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CONTENTS

- Page 89.—Primary Intra Dural Tumours of the Optic Nerve—By W. Harvey Smith, M.D., Winnipeg.
- Page 96.—Displacement of Stomach as a Cause of Indigestion—W Soltan Fenwick, M.D., F.R.C.P., London.
- Page 111.—Recent Developments in Urinary Analysis and Semeiology—By A. W. Gilchrist, B.A., B.Sc., M.D., (Paris), M.R.C.S., L.R.C.P., (London).
- Page 121.—Editorial.
- Page 125.—Medical Societies, Hospital News, etc.
- Page 130.—Correspondence.
- Page 132.—General Medical News.

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No. 3

PRIMARY INTRA DURAL TUMOURS OF THE OPTIC NERVE

(*With Report of a Case.*)

BY W. HARVEY SMITH, M. D.,

Ophthalmic Surgeon, Winnipeg General Hospital, and Professor
of Clinical Ophthalmology, Manitoba Medical College.

Primary intra-dural tumours of the optic nerve are of such clinical interest and rare occurrence, that a case which has recently been under observation and treatment of the writer, seems not unworthy of being recorded.

Up to the year 1901, when Byer's excellent and comprehensive monograph dealing with this subject appeared, (to which I am indebted for much of the information hereafter given) 102 cases had been reported. Wishart of Edinburgh, in 1833, being the first to publish an account of this unusual condition.

Actiologically, it seems to be an affection of child life. Eighty per cent. of the cases reported occurring in persons under 15 years of age and "there is a tendency for females to be affected oftener than males and the left nerve, than the right." In a few cases injury appears to have been the starting point of these growths, while *fabrile* affections have been noted to be frequently associated with the commencement of their development.

Macroscopically, they possess a capsule formed by the dural sheath, which can as a rule be readily "stripped from the structure beneath." In size they vary, reaching in some cases the dimensions of a gooses egg, in others being so small as to produce no proptosis. Their position may be at any portion of the nerve but are usually found at its posterior extremity. In shape they are generally pyriform. In "a great majority of cases the excised tumor is incomplete and must necessarily have been connected with the remaining portion within the cranium."

In consistence, they vary, "from dense and firm to soft and fluctuating," being nearly always elastic, "the color is usually yellowish, grayish red or reddish-gray." The nerve, which is frequently increased in length, "on section is distinguished both by a slightly different tint and by its striated appearance."

Microscopically, "Byers points out that intra-dural tumours of the optic nerve do not correspond with any one special type of growth, but that there is constantly represented in one and the same specimen, several phases of developing connective tissue. He compares them with the condition found in elephantiasis of the subcutaneous tissues, and uses the term "fibromatosis" to define the general features. There is essentially an over growth of white connective tissue which is protean in character. Where the growth is very gradual, dense fibrous tissue with a few nuclei is formed; where more rapid an almost imperceptible transition to the sarcomatous or myxosarcomatous type is found. These observations agree with those recorded in elephantiasis due to primary obstruction of the lymph-flow. The feature almost invariably described as myxomatous, which is so frequently present, is in reality a simple œdema, due to lymph stasis. This is proved by local appearances and still more conclusively by the absence of mucin, as shown by specific tests. The group of cases which show this œdematous condition forms the main bulk of intra-dural tumours."—Parsons.

"Primary tumours of the optic nerve do not give rise to metastases, and while occasionally local recurrences have been noted, this is easily explained on the well-known fact of the tendency of fibromatosis towards local malignancy.

When primary tumours of the optic nerve cause death, it is, I believe, never because of the spreading backward of the orbital tumour, but through the continued growth of an intracranial portion of the neoplasm which coexists with the orbital tumour and which is not removed at the time of operation."—Byers.

Symptomatology.—Exophthalmos is the symptom which is usually observed first and is of special importance from a diagnostic standpoint, since the formulation, by Von Graefe, of the rule that in cases of optic nerve tumours the direction of the proptosis is in the line of the orbital axis, in contra-distinction to that noted in other forms of orbital growth, which tend to produce deviation of the globe in one direction or another.

Proptosis is generally slow and painless in development and is as a rule associated with marked loss of vision.

Ophthalmoscopically, distinct fundus changes are usually observed thus, optic neuritis, simple atrophy or post neuritic atrophy were found in 80% of the cases reported.

Palpation is often of value in determining the presence of a neoplasm. In the cases reported, herewith, it yielded negative information, but produced forward dislocation of the globe, a condition, so far as the writer can learn, almost unique in the history of this affection.

Symptoms of a general character, such as headache, dizziness and impairment of the general health, have been frequently noted, and changes in connection with the globe are not exceptional, a pressure hypermetropia having been observed occasionally, while corneal changes, due to exposure, have been reported a number of times.

"Freedom of the musculature of the eye is present in a relatively large percentage of cases of primary intra-dural tumours of the optic nerve, and must therefore be looked upon as more or less characteristic of these neoplasms."—Byers.

The Diagnosis of this rare condition would appear to depend upon the following points:

1. Exclusion of affections of the orbit and adjacent cavities.
2. Unilateral slowly developing exophthalmos.
3. Associated early and profound reduction of vision.
4. Marked changes in the papilla.

Prognosis, Byers asserts, "is to be looked upon as more serious than has hitherto been regarded. The danger is not from recurrence in the strict sense of the term, but from the continued development of the intracranial portion of the tumour, which it is impossible to remove at the time of the operation."

Treatment, is always surgical, removal of the growth with or without the globe being indicated.

CASE REPORT.

C. M., Age 22. Nationality, Doukhobor. Occupation, Carpenter, unmarried. A well-developed muscular man, in good general health, first consulted me in September, 1903, regarding protrusion of the left eye, which had started four years previously. No history of value was obtainable on account of the inability of the patient to speak English. As far as could be learned, however, the exophthalmos was increasing and was accompanied by more or less pain and discomfort in the head.

Present Condition.—Right eye is normal in every respect and possesses a vision of 20/15. Vision in left eye equals counting of fingers at five feet. The globe protrudes forwards about

half an inch and deviates slightly upwards and outwards, its movements are restricted in every direction and the closed lids cover it completely. Tension is normal. Upon attempting to pull up the upper lid, the eye at once becomes dislocated forward between the lids, which close down spasmodically behind it; its anterior 4-5 being exposed to view. The patient suffered great pain during the time the globe was dislocated and made immediate and frantic efforts to replace it, which he succeeded in doing, without difficulty. He absolutely refused to permit of examination by palpation or with the ophthalmoscope, evidently dreading the possibility of a recurrence of the dislocation. He submitted, however, to being photographed (See Fig. 1.) which gives an extremely good idea of the extent of the proptosis and the position of the eye.



FIGURE ONE.

Patient was sent to the Winnipeg General Hospital to be kept under observation and was advised that an orbital tumour was present, which should be removed. Operation and further examination were, however, refused and he returned home after two days stay in the hospital.

In December 1906, he again presented himself for treatment, with the request that, whatever measures were deemed necessary should be adopted without delay, as the eye was more prominent and was causing increased trouble, such as headaches and lachrymation, than when last examined.

Present Condition.—Patient is in good general health, but appears to be a little thinner than when first seen. Proptosis has not increased to any very noticeable extent, but the lower lid is much everted, a large area of reddened and thickened conjunctiva being exposed to view. The cornea is intact and well covered by the closed lids, the upper of which is greatly stretched. Ocular movements are limited. Pupil reacts normally to accommodation and sluggishly to slight stimulation—Tension is normal—V.O.D. equals 20-15. V.O.S. equals counting of fingers uncertainly at three feet. Ophthalmoscopic examination reveals a pale atrophic nerve with small blood vessels. No orbital swelling can be made out by palpation and no pulsation is present. Patient refuses to allow his eye to be dislocated.

History.—Is a Doukhobor, born in Russia, 22 years ago, coming to Canada with the Doukhobor Exodus of 1899. He states that as a child he was occupied looking after cattle in his native village. Since 14 years of age has worked as a carpenter.

Family History.—Negative.

Personal History.—Has never had an illness and gives no history of injury. Since 4 years of age has been troubled with severe headaches over vertex and forehead, most intense over and about left eye. These headaches, he describes as, being of a burning, sickening and paroxysmal character, unrelieved by medication and almost unbearable, lasting from 1 to 3 days, after which he would be free from pain for ten days or two weeks. Nausea and vomiting often accompanied the pain, which appeared to be aggravated by the heat of the sun. About 8 years ago, shortly after coming to Canada, his relatives observed that his left eye was commencing to protrude, the protrusion increasing a little every year. He states that vision in the affected eye has been for six years or more, somewhat impaired, but that up to the present time he has been able to distinguish people. The accuracy of this statement is open to question, in view of the condition of the nerve and the very defective vision existing at the present time.

With regard to the frequency with which the eye has been dislocated, patient says, that for 5 or 6 years spontaneous dislocations occurred as often as every three days. But for the last three years, he has had better control of the eye and dislocations have been much less frequent.

Diagnosis.—Non-malignant tumour of the optic nerve.

Enucleation of the eye and removal of the growth advised and advice accepted.

As patient absolutely refused to allow the eye to be dislocated for the purpose of having it photographed, preparations were made to have photographs taken when under a general anaesthetic.

