbledon and won no less than nine prizes.

He was married shortly after his graduation to Miss Ellen Hill of the Mohawk tribe, a great-granddaughter of the celebrated Mohawk chief-captain, Joseph Brant. Dr. Oronhyatekha's official home since 1889 was in Toronto, where he was a familiar figure. He had, however, two charming country homes, one, "The Pines," situated in the midst of his people on the Mohawk reservation near Deseronto; the other, "The Castle," on Foresters' Island Park, in the Bay of Quinte. This residence was converted into the Foresters' Orphan Home, which has become a well-known institution.

He had suffered from diabetes for some years, and latterly from fatty degeneration of the heart. He went south six weeks prior to his death to Savannah, Georgia, where he died on the 2nd of March, 1907. His body was brought to Toronto, and was accorded a public funeral, lying in state in Massey Hall for a day. The remains were then removed to Deseronto. He leaves one son, Dr. Acland Oronhyatekha, and one daughter, Mrs. Percy Johnston.

R. H. DAVIS, M.D.

Dr. Davis died at Cayuga, February 11th, 1907, at the age of 79. He was a graduate of the University of New York of the class of 1856. In 1858 he took his M.D. from Queen's University, Kingston. For many years he held the office of sheriff of the County of Haldimand. In his earlier career he enjoyed a very large practice. He was well known and highly esteemed throughout that part of the country.

GEORGE A. PETERS, M.B., F.R.C.S.

Much regret was felt on all sides when it became known that Dr. Peters had died suddenly of an attack of angina pectoris, at his home in Toronto, on Wednesday afternoon, March 13th. He had been ill with heart trouble for about three years, during which period he had repeated attacks of angina. This induced him to withdraw almost entirely from practice and his military duties.

Dr. Peters was born on July 16, 1859, on a farm in Eramosa Township, near Fergus, where he attended the primary schools, and matriculated from the Collegiate Institute into the University of Toronto. He worked his way through the University by returning to the farm during the summer vacations, and graduated from the Medical School with honors. He was the first Toronto man to win a fellowship from the Royal College of Surgeons of London, England, the highest honor that can be obtained in surgery in the British Empire.

He always took a great interest in military matters and entered the Governor-General's Body Guard as a lieutenant, afterwards being promoted to a captaincy. After the South African war he organized the Toronto Light Horse along lines based on Boer methods of warfare and took the greatest interest in its welfare. He held the position of major of the regiment for some years, but was reluctantly forced to give it up about a year ago and the squadron has since been disbanded. Another attribute in connection with his love of military affairs was his remarkable skill in rifle shooting, which won him great distinction. His interest in this pastime led him to invent an electric target for practice shooting, which dispensed with the necessity for a marker, and is being gradually adopted at all shooting meets.

His talents were of a very varied nature, and he exhibited unique skill as a modeler, which, however, his professional duties unfortunately did not permit him to develop fully. In this connection he invented a process for preserving the ordinary plaster cast and rendering it of more permanent value. His only known product along this line was a bust of Lieut.-Col. Fred C. Denison, owned by the Military Institute, which possesses remarkable vitality, and showed the latent talent that might have won him worldwide fame. To the profession and public alike he was known as a direct, upright, and sterling man.

One of the best cross-country riders in Canada, he was an active member of the Toronto Hunt Club, and owned a number of fine horses, in which he took great pride. His brilliant riding especially in high-jumping events, was on many occasions one of the most delightful features of the Toronto Horse Show. This exercise, however, he was also forced to abandon on account of his ill-health.

He was for years surgeon at the Toronto General Hospital, and consulting surgeon at the Sick Children's Hospital. He was also professor of surgery at the University of Toronto, and excelled as a teacher from the fact that he was able to impart his ideas to the students, and in clinical work especially was this faculty recognized. Very many young surgeons now in practice owe much of their comprehension of their work to his ability.

Dr. Peters was married about ten years ago to Miss Constance Meredith, elder daughter of Sir William Ralph Meredith, and leaves surviving him a widow and two young daughters.

The funeral, which was very largely attended, took place on Friday, 15th March, at 3 p.m. The body was interred in St. James' cemetery.

A. A. STOCKTON, M.D., M.P.

Dr. Stockton, M.P. for St. John, N.B., died on 15th March at 6.20 a.m. in the Water Street Hospital, Ottawa, after an illness of about four weeks. Death was due to acute pleurisy, which attacked him suddenly after his system had been weakened by serious kidney trouble. His daughter was with him at the time of death, but Mrs. Stockton was at her home in New Brunswick. Some four weeks ago Dr. Stockton was attacked with a recurrence of old kidney trouble in acute form.

For over a quarter of a century Dr. Stockton had held a prominent place in the public life of his Province. He was a member of the New Brunswick Legislature from 1883 to 1899. In 1900 he unsuccessfully contested the seat for the Commons, but was successful at the last general election. In the House he was generally regarded as one of the strongest and ablest of its members, and was very greatly esteemed by all. His last speech in the House was a vigorous plea for a higher moral tone in the press of the country, the occasion of his remarks being the publication in this country of some of the most objectionable details of the Thaw trial. He was in his sixty-fifth year. The remains were taken to St. John for interment.

MRS. JAMES H. RICHARDSON.

To Dr. James H. Richardson the entire medical profession of Canada will extend its most sincere sympathy in the bereavement caused by the death of Mrs. Richardson. For some time Mrs. Richardson had not been in good health. She died on the 14th March, at the advanced age of 82 years.

MRS. GEORGE ELLIOTT.

The many friends of Dr. George Elliott learned with deep sorrow of the death of his wife a few weeks ago. Dr. Elliott is editor of the *Dominion Medical Monthly*, and the secretary of the Canadian Medical Association. We extend to Dr. Elliott our profound sympathy.

 BOOK REVIEWS.

BIOGRAPHIC CLINICS.

Essays concerning the Influence of Visual Function, Pathologic and Physiologic, upon the Health of Patients. By G. M. Gould, M.D., Editor of *American Medicine*, etc., etc. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut St. 1907. Vol. V.

This volume contains 23 articles dealing with the subject of eyestrain in all its aspects. A number of concrete examples are placed on record where the correction of the refractive error afforded marked relief to the patient. There are a number of articles treating of the general relationship of eyestrain to many other diseases. This volume is a most interesting work and well worthy of careful study.