On January 7th, 1907, under chloroform anaesthesia, the eye, and tumour of the nerve, shown enlarged in Fig. 4, were removed and photographs were taken. On account of the



FIGURE TWO

muscular relaxation accompanying the use of the anaesthetic, spontaneous dislocation of the eye did not occur, (See Fig. 2), but with the finger pressed lightly above and behind the eye, it could readily be pressed forward, as shown in Fig. 3. Patient



FIGURE THREE

recovering slightly from the anaesthesia, during the photographing process, developed marked Blepharospasm with the result that the eye was dislocated forward fully half an inch

more than is shown in Fig. 3. The lids closed down well and firmly behind the globe, which was almost entirely anterior to the lids. Unfortunately on account of the movements of the patient, a photograph of this condition was not obtainable. Upon replacing the eye, the Blepharospasm at once ceased.

Operation.—No speculum was required in performing enucleation, the eye being sufficiently far forward to allow of the separation of the conjunctiva and of the diversion of the tendons of the ocular muscles without its use. The conjunctiva was adherent from the sclero-corneal margin $\frac{1}{2}$ inch backward in all directions. Upon dividing the muscular attachments, the eye came well forward allowing of visual inspection of its posterior portion and the optic nerve, which was considerably elongated, (See Fig. 4) in color yellowish, much thickened and soft. At the end of the optic nerve and continuous therewith, a resistant mass could be felt rigidly adherent to the apex of the orbit. This was divided as close as possible to its point of attachment. The sensation, when dividing it with the scissors was, as though a piece of cartilage was being cut through. It was impossible to eradicate every vestige of the neoplasm as its posterior limits could not be determined. Hemorrhage was insignificant, and

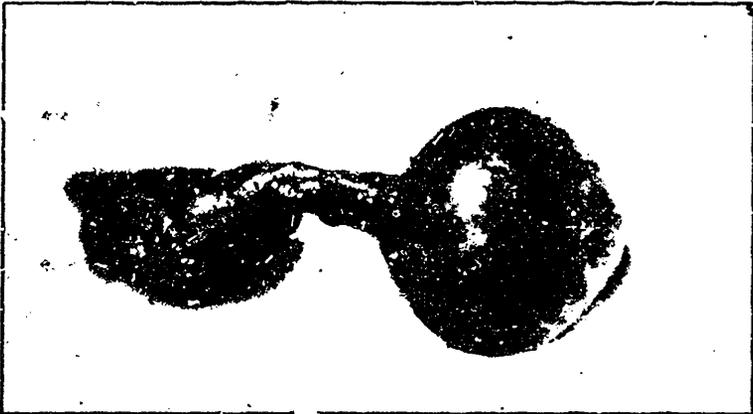


FIGURE FOUR

eye was dressed in ordinary way and recovery was uneventful. Three weeks after operation, patient was given an artificial eye, the wearing of which markedly lessened the ectropion of the lower lid and improved his appearance greatly.

I am indebted to Dr. Gordon Bell, Provincial Pathologist, for the following report on the eye and growth submitted to him for examination.

PATHOLOGIST'S REPORT.

"A slightly flattened pyriform tumour, located about $\frac{1}{2}$ inch behind the globe to which its apex is directed. Its length is one inch, its greatest circumference is $1\frac{1}{2}$ inches. While totally engaged by the mass, the optic nerve runs along one side. Condition of base of neoplasm would indicate that, removal was incomplete.

Sections show it to be a neuro-fibroma, consisting of a dense mass of fibrillar connective tissue, in which no myxomatous changes can be detected."

REFERENCES: Studies from the Royal Victoria Hospital. "The Primary Intradural Tumours of the Optic Nerve." Byers. "The Pathology of the eye."—Parsons.

(Continued from Page Seventy of February Issue)

DISPLACEMENT OF STOMACH AS A CAUSE OF INDIGESTION.

BY W. SOLTAU FENWICK, M.D., F.R.C.P.

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III. TOTAL DESCENT OF THE STOMACH (GASTROPTOSIS).—Gastroptosis is by far the most frequent form of displacement, and is usually associated with dislocation of other abdominal viscera. It is characterized by a descent of the entire stomach, the cardiac orifice being dragged down to the level of the twelfth dorsal vertebra, while the great curvature may reach any point between the navel and the symphysis pubis. The chief distinction between this condition and dilatation of the stomach is that in the former the distance between the upper and lower margins of the organ remains the same as in the normal state while in cases of gastrectasis the apparent breadth of the viscus is greatly increased.

Frequency.—The recognition of the slighter degrees of gastroptosis being attended by considerable difficulty, it is almost impossible to determine the absolute frequency with which the displacement occurs. Meinert examined fifty girls of 12 years of age, and found evidence of gastric displacement in nearly one-half of them, while among his adult female patients some anomaly in the position of the stomach existed in 80 per cent. According to this observer, a similar condition only occurs in about 5 per cent. of the male population.

Among patients suffering from diseases other than those affecting the digestive organs, I found gastroptosis in 6 per cent. of the males and in 33 per cent. of the females.

With regard to the frequency of gastroptosis among persons who suffer from functional disorders of digestion, Einhorn detected its existence in 6.2 per cent. of his male and in 34.8 per cent. of his female patients. Out of 500 consecutive cases of dyspepsia which came under my notice at the London Temperance Hospital, the digestive disturbance was dependent upon gastroptosis in 3 per cent., while in a similar series occurring in private practice the percentage was 6.6. In both cases the ratio of females to males was about 4 to 1. It may therefore be accepted that in about 5 per cent. of all cases of indigestion the symptoms will be found to depend upon a downward displacement of the stomach or those morbid conditions which ensue from it.

Causation.—Several conditions seem to *predispose* to the development of gastroptosis. Families which possess a strong tendency to tuberculosis are unduly prone to suffer from the complaint, owing possibly to their possession of abnormally long and narrow chests, with a contraction of the lower aperture. The displacement is also exceptionally frequent in persons who have suffered from tuberculosis of the lung in early life, but have made a complete recovery. In both these cases the displacement is usually associated with neurasthenia gastrica, and the resultant symptoms are exceedingly intractable to treatment. Certain congenital anomalies of the peritoneal folds which support the stomach, such as an abnormal length of gastro-hepatic, duodeno-hepatic, and gastro-phrenic ligaments, or an extreme tenuity of their structure, likewise predispose to downward displacement of the viscus, the degree of which increases when the body has attained its full development. In many instances of this description the floating tenth rib, to which Stiller has drawn attention, is found to exist.

Gastroptosis may be *acquired* in a variety of ways—(1) All forms of dilatation of the stomach are accompanied by a downward dislocation of the viscus as a result of its increased weight, and consequently gastroptosis is invariably met with in cicatricial and other chronic forms of obstruction of the pylorus or duodenum, as well as in severe cases of myasthenia gastrica. (2) Extensive emphysema of the lungs, especially if it be associated with some deformity of the chest or spine, always gives rise to flattening of the diaphragm and downward displacement of the abdominal organs that lie in contact with it, and for a similar reason pleuritic effusion or pneumo-

thorax affecting the left side of the chest is accompanied temporarily by dislocation of the fundus of the stomach. (3) Attenuation and stretching of the abdominal wall, associated with a diminution of intra-abdominal pressure, are potent causes of displacement of the abdominal organs, and the latter condition is therefore frequently encountered in emaciated persons whose lying-in periods have been unduly curtailed, or from whom ascitic fluid or a large tumor of the uterus or ovary has been removed. (4) Certain specific fevers, such as typhoid influenza, and pneumonia, are apt to produce great enfeeblement of the gastro-intestinal tract, which becomes evident during the period of convalescence. In the case of enteric fever, the resultant gastroptosis is greatly increased by excessive feeding after the subsidence of the pyrexia and the presence of an enlarged and fatty liver. (5) General neurasthenia is always accompanied by relaxation of the gastric ligaments, and for a similar reason the majority of the cases of neurasthenia gastrica are followed by gastroptosis. It is also interesting to note that the complaint is unduly frequent in women who are the subjects of mitral stenosis, and that the removal of the ovaries before the age of thirty is very apt to be followed by displacement of the stomach and other viscera. The same result is occasionally observed in neurotic individuals who have undergone laparotomy for other conditions. (6) Most writers lay stress upon the influence of a tight corset in the production of gastroptosis, and there can be no doubt that the compression of the chest which is thus brought about, hinders the development of the thorax and forces the abdominal viscera downwards. In England tight lacing is comparatively infrequent, and only existed in about 4 per cent. of the cases of gastroptosis that have come under my notice. (7) In rare instances, inflammatory shortening of the great omentum drags the great curvature of the stomach downwards, and causes much displacement of the viscus. In one of my cases the omentum was represented by two fibrous cords, which were fixed at their lower extremities to the wall of the pelvis, and had dragged the stomach into the umbilical region; while in another it formed a tight sheet, which was adherent on either side to Poupart's ligament, and had not only displaced the stomach and colon, but had also compressed the small intestines against the spine.