 FERGUSON'S EPITOME OF THE NOSE AND THROAT.

By J. B. Ferguson, M.D., of the New York Post-Graduate Medical School. 12mo, 243 pages, with 114 engravings. Cloth, \$1.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907. (Lea's Series of Medical Epitomes Edited by Victor C. Pederson, M.D., New York).

The author has presented in concise and practical form the diagnosis and treatment of diseases of the throat and nose. He has planned the book to be helpful to the under-graduate and post-graduate medical student in gaining familiarity with laryngological work, and likewise to the general practitioner, who is often called upon to treat diseases of this region, and who needs to have the chief points in diagnosis and treatment concisely placed at his command. All these classes of readers will appreciate the systematic arrangement, the clear directions for examination, the illustrations of preferable instruments and of diseases, and the abundant formulæ for the best medication. The Medical Epitome Series, of which this is the latest volume, will cover the whole range of medicine, surgery and the specialties in original books written by recognized authorities, and uniformly priced at one dollar.

JEWETT'S ESSENTIALS OF OBSTETRICS.

By Charles Jewett, M.D., Professor of Obstetrics and Gynecology, in the Long Island College Hospital, Brooklyn, N. Y. Third edition, thoroughly revised. 12mo, 413 pages, with 80 engravings and 5 colored plates. Cloth, \$2.25 net. Lea Brothers & Co., Philadelphia and New York, 1907.

Professor Jewett's object is to place the essential facts and principles of obstetrics within easy grasp of the student. This compact volume is intended as an introduction to the more elaborate treatises, and as a guide in following the didactic and practical teaching of college courses. Most attention has been given to practical topics. Works of this character have their distinct place and value, since mastery of the elements of any subject gives the rational framework for an easy and orderly acquisition of complete and systematic knowledge. Such a work is, therefore, useful not only to the student but also to the practitioner who would refresh his recollection or post himself to date. That Professor Jewett has interested both classes of readers, is shown by the demand for his new (the third) edition. It has been completely revised, largely rewritten, and rounded out with much entirely new matter.

THORNTON'S POCKET MEDICAL FORMULARY.

New (8th) edition, revised to accord with the new U. S. Pharmacopœia. Containing about 2,000 prescriptions with indications for their use. In one leather bound volume. Price, \$1.50 net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907.

It would be difficult to mention a more frequently useful work than Thornton's Formulary. The author is peculiarly qualified to render such a service, as he unites in himself a knowledge of the three necessary branches, being a graduate in pharmacy, a professor of materia medica in a leading medical college, and an active practitioner of many years' standing. He has here presented the collective experience of his profession as to the best measures for combating disease. He has arranged diseases alphabetically, and under each has given the best formulæ for simple cases, as well as for the various stages and complications, with quantities both in the ordinary and metric systems. A feature peculiar to this work, and one of obvious value, is found in the Indications and annotations for a choice between the various formulæ according to the conditions to be met. Critical study has been given to each formula in all its parts, as well as to palatability and compatibility. No point desirable in such a work has been overlooked. The most experienced physician will find it

useful as a reminder, and his younger confrère will perform his duty better both to the patient and himself with its suggestions at hand for quick reference. That practitioners widely appreciate its value is shown by the frequent demand for new editions, a point of special importance in a work dealing with so rapidly advancing a department as Therapy. In each of its eight editions, the author has embodied the latest and best information, so that the profession may consult this hand-book with confidence in finding it always up to date. This is particularly important in the case of this new edition, as it has been revised to accord with the new United States Pharmacopœia, in which many official changes have been made in the strength of drugs and their preparations. An undesirable risk now attends the use of all medical books dealing with drugs according to the old and obsolete Pharmacopœia. It is obviously essential that doctor and druggist should both follow the new and legal standard. The transition from the old to the new is facilitated by Dr. Thornton's book.

THE NEW HYGIENE.

Three Lectures on the Prevention of Infectious Diseases, by Elie Mitchnikoff, with a Preface by E. Roy Lankester. Chicago: W. T. Keener and Co., 90 Wabash Avenue, 1906. Cloth, \$1.00 net.

This little book is a reprint of Dr. Metchnikoff's Harben Lectures. The book gives us some excellent information on bacteria and the white blood corpuscles. The exposition of the subject throughout is in very simple language, and tends very much to remove the difficulty of studying the book. We commend what the eminent author has to say on syphilis. The little book is one of much value.

AUSTIN'S CLINICAL CHEMISTRY.

A Manual of Clinical Chemistry, by A. G. Austin, A.B., M.D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tuft's College, Boston. Boston, U. S. A.: D. C. Heath and Co., 1907.

This book is exactly what it claims to be, a manual of medical chemistry. It covers the examination and chemistry of the fluids and tissues of the body. The instructions are brief and clear. The illustrations are good and the paper of superior quality. We can recommend this book to any one who wishes to read up the chemistry of the human body. It

is a good book to have by one and taken up often, perusing its pages as they apply to work on hand.

DENTAL SURGERY.

Aids to Dental Surgery, by Arthur S. Underwood, M.R.C.S., Eng., L.D.S., and Douglas Gabelle, M.R.C.S., L.R.C.P., L.D.S., Eng. Second edition. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth and Co. Cloth, 75 cents, net.

The Aid Series is well known. In it are to be found a number of valuable small manuals on special subjects. The present one is no exception to the high standard attained by the other members of the series. We have often thought that doctors do not pay sufficient attention to the teeth and mouth. This small book covers the ground carefully and will supply all the information that the practitioner of medicine can require on the subject of the care and diseases of the teeth and mouth. It should have a wide sale.

DISEASES OF CHILDREN.

Aids to the Diagnosis and Treatment of Diseases of Children, by John McCaw, M.D., R.N.I., L.R.C.P., Edin., Physician to the Belfast Hospital for Sick Children. Third edition. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth and Co. Cloth, \$1.25 net.

This book is not large, and yet by the use of thin paper and small type there is a wide field of topics discussed, and full consideration given to these. The book has now reached its third edition and has been well revised and carefully brought up to date. The book is in the truest sense of the word an "Aid" to the diagnosis and treatment of children's diseases, for it does aid the reader. Much is said and little omitted, and this because of so careful a condensation of facts.

SURGERY OF THE RECTUM.

By Fred. C. Wallis, B.A., M.D., B.C., Cantab., F.R.C.S., Eng., Surgeon to Charing Cross Hospital, St. Mark's Hospital, and the Grosvenor Hospital for Women and Children. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth and Co. Cloth, \$1.75 net.

This book is got up in the very best form. It is well bound and printed on very fine paper. The illustrations are numerous and excellent.

The text of the book covers the usual diseases of the rectum in a clear and lucid manner. The symptoms, causation and treatment of rectal diseases receive full attention. This volume is a real repository of useful and practical information.

WAR WITH DISEASE.

By Frederick F. Maccabe, M.B., Medical Officer, South of Ireland Imperial Yeomanry; late Civil Surgeon, H. M. Field Force, South Africa. Second edition. London: Baillière, Tindall and Cox; Toronto: J. A. Carveth and Company. Cloth, 50 cents net.

This little book contains five lectures on general preventive medicine, and three others on ambulance work. The material in the book is useful and suggestive. It is a particularly helpful manual for the guidance of the army surgeon, as it deals with so many subjects of interest for him. The book is written in plain language by one who has had much practical knowledge of what he is writing about.

ANATOMICAL NOMENCLATURE.

With Special Reference to the Basle Anatomical Nomenclature, [B N A], By Lewellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University; formerly Professor of Anatomy in Rush Medical College, Chicago. With Vocabularies in Latin and English. Two colored and several other illustrations. Philadelphia: P. Blakiston's Son and Company. Octavo, cloth, \$1.00 net.

The Basle Anatomical Nomenclature—popularly referred to as the [BNA]—is the result of an earnest, concerted effort to systematize and simplify a nomenclature which has grown in haphazard manner, become burdened frequently with multiple designations for one structure, and in general has deteriorated in scientific accuracy and value.

The expression [BNA] is a shorthand title for a list of some 4,500 anatomical names (*nomina anatomica*) accepted at Basle in 1895 by the Anatomical Society as the most suitable designations for the various parts of the human anatomy which are visible to the naked eye. The names are all in correct Latin and have been selected by a group of the most distinguished anatomists in the world, working six years at their task, as the shortest and simplest available terms for the different structures; the majority of the names were already in use in the various standard text-books, but some of them were selected from anatomical monographs not considered in the text-books, and a few of them are brand-new

terms, introduced into the list, where an examination of the literature and of anatomical preparations showed that none of the names hitherto coined was satisfactory.

One name only is given to each structure, and the mass of synonyms which encumbered the text-books can thus be swept away. If one of the larger text-books of gross anatomy be examined, as many as 10,000 names will be found employed, the half of which are synonyms; and if the anatomical terms used in the various standard text-books be collected into one list, the total number amounts to more than 30,000. It is no small achievement to have reduced the necessary number of names in gross anatomy, as it is known to-day, to less than 5,000—an achievement for which both students and teachers of the subject must be thankful.

Even more important is the exclusion from the list of all obscure or ambiguous terms, each name employed having a definite and easily ascertainable meaning. The construction of the list has led, too, to the establishment of certain general principles regarding the formation and use of anatomical names, and these principles promise to be of great service in simplifying nomenclature and keeping it uniform as anatomical science continues to develop.

The [BNA] makes no attempt to limit the language of research, but only to supply a list of simple terms, free from ambiguity, for common use. Simplicity, accuracy, and serial connection will be favored by the uniform and consistent use of the [BNA] for the structures studied in the schools. The teacher's work will be simplified and the pupil's task will be lightened; instruction will be unhampered, research will flourish, and anatomical science will gain in dignity and in precision.

The [BNA] is already so widely used in English and foreign tongues by teachers of and writers on Anatomy, Physiology, Histology, Pathology, Embryology, Zoology, etc., that Dr. Barker's book is most timely in its publication.

In no other work in English are the purposes of the [BNA] described, its scheme explained, and its vocabulary given.

PROGRESSIVE MEDICINE.

A quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., and H. R. M. Landis, M.D. March, 1907. Lea Brothers and Company, Philadelphia. \$6 per annum.

The quarterly issue is particularly able. Dr. Frazier discusses the surgery of the head, neck, and thorax; Dr. Preble takes the infectious

diseases, Dr. Crandall deals with children's diseases, Dr. Kyle reviews the work done on the nose and throat, while Dr. Randall gives a resumé of progress on diseases of the ear. All that need be said is the volume is a very valuable one.

PARAFFIN IN SURGERY.

A critical and clinical study by Wm. H. Lockett, M.D., Attending Surgeon Harlem Hospital, Surgeon to the Mt. Sinai Hospital Dispensary of New York, and Frank I. Horne, M.D., formerly Assistant Surgeon Mt. Sinai Hospital Dispensary. 12 mo.; 38 illustrations; 118 pages. Surgery Publishing Co., 92 William Street, New York City Cloth \$2.00.

This book covers a special field in surgery of absorbing interest both to the surgeon and general practitioner. The research and original investigations made by these authors in the use of paraffin have exploded many fallacies previously maintained. It presents the Chemistry of Paraffin, the Early Disposition of Paraffin in the Tissues, Physical State of the Paraffin bearing on its Disposition, the Ultimate Disposition of Paraffin, Technic and Armamentarium. It thoroughly covers the use of paraffin in cosmetic work, such as saddle nose deformity, depressed scars, hemiatrophia facialis with a large number of photographs showing cases before and after operation, with illustrations of micro-photographs of the disposition of the paraffin in the tissues. It also presents other conditions of a functional character, where Paraffin can be used with service such as incontinency of urine, umbilical hernia, umbilical and vantral hernia, epigastric hernia, inguinal hernia, etc. The subject is presented in a scientific yet comprehensive manner.

Full details are given as to the method of preparing the paraffin as well as the method and manner in which it should be injected. This book presents a wide field for the use of paraffin and a copy should be in every physician's library. It is printed upon heavy coated book paper and attractively bound in the best quality of heavy red cloth, stamped in gold.

MISCELLANEOUS.

PROPOSED OSTEOPATH BILL.

Whereas it is expedient to extend to duly qualified practitioners of the system known as Osteopathy certain rights and privileges.