Symptoms.—Gastroptosis is a condition that is extremely variable in its clinical expression. In many instances, probably in the majority, it remains latent throughout the greater part of life, and it may only be as the result of a severe illness or physical shock that the characteristic symptoms are called into

being. This latency is particularly common in men, and Bial has estimated that only one-half of the male subjects of gastroptosis suffer any inconvenience from the complaint. The clinical picture which it represents also varies considerably according to its mode of causation, the nervous constitution of the patient, and the existence of complications; so that in many cases it is difficult to determine whether the gastroptosis is the primary affection or is merely a result of the coexisting neurasthenia or gastrectasis. But however complicated the case may appear, certain symptoms usually exist which prove sufficiently striking to direct attention to the possibility of a primary visceral displacement. In the first place, the abdominal phenomena prove remarkably intractable to ordinary methods of treatment, and even when they partially subside their place is usually taken by others arising from neurasthenia or gastric myasthenia. Secondly, the patient is very susceptible to physical impressions and immediately suffers from recrudescence of the former troubles if exposed to mental or physical overstrain, or undergoes an emotional outburst. Thirdly, there usually exists a degree of general debility for which the most careful examination fails to detect an adequate cause, and even the effort of walking or sitting erect in a chair will often induce a sense of weakness in the back, accompanied by dragging sensations in the hypogastrium and groins. Lastly, all these symptoms are rapidly relieved when the patient is confined to bed or a comfortable support is applied to the abdomen in such a way as to elevate and hold up the dislocated viscera.

A careful consideration of the numerous cases of gastroptosis that have come under my care has convinced me that, although the symptoms vary greatly in their nature and severity under different conditions, there is a general tendency for certain phenomena to group themselves together in such a manner that the complaint presents a series of clinical pictures in which minor or secondary symptoms form an ever-changing background. Of these, three principal forms may be recognized, the first of which is characterized by the prominence of certain gastric troubles; the second by periodical attacks of headache and vomiting, very similar to those of migraine; while in the third variety profound exhaustion is associated with anæmia and emaciation, and with vague pains in the abdomen and back.

1. *The dyspeptic form.*—This is by far the most common, and is met with in both sexes. It is especially frequent in those who come of a tuberculosis stock, or who have suffered from tuberculosis in early life. The degree of gastroptosis is usually

moderate, and is accompanied by looseness of the right kidney and some prolapse of the hepatic flexure of the colon. Occasionally several members of a family suffer in a similar manner after attaining the age of puberty. It is important to observe that physical impressions exert a most important influence upon the course and severity of the complaint, and that a strong emotion, such as fear, anxiety, or worry, will always excite an attack within the course of a few hours. In severe instances the symptoms may continue with occasional remissions for many months, but in milder cases they only manifest themselves at intervals. Sleep, though sound, is usually unrefreshing, and the patient suffers from abdominal distension and flatulent eructations as soon as she rises from bed. Less frequently colicky pains are experienced in the left side of the abdomen, and several ineffectual attempts may be made to relieve the bowels before breakfast. Whatever be the constitution of a meal, oppression at the chest and distension ensue soon after its ingestion, accompanied perhaps by flushing of the face, pressure at the præcordium, and palpitation. Within a short time noisy eructations occur, and large quantities of an odourless and tasteless gas are belched up. When the symptoms are persistent the eructation usually lasts for about an hour, but during an acute attack it may continue with slight remissions for thirty-six hours or even longer. Sometimes the effort to expel the gas from the stomach produces violent retching and headache, but vomitng is rarely observed. After an attack has subsided, the whole of the abdomen feels sore and tender to the touch for several days.

The bowels are usually confined, but the patient may prove extremely susceptible to purgative medicines, and even a minute dose of calomel will often set up troublesome diarrhœa. Although there may be no actual loss of weight, the patient remains thin and ill-nourished, and often fails to put on flesh even when subjected to the most careful feeding. When pregnancy occurs, excessive flatulence gives rise to great discomfort, and after parturition a severe attack of distension and eructation almost invariably ensues.

2. *The bilious form.*—The symptoms which characterize this variety are far more often met with in women than in men, and usually develop between the ages of 24 and 40. As a rule, there is a history of a similar complaint in other members of the family, especially on the maternal side, and as a child the patient may have suffered from severe bilious attacks. The complaint usually manifests itself for the first time after a period of general ill-health, but it may develop suddenly after an

attack of enteric fever, influenza, or diarrhoea. At first the symptoms recur at regular intervals, but with the progress of time they tend to become more and more frequent, until only a few days may intervene between the attacks. Sometimes a sense of fulness in the abdomen in the early morning, accompanied by pressure in the head or giddiness, betrays the imminence of a seizure, but as a rule it develops quite suddenly about 10 A.M. or 5 P.M., and may even be preceded by a feeling of exceptional well-being. Women are very liable to suffer either immediately before or after the menstrual periods. The first symptom to appear is headache, which affects the whole vault of the cranium and is often associated with pain or pressure behind the eyes; but the ocular phenomena that occur in migraine are never encountered. The pain rapidly increases in intensity, and is exaggerated by any movement of the head, stooping or coughing, but is relieved by a recumbent posture. Within a short time nausea supervenes, and finally vomiting occurs. Temporary relief follows the evacuation of the stomach, but the headache and other symptoms soon return, and violent attacks of retching recur at short intervals. At first the ejecta consist entirely of semi-digested food mixed with a large quantity of hyperacid gastric juice; but subsequently they acquire an alkaline reaction, and are found to be composed entirely of bile and mucus. In some of my cases the vomit consisted of gastric juice, and the whole course of the disorder closely resembled that of acute hypersecretion. During the attack the appetite remains in abeyance, and any attempt to relieve the thirst is followed by sickness. The pulse is small and slow, the temperature of the body subnormal, and the urine is diminished in quantity and is alkaline in reaction. Unlike migraine, sleep is not followed by relief of the symptoms, and both the headache and vomiting usually continue during the course of the following day. Great debility and mental depression are experienced after an attack, and the patient usually loses from two to five pounds in weight during its continuance. In the intervals a certain amount of flatulence and acidity are usually experienced after meals, and there is a tendency to constipation, while examination of the stomach almost invariably proves the existence of chronic hyperacidity.

3. *The asthenic form.*—In this variety there is a complaint of persistent weakness, mental depression, and vague pains in the abdomen and back. Both sexes are affected, but it is especially common in women who have borne several children in quick succession, and have bestowed little care upon themselves during the living-in period. Anæmia is always present,

and gives rise to dyspnoea on exertion, palpitation, giddiness, and occasionally to œdema of the feet; while examination of the blood shows a moderate diminution both of red corpuscles and hæmoglobin. The appetite is poor and capricious, and the ingestion of any form of food is usually followed by discomfort, distension, and flatulence. Want of energy and physical weakness are very pronounced, and are sometimes so severe as to render the patient a complete invalid. Very slight exertion induces exhaustion, and any attempt at physical exercise is followed by complete prostration. There is also great difficulty of mental concentration, and many persons complain bitterly of the fact that they are unable to add up figures, to keep accounts or even to read a newspaper. Headache is a variable symptom and when it exists is chiefly felt in the early morning or before meals. Walking or even sitting upright in a chair is accompanied by uneasy sensations in the back and by vague pains in the lower abdomen, while in many cases the patient experiences a curious feeling of emptiness in the epigastrium, and the contents of the abdomen seem as though they were "falling out." The bowels are always constipated, and not infrequently the administration of an aperient is followed by partial collapse. These varied sensations are always relieved when the recumbent posture is assumed, and the comfort that is experienced by remaining in bed probably accounts for the habits of invalidism which are exhibited by so many sufferers from gastroptosis. Splashing and gurgling during respiration, like that met with in vertical displacements of the stomach, are frequently present.

Loss of flesh is a prominent and disturbing feature of the complaint, and the emaciation may attain the same degree as that met with in diabetes or carcinoma of the stomach. It is usually found, however, that the loss of weight is very irregular, sometimes amounting to one or two pounds a week, while at others it remains stationary for several weeks in succession. The first indication of a restoration to health consists in a deposition of fat in the mammary region and an increase of elasticity of the skin, after which the body weight undergoes steady augmentation. Most patients complain of constantly feeling cold, despite the excess of clothing which they affect, and inspection of the extremities shows that the hands, feet, nose, and ears are cold and clammy and present a bluish color. It is also noticeable that a northerly or easterly wind is invariably accompanied by an exacerbation of all the symptoms, and that a cold or bracing climate produces a most injurious effect upon them.

Physical signs.—Inspection of the abdomen during the period of digestion often affords important indications of gastroptosis. Thus in many cases the normal protuberance of the epigastrium is seen to be replaced by a hollow or transverse furrow, while the umbilical and hypogastric regions are more prominent than usual. Occasionally a practised eye will be able to discern the outline of the stomach through the abdominal wall, and if gastrectasis complicates the dislocation the peristaltic movements of the organ may also be visible. Percussion of the stomach alone, is valueless, and the mere determination of the position of the great curvature not only fails to indicate the location of the viscus, but often leads to an erroneous diagnosis of gastrectasis. Even Leube's method of percussing the stomach after the introduction of water, with the patient in the erect position, fails to delineate the lesser curvature, and since the determination of the upper border of the stomach is all-important in the recognition of gastroptosis, it is necessary to employ some other procedure, such as auscultatory percussion, artificial inflation, or electric trans-illumination, which will furnish the requisite information.

Auscultatory percussion is performed in the following manner. Half a pint or more of effervescent soda-water is administered to the patient with the view of procuring moderate distension of the stomach, and he is then directed to lie upon his back with the shoulders and head slightly raised. The examiner places the end of a stethoscope over the epigastrium, and then makes a series of short taps with the index finger of the right hand upon the abdominal wall along lines that radiate from the point of auscultation. As long as percussion is made over a spot where the stomach is in contact with the parietes of the abdomen, the shock conveyed to the ear remains of the same intensity; but immediately the finger travels off the gastric area the sound becomes faint and toneless. The points at which this change occurs are marked on the skin with a blue pencil, and the investigation is continued in all directions until the entire outline of the viscus is mapped out upon the surface of the abdomen. This method is not only very accurate in its results, but is also easy of performance, and does not entail any discomfort to the patient. The only point which requires special attention is the application of the stethoscope immediately over the stomach.