Therefore His Majesty, etc., enacts as follows :

1. Until other persons be appointed, as hereinafter provided, R. B. Henderson, of the City of Toronto; Edgar D. Hoist, of the Town of Berlin; James S. Bach, of the said City of Toronto; J. T. Atkinson, of the City of Brantford, and A. K. Pigott, of the said City of Toronto, shall be members of the Council of the College of Physicians and Surgeons of Ontario to represent the practitioners in Osteopathy who shall become registered under the provisions of the Medical Act, as amended by this Act, and the said members shall forthwith without examination be registered under the provisions of the Medical Act and be entitled to practice Osteopathy.

2. The persons mentioned in section 1 of this Act shall continue in office as members of the said Council until their successors are appointed as hereinafter provided.

3. At the first general election for the appointment of members to the said Council under the provisions of the Medical Act, after the expiration of three years from the date hereof, five duly qualified members shall be elected by the registered practitioners in Osteopathy to succeed the members appointed under section 1 of this Act, and they shall be deemed to have been elected under section 6 of the Medical Act (as amended by this Act).

4. Section 4 of the Ontario Medical Act is amended by adding the following subsection thereto:

"Any member of the said College registered as an Osteopathic practitioner shall have all the rights and privileges enjoyed by the members of the said College, provided, however, that he may not prescribe medicine to be used either internally or externally (except anæsthetics, antiseptics and antidotes), nor perform major or operative surgery unless qualified to do so as hereinafter provided."

5. Subsection 2 of section 7 of the Ontario Medical Act is amended by striking out paragraph (c) thereof and by inserting the following as paragraphs (c) and (d) thereof respectively:

"(c) Five members to be duly elected by the licensed practitioners in Osteopathy who have been registered under the provisions of this Act."

"(d) Seventeen members to be elected in the manner hereinafter provided from amongst and by the registered members of the profession other than those mentioned in the preceding clauses of this section."

6. Subsection 2 of section 7 of the Ontario Medical Act is repealed and the following substituted in lieu thereof:

"In the event of the death or resignation of any member of the Council representing the practitioners of the Homœopathic system of medicine or of the Osteopathic system of treatment, the remaining representatives in the Council of the practitioners represented by the member who has

so died or resigned may fill such vacancy by selecting from amongst the duly registered practitioners of their system a member to fill the said vacancy."

7. Subsections 2 and 3 of section 17 of the Ontario Medical Act are hereby repealed and the following substituted in lieu thereof:

"(2) Until a Homœopathic Medical College or a College of Osteopathy for teaching purposes is established in Ontario, candidates wishing to be registered as Homœopaths or Osteopaths, respectively, shall pass the matriculating examination established under this Act as the preliminary examination for all students in medicine, and shall present evidence of having spent the full period of study required by the curriculum of the Council under the supervision of a duly registered Homœopathic or Osteopathic practitioner, as the case may be.

"(3) Such candidates must also have complied with the full curriculum of studies prescribed from time to time by the Council for all medical students except as hereinafter provided, but the full time of attendance upon lectures and hospitals required by this Act or by the curriculum of the Council may be spent in such Homœopathic Medical Colleges or Colleges of Osteopathy—as the case may be—in the United States or Europe as may be recognized by a majority of the Homœopathic or Osteopathic members, respectively, of the Council, but in all the Homœopathic or Osteopathic Colleges where the winter course of lectures is only of four months' duration, certified tickets of attendance on one such course shall be held to be equivalent to two-thirds of one six months' course, as required by the Council, and when such teaching bodies or either of them has or have been established in Ontario it shall be optional for such candidates to pursue in part or in full the required curriculum in Ontario.

"Provided that attendance at a College of Osteopathy in the United States or Europe, duly recognized as aforesaid, for three winter courses of not less than nine months shall be deemed full attendance for a student of the Osteopathic system.

"Provided, further, that it shall not be necessary for a student of the Osteopathic system to attend any lectures or to pass any examinations in materia medica, therapeutics and pharmacy."

8. Section 23 of the Ontario Medical Act is amended by adding subsection 5, as follows:

"Any person who was actually practising Osteopathy in the Province of Ontario on the 1st day of January, 1907, and who shall within one year from the passing of this Act present to the members of the Medical Council representing the practitioners of the Osteopathic system of treatment, a diploma from a College of Osteopathy recognized by a majority of the said members as a college in good standing, shall on due proof

thereof and on payment of such fees as Council may by general by-law establish for all persons desirous of being registered, be entitled without examination to be registered, and in virtue of such registration to practice Osteopathy in the Province of Ontario."

9. Section 25 of the Ontario Medical Act is amended by adding the following provisoes thereto :

"Provided that every person desirous of being registered under the provisions of this Act as an Osteopathic practitioner shall, before being entitled to registration, present himself before the Board of Examiners mentioned in section 28 for examination as to his knowledge and skill for the efficient practice of his profession, and upon passing the examination required, and on proving to the satisfaction of the Board of Examiners that he has complied with the provisions of section 7 of this Act, and on payment of such fees as the Council may by general by-law establish for all persons desirous of being registered, such persons shall be entitled to be registered, and in virtue of such registration to practice Osteopathy in the Province of Ontario.

"Provided, further, that it shall be sufficient for any person who on or before the 1st day of January, 1910, is desirous of being registered as an Osteopathic practitioner as aforesaid to prove to the satisfaction of the members of the Council representing the practitioners of the Osteopathic system of treatment that he holds a diploma of graduation from a College of Osteopathy recognized by a majority of the said members as a college in good standing, instead of and in lieu of proving that he has complied with the provisions of section 7 of this Act as in this section provided."

10. Section 29 of the Ontario Medical Act is hereby amended by adding thereto subsection 2, as follows :

"A candidate who at the time of his examination, as provided for in section 25 of this Act, signifies his wish to be registered as an Osteopathic practitioner, shall not be required to pass an examination in materia medica, therapeutics or pharmacy, and shall not be required to pass examinations in the principles, theory and practice of Osteopathy, Obstetrics, Gynæcology, Chemistry, and Diagnosis (physical and general) before any examiners other than those approved of by the representatives in the Council of the Osteopathic system."

11. The provision in subsection 1 of section 17 of the Ontario Medical Act, that "any change in the curriculum of studies fixed by the Council shall not come into effect until one year after such change is made," shall not apply to any change in the curriculum of studies which shall be made by the Council during the years 1907 and 1908 for the purpose of giving effect to this Act.

12. The following section is to be added to the Ontario Medical Act :
"From and after the first day of March, 1907, the provisions of this Act shall (except as hereinbefore provided) apply to practitioners of Osteopathy in the same manner and to the same extent as they now apply to practitioners of medicine, surgery and midwifery, and wherever throughout the said Act any of the following words, namely, physician, doctor of medicine, surgeon, practitioner, general practitioner, medical practitioner, or practitioner of medicine occur, they shall, when not inconsistent with the provisions of the said Act and amendments thereto, be construed so as to include practitioners of Osteopathy, and wherever throughout the said Act the words, medicine, surgery or midwifery are used, either separately or collectively, they shall, when not inconsistent with the provisions of the said Act and amending Acts, be deemed to include Osteopathy."

13. The following section is to be added to the Ontario Medical Act :
"Any member of the said College registered as an Osteopathic practitioner, or any candidate for registration as an Osteopathic practitioner who wishes to be entitled to perform major or operative surgery, shall, upon giving notice thereof to the Registrar, and upon proving to the satisfaction of the members of the Council representing the practitioners of the Osteopathic system of treatment that he has spent at least one year, in addition to the time required to obtain his diploma as a graduate in Osteopathy, in the study of surgery at some College of Osteopathy recognized by the majority of the said members of the Council and that he has received a diploma in surgery from such college, and on passing the examinations in surgery required by the Board of Examiners mentioned in section 36, be entitled to perform major or operative surgery."

TORONTO'S AID TO THE SICK AND POOR.

The sum of \$54,117 was distributed by the City Council last year among 34 charitable institutions in the city, the grants ranging from \$8,500 to \$130. This does not include \$49,000 to the hospitals, for poor patients.

Nearly dollar for dollar of Government money was also given, the total being \$46,648.

The expenditure of these institutions footed up to \$265,696, leaving \$164,931 to be collected from private sources, a large proportion of it the gift of friends.

Some of the figures furnished by these institutions to the Charities Commission give an idea of the wide extent of the work being carried on among the poorer classes of the city :

Average inmates daily	2,096
Registered during year	8,902
Protestants	5,315
Roman Catholics	2,808
	<hr/>
Total number assisted	27,761

The largest civic grant goes to the House of Industry for the relief of the outdoor poor, \$12,000. Last year 2,801 persons were helped in this way, 923 families. In bread, groceries, coal, wood, etc., \$5,801.02 was spent, 24,695 nights' shelter were given, of which 729 immigrants received 8,289.

Next in amount comes the House of Providence, \$8,500; then the Sick Children's Hospital, \$7,500; Home for Incurables, \$4,000.

The report of the Toronto Relief Society that receives \$1,000 from the city indicates a work that is peculiarly its own. Among the number assisted were 31 deserted wives and 102 widows. The total receipts were \$2,844.38.

Two societies are engaged entirely in work among needy Jews, the Ladies' Monteyore Benevolent Society, and the Toronto Jewish Benevolent Society. Each receives \$150 from the city treasury. The total receipts were \$974.90 and \$1,063.91, respectively, and the number assisted were 105 and 259. The Nursing-at-Home Mission, on Hayter street, also assisted over 600 Jews.

Among the institutions receiving the largest grants were the following:

City grant to the House of Industry was \$2,000; Government grant, \$4,060; average inmates per day, 185; inmates registered during the year, 309; Protestants, 255; Roman Catholics, 54; total receipts, \$10,695; cost of maintenance per capita per day, 19½ cents.

City grant to the Protestant Orphans' Home was \$1,420; Government grant, \$982; inmates for year, 228; receipts, \$9,587; daily cost, 11 cents.

City grant to the House of Providence was \$8,500; Government grant, \$11,694; daily average inmates, 474; inmates during year, 758; total assisted, 3,500; Protestants, 186; Roman Catholics, 570; total receipts, \$39,179; cost, per capita, 22¾ cents.

City grant to the Home for Incurables was \$4,000; Government grant, \$5,373; inmates, daily average, 136; during year, 171; Protestants, 167; Roman Catholics, 4; receipts, \$23,778; daily cost, 50 cents.

City grant to the Infants' Home and Infirmary was \$1,727; Government grant, \$1,418; inmates, per day, 74; during year, 190; Protest-

ants, 176; Roman Catholics, 7; Hebrews and others, 7; receipts, \$9,096; daily cost, 29 cents.

City grant to the Haven and Prison Gate Home was (special), \$1,465; Government, \$1,659; inmates, daily, 78; during year, 341; Protestants, 280; Roman Catholics, 60; receipts, \$9,445; daily cost, 27 cents.

City grant to the Sunnyside Orphanage was \$3,000; Government grant, \$2,466; inmates, daily, 344; during year, 700; total assisted, 1,009; Protestants, 82; Roman Catholics, 618; receipts, \$16,697; daily cost, 13 cents.

City grant to the Hospital for Sick Children was \$7,500; Government grant, \$7,131; inmates daily, 138; during year, 858; Protestants, 704; Roman Catholics, 103; Hebrews, 51; total assisted, 7,662; receipts, \$49,542 (for maintenance); daily cost, \$1.37.

City grant to the Toronto Relief Society was \$1,000; assisted during year, 300; expended, \$2,844.

City grant to the Toronto Children's Aid Society was \$3,500; inmates daily, 32; during year, 497; receipts, \$7,089; daily cost, 46½ cents.

THE ONTARIO MEDICAL ASSOCIATION.

The provisional programme for the coming meeting has already been issued to the profession of the Province. It should prove of interest to every practitioner. Of special moment will be the address in Medicine by Dr. Mrazyck P. Ravenel of the Phipps Institute, Philadelphia, on "The Methods of Infection in Pulmonary Tuberculosis," and the address in Surgery by Dr. George W. Crile, professor of Clinical Surgery, Medical Department of the Western Reserve University, Cleveland, dealing with the "Clinical and Experimental Observations on the Direct Transfusion of Blood."

The committee also have invited Dr. William Milligan, of Manchester, ex-president of the British Laryngological and Rhinological Association, and Professor Gustave Killian, of Freiburg, Germany, who will be guests of the American Medical Association a few days later at Atlantic City. Symposia upon "The Profession in relation to the Public" and on the subject of "Fractures" will open interesting discussions, beside which the programme of papers promises many important topics for consideration.

A smoking concert and a dinner are items in the programme under the care of the Committee on Arrangements.

The meeting will be held in the Medical Building, Queen's Park, on the 28th, 29th, and 30th of May next.