Artificial inflation of the stomach may be performed in two ways: either by the administration of chemical substances which generate carbonic acid gas when mixed together, or by forcibly pumping air into the organ. Inflation by carbonic dioxide is a very old procedure (Wagner, 1869), which has recently been

brought into fashion by Riegel and Boas. About 60 grs. of bicarbonate of soda and 40 grs. of tartaric acid are each dissolved in 8 oz. of water contained in separate glasses. The patient first drinks the acid and then the alkaline solution, and is directed not to eructate any gas. The interaction of the two substances causes a rapid evolution of gas, which distends the stomach to its utmost capacity and causes its outlines to become visible through the abdominal parietes. In the second method, a soft tube is introduced into the stomach, and air is either pumped in through a hand bellows or blown in by the mouth until the organ is sufficiently distended to be visible. Hemmeter prefers a rubber bag made in the shape of the stomach, which is introduced in the end of a soft tube and can be inflated in position. The disadvantages of artificial inflation are that it entails a certain amount of discomfort, and, unless carefully performed, may seriously embarrass the action of the heart; while, by distending the stomach to its utmost capacity, it is apt to produce an exaggerated conception of the size of the organ and its degree of downward displacement.

Gastrodiaphany, or electric trans-illumination, is a favorite method with some continental and American physicians, who assert that its employment serves not only to establish the diagnosis of gastroptosis, but also to differentiate it from gastrectasis. That the method is capable of affording important evidence concerning the position of the stomach has been proved beyond doubt, but that it is either necessary or even convenient to employ it is extremely doubtful. For my own part, I only use it for the purposes of clinical demonstration, as I have found that in private practice the apparatus is so cumbersome, and the passage of the tube is so obnoxious to patients, that the results obtained from it are rarely commensurate to its advantages. Whatever method be employed, it is always advisable to mark the outlines of the stomach upon the skin of the abdomen with a colored pencil, so that the relation of the two curvatures may be brought into prominent relief. When this is done, it will be observed that, while the normal distance between them is preserved, the upper border of the stomach lies well below the edge of the liver, and the great curvature crosses the abdomen at some point between the umbilicus and the symphysis.

Percussion over the space between the liver and the stomach affords a dull note, and the semilunar area of Traube fails to afford the tympanitic resonance characteristic of the stomach. Palpation along and above the upper border of the organ is almost always painful, and there often exists a circumscribed

tender area in the epigastrium similar to that met with in cases of gastric ulcer, while the left lobe of the liver and cartilages on the left side are also abnormally sensitive. In many instances the pancreas can be felt as a hard and somewhat tender mass, lying across the spine over the stomach, and occasionally the gland exhibits distinct pulsation owing to the proximity of the aorta. These signs are due to the uncovering of the deeper structures of the abdomen by the downward displacement of the stomach, and are often mistaken for evidences of abdominal tumor, ulcer, or aneurysm.

The prolapsed stomach does not move as readily on respiration as it does in its normal position, and firm pressure by the hand will often prevent its ascent towards the thorax during expiration. Its degree of lateral mobility is also a notable feature, and when the viscus is partially filled with food it can sometimes be grasped between the hands and pushed about in all directions in the abdominal cavity. Examination of the contents of the stomach does not afford any characteristic signs. In about one-half of the cases hyperacidity is found to exist; but when gastrectasis occurs, the excess of hydrochloric acid usually disappears and is replaced by subacidity.

Complications.—Pronounced gastropnoxis is extremely apt to give rise to motor insufficiency, owing to the acute flexure of the first part of the duodenum which so often occurs. In such cases symptoms of stagnation and fermentation of the food gradually manifest themselves, and the patient suffers an excess of pain about an hour after each meal, accompanied by flatulence, acidity, nausea, and occasionally by vomiting. As a rule, however, the expulsion of gas from the stomach is more difficult than under normal conditions, and vomiting is only accomplished with much straining and in the recumbent posture. Loss of flesh is invariable, and the emaciation may become so severe as to suggest serious organic mischief. The effort of the stomach to force its contents into the intestine gradually produces hypertrophy of its muscular coat, and finally leads to dilatation of its cavity. It is for this reason that long-standing cases of gastropnoxis are so frequently associated with the signs of myasthenia and gastrectasis. The secondary fermentations of the food that ensue from these conditions are apt to excite chronic inflammation of the gastric mucus membrane, which in its turn intensifies the sensations of discomfort after meals, destroys the appetite, and leads to rapid emaciation. Finally, the continued entrance into the bowels of food in an undigested and fermenting condition disorders the processes of intestinal digestion and excites an inflammatory condition of the colon,

which manifests itself by attacks of griping pain in the abdomen and mucous diarrhœa. Chronic pharyngitis, undue susceptibility to cold, and deficient circulation in the extremities, are also frequently associated with these digestive disorders. In the present state of our knowledge it is difficult to say whether the neurasthenia and hysterical symptoms, so often displayed by the subjects of gastropstosis, are the result of the gastric displacement or of antecedent development, but there can be no doubt that the deterioration of the general health, which the dislocation of the stomach and its sequelæ so often produce tends materially to depress the nervous system and to exaggerate the symptoms that arise from its functional derangement.

Lastly, the stomach may become twisted upon its axis, with the formation of a kind of volvulus. Of this rare condition Wiesinger has reported an instance, and Beck has successfully operated upon two cases of a similar nature.

Diagnosis.—The clinical history of the case will often indicate the probable existence of gastropstosis. Thus, if a woman who has borne several children, who has undergone an abdominal operation, or has suffered for a length of time from general debility, complains of flatulence and pain after meals which no ordinary treatment appears capable of curing, suffers from attacks of headache and vomiting at irregular intervals, or complains of extreme weakness, loss of flesh, and vague abdominal pains when in the erect position, especial care should be taken to ascertain the exact location of the stomach and the manner in which it performs its various functions. On the other hand, a diagnosis of displacement can only be made by the discovery of the malposition of the stomach on physical examination. In true gastropstosis the entire organ is found to have been dislocated downwards in the abdominal cavity, the lesser curvature lying below the liver and the great curvature considerably below the level of the umbilicus. The region usually occupied by the viscus is dull on percussion, and both the pancreas and the pulsations of the aorta can be detected on palpation above the upper margin.

The effects of treatment are also confirmatory of the diagnosis, since during ordinary circumstances little or no improvement follows the adoption of measures which prove effectual in other varieties of dyspepsia, while rest in bed and the use of an abdominal support afford immediate relief.

Gastropstosis is often confounded with dilatation of the stomach, and although the two conditions frequently coexist, it is imperative that they should be carefully distinguished from each other. A dilated stomach always occupies a lower

position in the abdomen than normal, owing to the drag exercised upon its ligaments by its increased weight. It may be observed, however, that the organ is greatly increased in bulk when dilated, and hence the distance between the two curvatures is much augmented. In many instances, also, the peristaltic movements of the viscus are plainly visible through the abdominal wall, vomiting occurs at intervals, and the passage of a tube proves the existence of food retention; while a chemical examination of the gastric contents, combined with the clinical history of the complaint, will usually indicate the cause of the pyloric or duodenal stenosis.

In long-standing case of myasthenia, the stomach undergoes a certain degree of dilatation and becomes consequently dragged out of its place. Under these conditions visible peristalsis is usually absent, vomiting is infrequent, and the evidence of food stagnation and decomposition is less marked than in pyloric stenosis.

When gastropotosis causes kinking of the duodenum with secondary enlargement of the stomach, the condition may be difficult to distinguish from an organic stenosis of the pylorus. In most instances, however, it will be found that the vomiting subsides as soon as the patient is confined to bed, that hyperacidity is absent, and that rapid improvement ensues from the use of a well-fitting belt.

Prognosis.—Gastropotosis is rarely, if ever, cured. On the other hand, careful treatment will usually relieve the symptoms, and should the abdominal walls regain their tone and the internal tension be permanently increased, the condition may cease to be a menace to health. Gastrectasis and colitis are serious complications, while the coexistence of neurasthenia or hysteria intensifies the general symptoms and retards recovery. Many of the subjects of severe gastropotosis succumb eventually to tuberculosis.

Treatment.—Much can be accomplished in the prevention of gastropotosis by careful attention to the clothing and the early correction of those conditions which are commonly responsible for its development. Young girls should never be permitted to wear tight corsets, and at all ages tight lacing should be prohibited. For a similar reason, strings and bands worn round the waist should be avoided, and buttons substituted for them whenever possible. During the lying-in period, special attention should be bestowed upon bandaging the abdomen, so as to afford a firm support to the viscera, and aid the belly to regain its former shape. Any attempt to regain the figure by tight lacing should be discouraged, since the chief effect of the corset is to

force the stomach and intestines downwards, while it fails to afford any support to the parietes below the waist. Care should also be taken to reduce the gaseous distension of the bowels that usually occurs after delivery, and to overcome the natural tendency to constipation. The patient should never be allowed to walk before the tone of the abdominal muscles has been restored. The same rules apply to persons who have undergone abdominal operations, and to those cases in particular where the intra-abdominal tension has been suddenly lowered by the removal of a large tumor or an excess of fluid. The treatment of the dislocated stomach itself is a purely mechanical one. In mild or recent cases, confinement to bed for a month is invaluable, as it not only tends to cut short the progress of the complaint, but completely relieves the symptoms which emanate from it.