THE CHANGES IN MEDICAL OPINION.

The following, from the Khan, appeared in a recent issue of the *Toronto Daily Star*, and is worth reproducing. Most medical men will admit that there is a good deal of truth in the criticisms:—

“I see,” began Old Twilight, “that the London *Lancet* sez thet plum puddin’ is a perfectly harmless and digestibil ration, an’ kin be et with impoonity.

“Ef a body isn’t looked up to and respected in this here world it’s his own fault—there’s something radically wrong with himself, an’ that’s what’s the matter with Hannah.

“Now, take the hoe-tell keepers. Local option is breakin’ out in this kentry like smallpox in a Mohawk encampment, an’ it will wipe out the hull tribe before it lets up. Who’s chiefly to blame fer it? Why, the hoe-tell keepers. All uv them, except one here and there, an’ he is the exception which proves the rule, sell liquor in prohibited hours, and to minors and women bodies, and notorious drunkards, till the public hes got sick uv it an’ hes a blame good notion to close ’em out. They don’t sell good stuff—you don’t get vally fer yer money. Ef you git good an’ full in an ordinary tavern you don’t git rightly over the effects fer two weeks. You’ve bin drinkin’ ile uv smoke, blue vitril, an’ Jamaky ginger, an’ yer insides look like a summer fallow after a bush fire. Our noble ancestors usta drink gallons uv whisky an’ it never fized on them, but this stuff nowadays is doctored, most uv it, an’ the first thing you know there is a blue monkey with yaller polka dots onto him perched on the foot uv yer bed, makin’ faces at yeh.

“That’s the way it is with the doctors. They can’t understand how it is that folks cotton to Christian Science, er stack up agin patent medicine. I’ll tell yeh. The doctors ain’t consistent. I’ve took notice doorin’ the past forty year, an’ there isn’t a dang thing that a body puts inside uv his face that they hev’n’t condemned as unfit fer food—an’ sure to kill yeh.

“Doorin’ the past forty year some prominent doctor with a world-wide fame has condemned the followin’ eatables:

“Bread’n butter, scones, biscuits, pancakes, puddin’, pie, doughnuts, beef, mutton, pork, poultry, fish, gravy, sauces, ’taters, cabitches, pass-nips, car’ts, turmots, lettuce, inyins squash, corn, beans, peas, raditches—in short, everything you kin mention that is good to eat.

“They even say that a body shouldn’t drink milk, that tea is poisonous, an’ coffee means a lingerin’ death. One doctor’ll tell you that whisky, no matter how pure it is, is rank pizen, while another gives his

payshent all he wants uv it. That's where the doctors queer themselves—they make the laity leery—that's what they do. Ef you was to kill a fella with a gun you couldn't bring a dozen renowned doctors fer to swear that the late lamented didn't die uv pewmony er Bright's disease er appendesightus er any old thing. The doctors hev told us that plum puddin' was sure death up to a thousand yards, and now the greatest medical journal in the world up'n says that plum puddin' is a perfect baby food.

"First thing we know the advertisin' columns will hev a pitchur of a fat young one sittin' on a sofa cushion, and underneath it the follering startling statement: 'This beautiful infant was raised on Noffle's Perfect Plum Puddin'. Sold by all grocers. Beware uv imitations. Sample tin sent on receipt of ten cents in stamps,' ek settery.

"Fifty years from now the historian will state that the early pioneers overthrew the forest because they were ravin' drunk most of the time on unadulterated whisky valley tan—whisky bein' only two York shillin's a gallon; cuz fifty year from now there won't be a white man in Canady that cud cut down an oak three foot on the stump in a month o' Sundays.

"Next thing we know some big doctor'll come along an' say 'If youse fellers want to be Methusalems, eat a stomachful uv Welsh rabbit, toasted cheese, kippered herrin', fried oysters, porkinbeans, mince pie, coffee, an' beer before youse go to bed.'

Nothing that the average doctor sez surprises me any more, Lucy. One of um will say 'Eat only once a day;' another will up'n say 'Oh, you go long!—eat as offen as ye kin'—an' that's me."

CLINICAL REPORTS OF THE NEW HYOSCINE, MORPHINE AND CACTIN ANÆSTHESIA.

American Journal of Clinical Medicine, February, 1907.

I gave the hyoscine, morphine and cactin compound a trial to-day in a case of locomotor ataxia of three years' standing, in which three grains of morphine (hypodermically) had no effect. This patient had been using morphine for more than nine years; had not had any morphine for eighteen hours previous to the hypodermic injection of the hyoscine, morphine and cactin compound, and thirty minutes after injection there was complete surgical anæsthesia.

Ashland, Ohio.

F. V. DOTTERWEICH.

Since using the hyoscine-morphine and cactin tablets in a number of different cases I would not be without them. They are valuable in obstetrical as well as surgical work, and in many other cases where morphine or hyoscine is needed. The hyoscine prolongs the rest so well in pain cases that a second dose of morphine is not needed nearly as often.

McCammon, Idaho.

J. W. ROBINSON.

I have had good results with the alkaloids. Yesterday I had an opportunity to test your method of hypodermic anæsthesia. A woman had the end of her finger torn from the second joint, badly lacerating the muscle above, which required my taking off a piece of the bone. I injected one tablet and in due time, with but four or five drops of chloroform, she was asleep and the necessary operation was performed without the slightest pain.

Olmsted Falls, Ohio.

M. H. WESTBROOK.

PHENALGIN AND ITS USES.

From time to time new coal-tar products are introduced, and very often these disappear within a few months after they have been brought to the notice of the profession, simply because they do not prove a special value or else have been found to exhibit dangerous properties. Not so with Phenalgin, which is a product put upon the market by the Etna Chemical Company, New York (London agent: Mr. E. J. Reid, Basinghall avenue, E.C.). Phenalgin is ammonio-phenylacetamide. Like products of a somewhat similar composition it possesses three distinct properties. It is an analgesic. In this respect it bids fair to rival completely phenacetin, and is of special service in cases of neuralgia and headaches of various kinds. In dysmenorrhœa it is likewise of great service, small repeated doses frequently acting as a charm in relieving this distressing complaint. Then again it is useful in reducing temperature. Here it finds a useful application in the hectic fever of tuberculosis, small doses being given with marked benefit in such cases. In fact Phenalgin is one of the best all-round antipyretic agents known, and is more reliable than any other products of similar origin. Lastly, it acts as an hypnotic, partly by relieving pain and partly also by allaying nervous restlessness, so often met with in diseases of various kinds.

The product is chemically pure, and is put up in pink-top capsules and in tablets. These capsules are made of the best gelatine and are absolutely free from all impurities, retaining their strength, it is said, for an indefinite period. The tablets contain $2\frac{1}{2}$ grains of phenalgin, and

the capsules five grains each of the powder. The dose ranges from $2\frac{1}{2}$ to 10 grains, repeated in half an hour if necessary. In cases of dysmenorrhœa ten grains should be taken every half hour until relieved. At least these are the directions given by the manufacturers, but probably much smaller doses will be found sufficient. From personal trial of Phenalgin we can strongly recommend it as a valuable substitute for phenacetin. Its great advantage is that it is not known to the public, whereas phenacetin is, and apart from this it is a distinctly pure product from which good results may always be confidently expected. Samples and further particulars can be had for the asking at any time from the London agent, who will also answer any inquiries relating to this new remedy. We strongly advise our readers to give it a trial in their practice.—*Medical Times*, London, England.

FACTORS IN CATGUT UTILITY.

The successful use of catgut is dependent on several conditions. A little thought will demonstrate that it is the sum of these conditions that essentially determines the degree of resulting success. Like the proverbial chain, the whole utility is limited by the strength of the weakest link. Failure in one detail tends to nullify the efficiency of the rest. Therefore, in using catgut, it should never be forgotten that every collateral factor requires equal consideration and attention in order to obtain the best possible result.

For discussion these various factors may be divided into intrinsic and extrinsic. Briefly stated, the intrinsic conditions essential to the successful use of catgut are as follows:

First: Quality. This of course implies that the catgut shall be carefully selected, that it shall be free from foreign substances, of adequate tensile strength, perfectly flexible and properly absorbable.

Second: Sterility. This means freedom from pathogenic organisms as a result of certain careful procedures which aim at thorough elimination, not only of ordinary pyogenic microbes, but also of such bacteria as tetanus and anthrax bacilli. Due attention must also be given in the process of such sterilization to the conservation of the tensile strength, flexibility and proper absorbability of each strand, otherwise, while sterility of the catgut will be obtained, it will be at the sacrifice of its mechanical and physiological utility. Finally, suitable measures must be taken to maintain sterility when it is once obtained, and to prevent every possible chance of subsequent contamination.

The extrinsic conditions which contribute to success or failure in the use of catgut are as follows :

First: Avoidance of infection from extraneous sources at the time of surgical use. This necessarily embraces the whole scheme of operative asepsis, including the surgeon, his instruments, his assistants, the solutions, the condition of the patient's skin and tissues, and finally all the dressings used. In this connection it should be remembered that for several days subsequent to an operation, faulty technique or uncleanness on the part of the assistants or nurses is a frequent cause of infection.*

Second: Selection of the proper size of catgut for the object desired. It must be apparent that if a strand is too large the absorptive power of the tissues will be taxed beyond safe limits, and, as a consequence, the catgut will present the dangers and irritating tendencies of a foreign body. If the strand is too small, it may be absorbed too rapidly and fail to accomplish proper ligation when used as a ligature or sufficient approximation when used as a suture, with equally disastrous results.

Third: The avoidance of too great tension or constriction. Herein lies the nicety of skilful technique, for the surgeon who uses just tension enough to produce proper coaptation will always obtain better results than the one who draws his suture so tight as to impair capillary circulation with an inevitable tendency toward tissue necrosis.

The foregoing can hardly leave any doubt that the successful use of catgut depends quite as much on conditions presented by the surgeon and the patient as on the inherent qualities of the catgut itself. Hence is emphasized again the great importance of consistent technique in all matters of surgical detail, or to express more specifically concerning the use of catgut sutures and legatures; while too great care cannot be exercised in their selection and preparation, equal care should be employed by the surgeon in their application.

At the risk of useless repetition, therefore, every link in the chain of surgical procedure, including not only the quality and sterility of the material used, but also of asepsis, discretion and skilful application must be equally strong, or failure is a logical result.

ANNOUNCEMENT RE THE JOURNAL OF INEBRIETY.

The Journal of Inebriety, after thirty years of continuous studies of the disease of inebriety and drug taking, begins its new decade by

*The Relation of the Technique of Nurses and of Hospital Apparatus to the Healing of Wounds, by Charles P. Noble, M. D., *Annals of Surgery*, Sept., 1906, p. 481.

entering upon a comparatively new field of physiological and psychological therapeutics for the treatment of these neuroses. Arrangements have been completed by which the *Archives of Physiological Therapy* has been consolidated and will hereafter be published as a part of the *Journal of Inebriety*. This very able monthly has been developing parallel lines of study with the *Journal of Inebriety*. In the opinion of its managers its scientific value would be greatly enlarged by concentrating its work along some special lines. The disease of inebriety and its allied neurosis is a field of most practical interest, hence the *Journal of Inebriety* is selected as a medium for continuing the work of the *Archives of Physiological Therapy*.

Henceforth, in addition to the various phases of this subject which the *Journal* has presented, the therapeutic effects of hot air, radiant light baths, electricity, massage, psycho-therapeutic measures and other physiological means will occupy a prominent space. This effort to clear away the confusion and broaden the studies of therapeutic means for cure, will make the *Journal of Inebriety* one of the most practical and valuable visitors to every hospital and institution, as well as to all specialists who treat brain and nerve neurotics. We shall aim to present and formulate the latest studies and facts along these frontier lines, and in this way lift the whole field of therapeutics out of its present empiric stage into one of rational therapeutics.

PENNSYLVANIA RAISES THE REQUIREMENTS FOR ADMISSION TO MEDICAL SCHOOL.

Recognizing the advantages of a broader general education and the growing necessity of the prospective student having in addition special preparation for the study of medicine, the Board of Trustees of the University of Pennsylvania has decided recently to raise the requirements for admission to its medical school. These requirements include two years of general college training and in addition a certain knowledge of biology, chemistry and physics. According to the plan which has been adopted, the standard will be raised gradually, beginning with the academic year 1908-1909 and reaching the maximum 1910-1911.

THE TREATMENT OF NASAL CATARRH.

By JOHN A. HALE, M.D., Alto, Pa., III.