Rest cures also act advantageously, since the patient is forced to occupy the recumbent position; while an excess of nourishment leads to the accumulation of fat in the abdomen. Under all conditions, persons suffering from gastroptosis should be advised to lie down for an hour after meals, and at the same time to loosen the corsets and clothing round the waist. By this simple procedure the symptoms that ensue during the period of digestion are rendered much less severe, and stagnation of the food is to a great extent prevented.

Lavage is of no value unless the condition is complicated by gastrectasis and chronic gastritis, nor in ordinary cases do massage and electricity produce any direct effect upon the stomach. As means, however, of strengthening the muscles of the abdomen, they are often extremely useful.

The essential factor in the treatment is the application of a firm belt to the abdomen, which will support the stomach and hold it in position. Numerous varieties have been devised for this purpose (Glénard, Landau, Bardenheuer, Rosenheim, Teufel), but it must be remembered that a belt that suits one person will not suit another, and consequently that no stock pattern can be prescribed without careful trial. Many of the corset-belts now in fashion either exaggerate all the ill effects of the corset, or afford no support whatever to the prolapsed stomach. As a rule, the binder or belt should extend from the lower border of the twelfth rib to the symphysis, and should be made of some light but firm material, which will not easily stretch. Silk elastic makes an excellent belt, but it needs constant renewal. The support should be applied when lying upon the back, and should be laced or tightened from below upwards. To prevent it from riding up, a perineal band may

be worn, or, in the case of a woman, the suspenders may be attached to it on either side. For some time the belt must be worn both day and night, but when considerable improvement has taken place it may be left off when the patient goes to bed.

Surgical treatment.—Duret, in 1894, was the first to treat gastroptosis by an operation, which consisted of suturing the lesser curvature of the abdominal wall; while, three years later, Davis adopted the plan of fixing the lesser omentum to the parietes. Rovsing attempted to suture the anterior wall of the stomach, and Coffey the great omentum below the transverse colon, to the parietes; while Bevea and Bier introduced methods of plicating and shortening the gastro-phrenic and gastro-hepatic ligaments. More recently Eve has reported a case in which a successful result was attained by suturing the lesser curvature of the stomach to the liver. Although the various cases which have been subjected to operation are reported to have improved, I cannot help feeling that most cases of gastroptosis severe enough to warrant operation are of too complicated a nature to promise a cure from mere elevation of the stomach, and that the neurasthenia which invariably exists is a more important factor in the production of the symptoms than the mere dislocation of the stomach. When the gastric displacement is due to organic stenosis of the pylorus or duodenum, gastro-enterostomy is usually sufficient without suturing the stomach to the liver or abdominal wall. Fixation of the right kidney has no effect whatever upon a coexisting dislocation of the stomach, and usually increases the gastric symptoms by the induction of nervous shock.

Diet.—The food must be regulated according to the necessities of each case, and the existence or otherwise of complications.

Gastroptosis associated with healthy intestinal functions and good gastric compensation merely requires a full diet composed of substances that are easily digested. Moderately cooked and tender meats, fish, game, eggs, sweetbread, tripe, sheep's head, calf's head and feet, well-boiled cereals, farinaceous puddings, and a moderate amount of fruit may be allowed; and the patient should be encouraged to drink milk with the meals, and to indulge in cream and other forms of fat. Raw vegetables, pastry, sauces, pickles, and cheese should be avoided. When the emaciation is a marked feature of the case, and is attended by neurasthenia, a milk diet is often of great value, five pints mixed with a small proportion of lime water being administered in divided doses during the course of the day.

Gastroptosis accompanied by myasthenia requires a diet suited to this important complication. The great principles

to be borne in mind are to supply the stomach with those forms of food which are most easy of digestion, to avoid over-distension of the organ, in order that the viscus may completely empty itself on each occasion.

Sugars and fats in excess are always injurious, owing to the tendency of the former to undergo fermentation and of the latter to stagnate in the stomach. Butter and cream may be allowed in moderation, as well as rice and well-cooked oatmeal porridge. Lean meats, white fish, fowl, game, and eggs may be given; but soups and broths should be avoided. Spinach and asparagus may be taken in small quantities, but raw and coarse vegetables are difficult of digestion. An exclusive milk diet rarely agrees, owing to the distension of the stomach which ensues from the introduction of large quantities of fluid, and at most 8 oz. should be taken with each meal. Tea and coffee rarely agree, and cocoa proves injurious from the sugar it contains. A decoction of cocoa husks or cocoa-nibs form a palatable drink, and is free from the disadvantages which pertain to the other varieties. If the patient is accustomed to take alcohol, a little good brandy or whisky may be allowed; but, as a rule, half a tumblerful of hot water, sipped at the end of a meal, is more beneficial.

When colitis complicates the gastric displacement, the diet should consist entirely of finely minced fish and poultry, tripe sweetbreads, and sheep's brains, dry toast, meat juices, clear soup without vegetables, potatoes, and plain milk puddings. Green vegetables and fruits are particularly harmful, and, as a rule, red meats should be avoided. Vichy or Contrexéville water may be taken with the meals.

Medicinal.—In uncomplicated cases drugs are seldom of much value, and the treatment is chiefly symptomatic. If the appetite is bad, a dose of nitro-hydrochloric or phosphoric acid, combined with a bitter infusion, may be given between the meals. Occasionally the sense of extreme weakness may require the exhibition of strychnine, nux vomica, cinchona, or some other tonic; while in many instances cod-liver oil, the compound syrup of the hypophosphites, elixir of phosphorus, or formate of sodium, produce a beneficial influence upon the symptoms of neurasthenia. Pain after food and flatulence usually depend upon some morbid condition of the gastric secretion, or an increased sensibility of the gastric mucous membrane, and in such cases the compound bismuth mixture, with or without morphine, will usually afford relief. Sometimes a preparation of pepsin or pancreatine, or the tabloids of peptenzyme, appear to aid the processes of digestion. The

development of myasthenia requires the addition of carbolic acid to the bismuth mixture, while in cases complicated by colitis, full doses of salicylate of bismuth, cyllin, or guaiacal should be employed. The selection of a suitable aperient is always a matter of importance. As a rule, severe purgatives must be avoided, and reliance be placed on small doses of cascara and euonymin, combined, if necessary, with belladonna and rhubarb. In other cases, a confection of cascara and maltine, taken at bedtime, proves efficient; or one composed of guaiacum, senna, and ginger may be employed with advantage. When colitis is accompanied by constipation, nothing is so effectual as a small dose of castor oil each morning before breakfast; but if severe neurasthenia exists, all purgatives may have to be omitted, and an action daily of the bowels secured by an enema of soap and water or an injection of glycerine. Carlsbad salts and other salines are chiefly indicated when myasthenia with stagnation of food exists, as their employment edects a form of internal lavage, and the fermenting contents of the stomach are swept into the intestine. In other respects the medicinal treatment of gastroptosis is conducted upon the lines laid down for the management of chronic gastritis and atony of the stomach.

RECENT DEVELOPMENTS IN URINARY ANALYSIS AND SEMEIOLOGY.

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The Western readers whose special requirements will be met by the Medical Journal, which should, doubtlessly, have a highly prosperous career, should attach a certain amount of importance—I write here as the representative of a pathological school—to the theories and methods, which it will be the object of the following pages to describe.

There are many reasons to be adduced in favour of this recommendation; some of them may be mentioned at once, while others will appear in the course of our remarks. In a new country, in effect, the number of hospitals is necessarily

small, and the opportunities for clinical observation correspondingly limited. This militates against accuracy of diagnosis. The conditions of medical practice, on the other hand, are particular; there is little room for specialization; the medical man is engaged in general practice; the calls, therefore, upon his knowledge are as diversified as they are often urgent in nature. In young communities, again, many different racial and constitutional types are represented; pathology, like society, is in a state of evolution,—a disconcerting problem for traditional clinical medicine, with its reliance upon antecedent to contemplate and solve.

Methods founded upon general conceptions assume, under these conditions, an increased degree of importance. Indeed, it is a question whether these conditions are not amongst the chief reasons for their existence; such methods, therefore, could hardly meet with anything but a generous welcome upon an occasion like this. Let an example serve the double purpose of introducing our subject and illustrating our meaning.

The first breath of cold weather, after a hot American summer, has called upon the country physician to consider the following case: A young man, arrived within the year from the mother country, is slightly indisposed; he is disinclined to follow his ordinary occupations; he feels chilled, he has an unpleasant and unusual taste in his mouth, his appetite is impaired, his liver disturbed, and the functions, he thinks, of the alimentary canal in general disarranged. His night has been restless, and his mind is depressed. What is likely to be the matter with him? The physician engages upon his investigation in the classical manner. He examines the tongue and sees that it is slightly coated, he takes the pulse and finds both the rhythm and tension disturbed, he tries the temperature and finds it slightly abnormal; the region of the stomach is probably resonant, the epigastrium tender, the abdominal tension, perhaps, increased, and the liver sensitive. What are the morbid antecedents of the patient, he enquires? Nothing of any special significance, he ascertains. What information can considerations of heredity elicit? None of a definite nature. The physician hesitates, his diagnosis is evidently uncertain; but he reassures the patient, recommends rest, calm and warmth, prescribes the habitual laxative with the not less inevitable saline draught, and recommends a light diet, with absence from alcoholic stimulant.