For years I have used various remedies and met with varying success. until tiring of one remedy after another, I relied solely on Potas-

sium Permanganate in weak solutions as a nasal douche, but a review of some points in this paper will show why I always sought for something else. Glyco-Thymoline has usurped the place of the permanganate solution in my armamentarium, and after sufficient trial established faith, implicit faith, in its specific therapeutics for this condition. A knowledge of its essential constituents and their therapeutic action only tends to strengthen a belief in its specificity. Caution is necessary in the selection and use of remedies, but a fair trial has proven no untoward inconvenience emanating from the use of this remedy. Meanwhile the therapeutic results are gratifying and the good effect of Glyco-Thymoline can be easily verified by trial, when conclusions will be the results of practical truths only.

OUR CONFIDENTIAL FRIENDS.

We would not banish opium. Far from it. There are times when it becomes our refuge. But we would restrict it to its proper sphere. In the acute stage of most inflammations, and in the closing painful phases of some few chronic disorders, opium in galenic or alkaloidal derivatives, is our grandest remedy—our confidential friend. It is here also that the compound coal-tar products step in to claim their share in the domain of therapy. Among the latter, perhaps, none has met with so grateful a reception as "Antikamnia and Codeine Tablets," and justly so. Given a frontal, temporal, vertical or occipital neuralgia, they will almost invariably arrest the head-pain. In the terrific pronto-parietal neuralgia of glaucoma, or in rheumatic or post-operative iritis, they are of signal service, contributing much to the comfort of the patient. Their range of application is wide. They are of positive value in certain forms of dysmenorrhœa; they have served well in the pleuritic pains of advancing pneumonia and in the arthralgias of acute rheumatism. They have been found to allay the lightning, lancinating pains of locomotor ataxia, but nowhere may they be employed with such confidence as in the neuralgias limited to the area of distribution of the fifth nerve. Here their action is almost specific, surpassing even the effect of aconite over this nerve.

ANÆMIA AND ITS RELATION TO CATARRHAL INFLAMMATION.

No disease is more common than chronic inflammation of the mucous membranes. Doubtless many causes contribute to the prevalence of this

malady which spares neither the young nor the old, the rich nor the poor, the high nor the low. Prominent in its etiology, however, are sudden climatic changes, the breathing of bad or dust-laden air, bad hygiene in personal habits, and bad sanitary surroundings. These factors all singly or collectively tend to lower the vitality of the whole human organism, and as a consequence the cells throughout the body perform their various functions imperfectly, or not at all. The quality of the blood becomes very much lowered, with the result that tissues that have important work to perform, do not receive sufficient nourishment and so falter from actual incapacity. The red blood cells are reduced in numbers and the hæmoglobin is likewise diminished. Because of the blood poverty the digestive process is arrested, nutritive material is neither digested nor absorbed, and a general state of inanition ensues. It is not surprising under these circumstances, therefore, that chronic inflammation of the mucous membranes is produced. These highly organized structures with very important duties to perform naturally suffer from insufficient nutritional support, and the phenomena of catarrh follow as a logical result. Perversion and degeneration of the cells in turn takes place, and more or less permanent changes are produced in the identity and function of the tissues.

Appropriate treatment should consist primarily in correcting or eliminating all contributing factors of a bad hygienic or insanitary character. The individual should be placed under the most favorable conditions possible and every effort made to readjust the personal regime. Local conditions of the nose, throat, the vagina, or any other part, should be made as nearly normal as possible by suitable local applications or necessary operative procedures. Then attention should be directed immediately to improving the quality of the blood and thus increase the general vitality. For this purpose vigorous tonics and hæmatics are desirable, and Pepto-Mangan (Gude) will be found especially useful. Through the agency of this eligible preparation, the blood is rapidly improved, the organs and tissues become properly nourished and accordingly resume their different functions. Digestion and assimilation are stimulated and restored to normal activity, and the various cells and organs start up just as would a factory after a period of idleness. In fact Pepto-Mangan (Gude) supplies the necessary elements that are needed to establish the harmonious working of the whole organism. When this result is achieved, the catarrhal condition is decreased to a minimum and distressing symptoms are banished, a consummation that is highly gratifying to every afflicted patient and every earnest practitioner.

EARLY DECAY OF CHILDREN'S TEETH.

A live question with physiologists is the very general tendency in children to early decay of the teeth and the resultant unfortunate consequences to general health. It is now generally conceded that one of the main causes of the decay of teeth is the general use of white bread and soft, mushy foods. The coming of the teeth marks a period in the child's life when an elaboration of the all-milk diet is required. The amylolytic function is gradually developing and it is therefore necessary to provide food which will not tax these new powers and yet will afford gentle exercise so as to promote normal development. The whole-wheat food, Egg-O-See, contains soluble starch (maltose), and even before the child can chew the food this starch (practically redigested) is made available by straining the milk through Egg-O-See flakes.

When a little later the molars appear they must begin the work of mastication and trituration if the teeth are to develop physiologically and grow into objects of personal adornment. The partial digestion of Egg-O-See makes it acceptable to the stomach of the child at this age, the dry, crisp flakes encourage proper exercise of the teeth, while the phosphates, nitrates and other salts of wheat (absent in white bread and similar forms of food) furnish the mineral food required by the teeth and the bony framework of the body. Readers of this journal will receive a full-size package of Egg-O-See on application to the Egg-O-See Cereal Co., Chicago.

A STERILE EYE BATH.

An eye bath fashioned from a single piece of aluminum has been introduced by the Kress & Owen Company. That this little device will be well received by the medical profession is not to be questioned when

GLYCO-THYMOLINE



EYE BATH

one considers the many points of advantage this metal cup has over the old style glass contrivance. It is cleanly, unbreakable, and can be sterilized instantly by dropping into boiling water. The surgical bag in the future will hardly be complete without one of these cups, which will give happy results in many an emergency. It will be found invaluable for treating ophthalmia, conjunctivitis, eye-strain, ulceration and all inflammatory conditions affecting the eye.

Directions.—Drop into the eye-bath ten to thirty drops of Glyco-Thymoline, fill with warm water; holding the head forward, place the filled eye-bath over the eye, then open and close the eye frequently in the Glyco-Thymoline solution.

No pain or discomfort follows the use of Glyco-Thymoline. It is soothing, non-irritating, and reduces inflammation rapidly.