A similar attack, accompanied, perhaps, by some indefinite throat trouble, not long after, again engages the attention of the physician, who makes the same recommendations as in the

first attack and with equally satisfactory results; excepting that recovery has been less rapid and less uninterrupted than he anticipated.

No special recommendations of a general hygienic or dietetic nature have been given in the meanwhile to the patient, who, in the course of the winter is seized with a third attack. On this occasion the symptoms are of a more serious, though similar nature; there is more marked and, perhaps, more localized abdominal pain; and the advisability of seeking a surgical opinion may suggest itself.

Clinical medicine here, we see, has been unable to arrive at an accurate diagnosis; it has neither suspected nor foreseen any complication, and has proved incapable of instituting definite measures of a preventive nature. Can the newer pathology do any more? Can general physiology, coming with its more searching methods to the help of the scientific physician, can general physiology do any more? Let us enquire. We will again make a supposition. We will assume that our patient at some previous time, has been advised, with the view of investigating his constitutional tendencies, to have performed a complete bio-chemical urinary analysis. This analysis we find displays as its essential feature, a diagram or graph constructed in the following form:

Urine of Mr. O——, April 18th. 1903.
 Reaction acid.
 Specific Gravity at 15°C., 1.021.
 Coefficient of oxidation, 87.
 Coefficient of phosphate, 20.

Biological Coefficient, 67.
 (The Biological coefficient is only important for the chemist; it is used for establishing the normal units.)

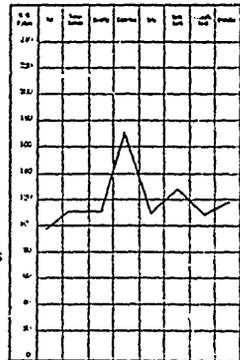
ABNORMAL ELEMENTS.

Skatol, traces.
 Indican, traces.
 Oxalate of lime, a few crystals.

SPECTROSCOPIC EXAMINATION.

Absorption Bands: Urobilin and bile, faint.

NORMAL



(a) The normal is a mean between the theoretical and the actual weight of the patient; the theoretical weight being a fraction of the height, age and perhaps breadth of the subject (see Bouchard Pathologie General & E. Gautrelet, Physiologie)

We will further assume that the physician, now initiated into the principles that we are discussing, is able to interpret as follows the leading characteristics of the analysis and its curve. The volume of urine is normal; the total solids in slight excess,

showing active elimination; the activity is above the theoretical level, pointing to a rheumatic tendency;(*) the excretion of chlorine excessive, meaning amongst other constitutional habits, a deficient secretion of gastric hydrochloric acid;(†) the urea is somewhat below the level of total solids, implying slightly deficient liver action—an indication confirmed by the excess of uric acid, which has escaped the influence of hepatic synthesis;‡ the phosphoric acid, above the normal but inferior to the figure of total solids, points to a particular disturbance of metabolism, and, perhaps to nervous strain; the urobilin, not in great excess, but still unduly high, confirms the evidence—bile, it will be noticed, has been detected—of disturbed hepatic and biliary functions.

This is so far as the normal constituents of the urine are concerned; but the abstract of the analysis shows the presence of certain abnormal elements. What significance will the physician attach to them? He finds traces of skatol and indican—both sulpho-conjugated salts—that is, of indoxyl and skatoxyl sulphates of potassium; these products of fermentation, added to the excess of urobilin and uric acid, and the traces of bile already noticed, indicate a certain degree of intestinal insufficiency. The crystals of calcium oxalate may have a similar significance, may possibly suggest, in addition, some pancreatic inadequacy—not at all an unlikely hypothesis, under the circumstances.

This knowledge, constituting as it does an addition to the usual clinical elements of diagnosis, will be of obvious value; it gives accuracy and certainty to the treatment, it tells us what to do and what to avoid in the present, and what is of conspicuous help, suggests general rules of conduct for the future. Thus, the patient is to avoid physical and mental strain, as both the circulatory and nervous system are sensitive to infection(*). He is to eat slowly and masticate thoroughly(†), or partake of finely divided food, because he is the subject of abnormal fermentations(‡). He should be advised to use hydro-

* The French, like our older writers, such as Sir Thomas Watson, would say, arthritic. See the writer's letter to the *Bh.M.J.*, June, 1906; the *Arthritic Diathesis*.

† This deficiency leads to biliary and intestinal inadequacy, as shown by Bouchard's coeff. that is, the relation between the total carbon and the total nitrogen of the urine.

‡ Some of the carbon, it is held, utilized in the formation of the biliary constituents, is derived from the breaking down of uric acid. (See *Les Coefficients Urinaires dans les Cirrhoses*, Durandeau, Paris Thesis, 1900.)

* Bouchard, as is well known, introduced the idea of auto-intoxication, Gilbert, the term of auto-infection.

† The method, recently dignified by a popular American journal under the name of Fletcherism was scientifically discussed by Professor Chittenden at the Toronto meeting of the B.M. Association.

‡ E. Gautrelet, of Vichy, the author of the graphical method, and Desmouliere of Paris, add to the analysis the presence of leucamines. An excess of the organic bases is of significance in such cases as we are considering.

chloric acid at his meals to compensate for the evident gastric deficiency, and he should have frequent recourse to some mild mercurial, or similar hepatic and intestinal stimulant to meet the consequences of hepatic and pancreatic insufficiency.

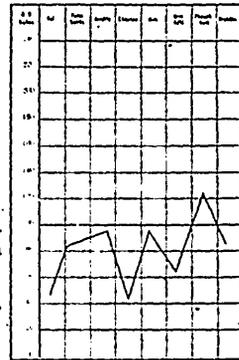
Will there be any need for therapeutic intestinal antiseptics, the physician, now reasoning on principles of general physiology, must ask himself. Is the amount of skatol sufficient to suggest the necessity for intestinal irrigation; is the small intestine to be defended by benzo-naphthol, (*) for instance. Or will the observance of dietetic and hygienic rules, such as have been already instituted, be sufficient to protect the organism against toxic invasion? And against toxic absorption and infection? For these are the dangers; and dangers that cannot be too often or too seriously insisted upon. It is sufficient to remember the presence of the appendix, a vestigial organ prone to regressive inflammations of every degree of violence, to the possibility, in fact of appendicitis, to justify the warning.

No. 297.
 Urine of Master D—, December 13th, 1905. (Born in China.)
 Specific Gravity at 15°C., 1018.
 Coefficient of oxidation, 93.
 Phosphatic coefficient, 21.

NORMAL.

Semeiol Conclusions are, very disturbed nutrition; phosphaturia actual or elementary; Toxaemic condition.

Abnormal elements, Skatol traces; Indican, very marked, and Bile, traces.



The methods we are describing have been in use for too short a time to enable us to answer these questions directly, to prove by unequivocal examples that danger of such a nature is to be anticipated; we can only have recourse to evidence of a presumptive nature; but this evidence is convincing, and, it will be seen, eloquent in its plea for general and systematic investigations of the kind. (†)

I have said "unequivocal" because the one urological analysis I have amongst my notes of a subject subsequently—indeed shortly afterwards—operated upon for appendicitis,

* Bouchard's favourite antiseptic for this purpose.

† This order of investigation should be suitable to Canada, with its long winter and consequent inducement to indoor occupations.

offers the objection (†) of having been carried out during an attack of fever, a condition which unfortunately masked the true nature of the affection. Still, it is very significant, and studied in the light of the subsequent development, endowed with even predictive power. This is the graph in question:

The first view of this analysis tells us, as was noticed, we can see, at the time, of a very disturbed state of nutrition. There is febrile oliguria with excessive relative acidity, (‡) retention of chlorides and phosphaturia. The urine is so concentrated and so acid that crystals of pure uric acid have been precipitated. But these signs, it will be justly said, have no special significance. Are there indications of marked auto-intoxication, of threatening infection, we must ask. Are there normal products such as those we noticed in the first analysis? We can unhesitatingly reply that there are; indeed, it will be remarked that the notes of the biological chemist are underlined; both bile and indican being present as before, and much more marked in extent; while an excess of urobilin is also present, which in view of the fact that children excrete relatively little of the product is not devoid of significance.

The urological signs, in fact, are identical in both cases; should we not, therefore, conclude that our first patient, an adult it will be remembered, was exposed, although in a minor degree, to a danger similar to that which was realized in the case of the child.

We will not, I think, be exaggerating the importance of the methods we have been describing if we answer in the affirmative. There can indeed be very little doubt that if any unskilful line of treatment, dictated by a partial or defective diagnosis, had been carried out in this case the consequence might have been equally serious. And not only equally serious, but even disastrous. Does not the following analysis, which we will now proceed to consider, sufficiently support this view? There can be very little doubt of the answer when the circumstances of the case are known. They are these. This analysis was furnished by our first patient's sister, and she while still a girl succumbed to an attack of septic appendicitis. This is the graph of the analysis made shortly before her death.

† Acute disease being accompanied by a febrile state, after all the same urological characteristic,—that of fever, which thus prevents their being differentiated, and which deprives the study of these excreta of the importance susceptible of being attached to the scientific examination of the urine of chronic diseases. E. Gauntrelet (of Vichy) *Physiologie Uro-chemiologique*, Preface.

‡ Achard's work on the physiology of the chlorides is highly interesting and instructive; it was this work chiefly that suggested to Vidal the treatment of albuminuria oedema by dietetic dechlorination. Quintou's researches in comparative physiology, embodied in his recent book entitled *L'Eau de Mer, Milieu Organique*, are also highly suggestive.

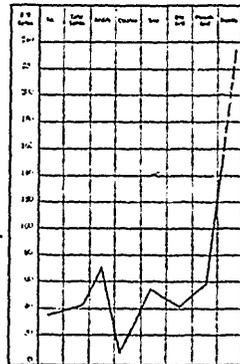
It shows little, it is true, on a superficial examination, beyond the fact that a fatal issue was inevitable—the extremely low excretion of chlorides alone would imply that fact (*)—but what will it show in the light of the patient's family and hereditary tendencies and in the light of the theories we are supporting here? It shows, in the first place, a fairly high coefficient of oxidation, 86 per cent., in agreement with the figure, 87%, of her brother, and a concordance in the phosphatic coefficient, 22 as compared with 20. Both these coefficients are of constitutional significance, I mean they display a similar family tendency. Then the products of infection are identical, though this sign from its frequent incidence is necessarily of smaller import. It shows further a rising movement under the double columns of acidity and xanthic excretion, which we can take to

No. 545.
Urine of Miss O——, Age 21.
Reaction acid.
Specific Gravity at 15°C., 1020.
Coefficient of oxidation, 86.
Phosphatic coefficient, 22.

ABNORMAL ELEMENTS

Albumin, 12%.
Peptones, very marked.
Skatol, very marked.
Indican, very marked.
Bile, very marked.
Uroerythrin, very marked.
Semi conclusions: Intense infection, ominous retention of chlorides inhibited metabolism.

NORMAL.



mean a tendency to articular rheumatism, a similar constitution again to the brother. And finally it indicates, by the enormous excretion of urobilin, an intense degree of hepatic infection, a circumstance curiously in keeping with the attack of jaundice which we may now say was a morbid episode in the history of her brother.

Can we ask this analysis to go any further and give us information concerning the previous condition of the patient? We can, and information of a highly interesting character. But we must first enquire into the clinical history of our case. This history tells us briefly that the patient, who lived in a damp locality and a wet climate, was subject from early childhood

* A retention of chlorides even when very marked in degree, does not necessarily imply, as was once supposed, a prognosis of extreme gravity; a simple hemorrhage may induce this condition; but a retention of chlorides with a comparatively high excretion of urea and other nitrogenous substances, such as is seen in infectious pneumonia, for instance, is of the most serious import.

to repeated colds, of a tenacious character, that gave rise presumably in time, to congestive complications and to chronic bronchial irritation. These conditions seem later to have induced a state of denutrition, which culminated in symptoms of phthisis. Even bacilli were then found, it was said, in the sputum. As a consequence of this state and in view of the prospect of further ill-health, the patient was directed to resort for several winters to an Alpine sanatorium. There her recovery from the pulmonary affection was uneventful; she did subsequently, besides, it was thought, extremely well.

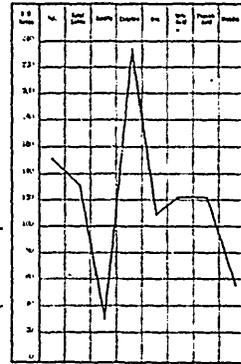
The analysis then, the reader will say, betrays evidence of a constitutional tendency to tuberculosis. It points to an acquired condition different to the diathesis that we presumed the patient possessed in common with her brother, that is, a tendency to rheumatic affections. No, and this is the important point, we do not think so. On the contrary, we do not consider that the tubercular infection was ever constitutional, of the danger of generalization ever very great. The treatment nevertheless, it will be presumed, to which the patient was subjected, did not differ materially from that prescribed for the generality of tubercular patients. That is, the diet was highly nutritious and contained a large proportion of nitrogenous substances. Unhappily, it is difficult to think otherwise, such was probably the case; no provision was made for what was in all likelihood an exceptional condition. And thus, in contending against the presumption of a marked phthisical infection, the opposite danger was induced, the fatal invitation held out to progressive auto-intoxication, to disturbed mineralisation(*) and to destructive infection.

We will therefore, not be wrong in supposing that had an analysis, or several analysis, been made in the first place, at the period when the bronchial and congestive attacks to which we have referred, were developing, the subsequent history of the patient would have been different. We are justified in supposing that with the observance of the same preventive principles her history would have been similar to that of her brother. Again, we claim that it is not at all unreasonable to conclude that such might have been the case.

For the constitutional tendency to tuberculosis infection displays urological characters essentially different to those that were remarked in the two analyses we have been preparing. We have only to examine the following composite diagram to make this statement convincing:

* See La Mineralogie Biologique Gaube (See Gers), Paris.

Thus, it will be seen, that the value and total solids are higher than in any of the previous cases, while the acidity is remarkably low. The excretion of chlorides is excessive,—more than double the normal daily output—another significant feature. The proportions of urea, of uric and phosphoric acid are all above the normal average quantities, but yet inferior to the total solids; and finally, the amount of urobilin is very much reduced. Further analysis, it may be added, of the abnormal products would show ammoniacal elements replacing the free acids, or certain acid compounds, of the opposing constitutional conditions.



Urological graph of tuberculosis, partly diagrammatic (after Gautrelet).

The differences are unmistakable. They are, in fact, sufficiently evident to illustrate those diathetic characters of organic hyperacidity and hypoacidity, which E. Gautrelet (*) has so ably defined; sufficiently marked to imply a different reaction to similar morbid influences. But these are questions that we must leave for another opportunity.

What form should be taken by the last questions, we will ask in this paper? And before asking these final questions, what may we be said to have attempted to show in the preceding discussion? We have attempted to demonstrate the information that can be derived, in connection with the clinical history of the patients, from three characteristic analyses of urine. We have interpreted the first graph (†) as meaning a soil (‡) open to the auto-intoxication and intestinal infection,

* E. Gautrelet was the chemical assistant of Professors Lecorch. and Bouchard.

† The word 'graph' has been adopted, not from any mathematical affectation, but from the French who use the term 'graphique' for this purpose.

‡ See du Role des Substances Minerales en Biologie A. LePlay, Paris, 1906.

and concluded what measures were to be instituted to effectually guard against this infection. We have shown a second analysis where similar tendencies prevailed, but in which no such precautions were adopted, and where an operation for appendicitis became subsequently necessary; and thirdly, we have considered an analysis made under exceptional circumstances, where a fatal determination resulted from the failure to ascertain at an early date the presumable constitutional tendencies of the patient.

This recapitulation makes our questions easy to choose. What degree of determinism exists in modern medicine, and how can the subtle connections of morbid cause and effect be further unveiled? It is for Canada, with its exceptional opportunities (*) and its wealth of actual and potential intellect, to answer them both.

* I allude to the comparatively ample provision, very evident to the recent visitors to the Toronto Meeting made in Canada for educational and scientific requirements.

TO OUR SUBSCRIBERS

Dr. Heustis' paper on "Climatic conditions in the West," has as we hoped brought forth observation and criticism and much discussion. Dr. Bond, Winnipeg, who makes a special study of Electro-Therapeutics has sent a most interesting answer which space does not allow us to print in this issue but which will appear in April. Dr. McDonald, Health Officer, Calgary, also will give us a contribution on the subject.

Dr. Welsford, Rome, has kindly promised to be our correspondent for Italy.

We have to acknowledge with thanks, contributions from the following:—Professor Sidney Martin, London, Eng.; Dr. Percy Kidd, London, Eng.; Dr. Brock, Rome; Dr. Sanson, Calgary; Dr. Rorke, Winnipeg; Dr. Lineham, Dauphin; and Dr. Bond, Winnipeg. Also the following Journals in exchange:—The Canadian Journal of Physicians and Surgeons, Toronto; Maritime Medical News; Canadian Practitioner and Review; and Canadian Lancet. Also to thank Dr. Croll of Saskatoon for promising to act as local Editor for that district.

WESTERN CANADA MEDICAL JOURNAL

Editorial

Last month we discussed the desirability of inter-provincial Reciprocity. In this issue we are publishing a letter from a member in the N.W.T. which will be read with interest.

The latest news regarding definite steps taken in this direction is that Quebec—the province always quoted as the stumbling block to Inter-provincial Reciprocity—has applied to the Privy Council for Imperial Reciprocity. No one can deny that this is a transition period in the Great West. Therefore now is the time for us to decide which will be the right road to take. It is much easier to build up than pull down. At present there would not be much to alter in the West; but later when all matters are in a more settled condition we should find much of the difficulty probably that the States are experiencing on the matter. We have the great privilege of being able to study the method of older countries, see their errors and profit thereby. We shall be doubly to blame if with this advantage we do not, individually think the matter out and having decided what is best, strenuously work to bring to pass what is best for the profession now and in the future. Little seems to be known of the views of the various Medical Councils and Licensing Boards in the West. We are told that Manitoba is having a plebiscite taken on this subject. Let every member see that when given the opportunity to voice his opinion he will do so and see that his answer reaches the registrar safely. It is getting as wearisome to hear of the apathy of the profession as to hear that a medical man is not a business man. One can understand apathy where members have tried and tried for reforms and failed; but here in a young country one cannot give that excuse for neglecting to take an interest in all pertaining to our professional welfare. Many have written and expressed themselves as in accord with our views on this important question. So far no letter has reached us stating reasons against. This we would be glad to receive. The other side of the question must be heard and discussed before a good decision can be reached.

In discussing International Commercial Reciprocity, the question is asked, is the supply at hand equal to the demand?

In the cases of Saskatchewan, Alberta and British Columbia, there is no supply as they have no medical schools. In the case of Manitoba which has a medical school it is open to question whether, with the rapid increase in population, the supply is equal to the demand.

Again, political reciprocity always intends to safeguard home interests, prosperity and institutions. Interprovincial Reciprocity to us would do this. It would eventually lead to a higher Medical Standard in every way; to efficient, well equipped medical schools; efficient examiners; and a powerful and influential Central Board to look after the interests of the profession and community. Home interests would benefit. Sanitary and health laws could be rigorously enforced by the strong influence this Board could bring to bear on politics. Protection would be given every member so our home and profession would also profit. Society would profit because underlying all medical legislature is the protection of society. Another argument *against* is that the supply of medical men should be limited. The limitation required could best be made by raising the standard of the entrance examination. The great point would be the deciding of the standard and the careful appointment of examiners.

Still another argument advanced is that it might lead to much moving about of medical men. We hardly think so. A man who has built up a good practice is hardly likely to move unless for an improvement in position or knowledge and surely this would be an advantage. One can imagine a medical man after say five years general practice desiring to go for a year to take post graduate courses in the hospitals of Europe and the States, possibly just to improve himself or to study some special branch of his profession. As things are, he would return to the West and find, in all probability, his practice gone, but might know where there was a good opening. As it was in another province he might have to wait some months before he could take the required exam. It is good for all to see as much as possible what is being done in their line of work in other parts of the world, and we can certainly think of many leaders in the profession who have moved round considerably. The medical rolling stone as often as not does gather moss. More and more one sees that unity is the spirit of the times and gives strength to all professions in obtaining reforms and promoting the highest welfare of the individual.

The question of Reciprocity is to be discussed by the Calgary Medical Association which shows they are entering into the subject and see the advisability of discussion. Now is the time

to discuss it when we hear that two Eastern Provinces have applied to the Privy Council for Imperial Reciprocity.

It seems that all this dividing up into small bodies must prevent the greatest efficiency being reached. Secretarial matters and others cannot be carried out on a proper business basis unless there is a properly salaried registrar. The finances of a Central Controlling Board would of course allow this. Every member then could be duly notified regarding any matter of professional interest. Regarding the much mentioned apathy of the profession—This Central Board would have the *means* and the *men* to rouse the members to a sense of their individual duty. At present no one has the time or means. Meetings would be held about twice a year at least, and the interest of the mass kept up. Regarding the tenure of office of Councils—It is possible to imagine a very enthusiastic member working ardently for his profession's good for three years, but five years would take exceptional enthusiasm and we have to deal with the average. In this rapid age five years is too long to hold such a stewardship. When the end comes the beginning is nearly forgotten and the progress made would need close studying.

What a surprise to many members of the late N.W.T. College of Physicians and Surgeons it must have been to receive a notice that if amount due for annual subscription was not paid by a certain date he would be marked off the register and have to pass an examination and pay entrance fees again, if he practise in either Alberta or Saskatchewan. This fee in all provinces mentioned is the key to a ballot. Under these circumstances we would advise each member to see his dues are paid or he may find himself cut off the register.

If we had the Central Controlling Board proposed, all disputes arising out of licencing questions which are much discussed in the public press, and often ignorantly, would not occur. This quarrelling, as it seems to the public, amongst ourselves does not add to the dignity of the profession.

The physician holds a place in the community as great, if not greater, than any other, for he is called upon to heal body and also, frequently to heal the mind too. If he lived up to his social and political opportunities his influence could be immeasurable. Imagine the strength then of a United Medical Profession, with unity of purpose and sentiment. No profession could be stronger. With well equipped Medical Schools, good finances, our representatives would have the power needed to safeguard our material interests; to secure the enactment of medical laws and see that they were enforced. They would also

have the confidence then to enlighten and direct public opinion on matters regarding the health and welfare of the community.

Especially at this moment should we note the patent medicine evil. We are glad to see that the Hon. Wm. Templeman is introducing a bill to regulate patent medicines in Canada, and let us hope that each member is duly informed of the importance of this Act. The United States have passed theirs and we hear already of the bankruptcy of a patent medicine firm. If these laws are rigorously enforced, Canada, especially the West, will be flooded with these frauds. Already one has only to look round to see they are invading Winnipeg. A new country without such laws is a happy hunting ground for them. People away out in the country especially, often far from a doctor, receive the daily newspapers and pamphlets with alluring advertisements of positive cures, off goes money and request for cure. When all the money is nearly gone, and hope given up, the sufferer goes then to the physician to see if he can at least alleviate his pains. Every medical man knows this. The legal department of a strong Central Board would look after such matters.

Again, consider Dr. Clingan's recent experience. We may mention here that at least this case shows the advisability of each member belonging to the Legal Defence Fund. In this matter too, the benefit of the Central Board would be seen. The legal department would have looked after the member's rights in such a case. In fact were it known there was such a strong board with ample finances, very few unjust cases would occur and blackmailers possibly never. It is the idea that the physician may not feel equal to great legal expenses makes such possible.

A Central Controlling Board would without doubt lead to greater activity in the various medical societies because they would feel there was a strong body to take up and vigorously look into any matters brought under their notice. Strength and activity at headquarters soon causes interest and activity among the rank and file. If each member considers this question fairly, thinking of the welfare of the community, the dignity and welfare of the profession, we feel that he will certainly vote for a Medically United Western Canada, if not for a Medically United Dominion.

The hearty co-operation of the various Colleges of Physicians and Surgeons throughout the West; of the Medical Associations and all the members of the profession would lead to a right settlement of this most vital question of Reciprocity.

SOCIETY MEETINGS.

The last meeting of the *Northern Alberta Medical Association* was well attended, the retiring president, Dr. Whitelaw being in the chair. Elections for the ensuing six months were held resulting as follows: *Hon. president*, Dr. McIntyre, M.P.; *president*, Dr. Leman; *1st vice-president*, Dr. Blais; *2nd vice-president*, Dr. Archibald; *secretary-treasurer*, Dr. W.W. Smith; *Committee*: Dr. Redmond, Dr. Wells, and Dr. Farquharsen.

Dr. Brett, Lafferty, Simpson and Hotson, visiting member of the Alberta Medical Society, were present and addressed the association on the present entanglement in the Alberta Medical Act, explaining fully and satisfactorily why it had been decided to appeal against the decision given at Calgary. The appeal will shortly be heard at Ottawa.

The *Regina Medical Society* met on the 7th of January. Various papers were discussed and it was decided to renew the agreement of last year in connection with lodge practice.

The monthly meeting of the *Calgary Medical Society* was held on Tuesday, February 12th. The question of lodge practice was postponed again as the legal interpretation of the Dominion Statute relating to contract work had not been obtained. Dr. Sanson introduced for discussion the subject of "Intestinal Obstruction," by reading a short paper and bringing before the meeting two cases. A thorough discussion of the subject followed which was very interesting. At the next regular meeting Dr. W. Egbert will read a paper introducing the subject of "Ectopic Gestation."

A special meeting has been called for Tuesday, February 19th, for the purpose of discussing the question of Reciprocity and hearing the reply of one member *re* Lodge and Contract work.

The *Winnipeg Medical Association* met on Monday, February the 11th. The fee for police emergency calls and fee for notification of infectious diseases was discussed. A committee was formed to bring the matter before the City Board of Control. The question of a uniform schedule of fees for the use of the general practitioner in the city and province was brought up and the suggestion made that the committee which had it in hand should report the result of their work. A paper was read by Dr. MacArthur.

CURRICULUM OF MANITOBA MEDICAL COLLEGE.

Among other questions of far-reaching practical importance to the medical profession and the public generally is that concerning the results of the recent action of the Faculty of Manitoba Medical College and the University Council in extending the course of study for the degree of Doctor of Medicine from a four to a five year term. That the lengthening of the preparatory study and a readjustment of the curriculum was desirable will be freely admitted by all. The point yet remaining to be demonstrated is as to whether or not the best possible arrangement of the course of study has been adopted. That this is a legitimate question for discussion will certainly not be denied by the most ardent advocate of the new five year course as outlined in the issue of the Calendar for the current year. The fact that some modification has already been made in the first year work is evidence that new light has in some way been shed upon the problem since the curriculum was adopted. Many are of the opinion that some further modifications would be beneficial, and doubtless the Board of Studies will willingly consider such reasonable suggestions as are offered in a spirit of friendly helpfulness.

That the graduating physician should have a high qualification for his most important work needs no argument. The utmost degree of efficiency that the most thorough source of training can impart ought to be the aim. The practical point being how best to arrive at this desired end. The adoption of the five years' course of study as a means to this end is a decided step in advance, and carries the strongest approval of those interested in the problem.

Some, however, think that a few changes in the regulations and appointment of the course would be yet more helpful. On different occasions prominent members of the Faculty of the Medical College have advocated the possession of the degree of B.A. or its full equivalent from a recognized university as a prerequisite to matriculation in medicine. The sooner such a rule is put into effect the better for the interests both of the profession and public. While in individual cases this might be regarded as a hardship by students, it would without a doubt have the effect of raising the educational standard of the profession, and of securing greater maturity of mind in the student body, desiderata of no minor import.

As the subjects of Inorganic Chemistry, Physics, Zoology and Botany are or ought to be taught in the Arts department of the University, the detailed study of these might be de-

manded as part of the matriculation qualification and omitted from the medical course. This would leave time for much better work in Organic Chemistry and Physiology with extended laboratory work in both, while a brief practical course in Pharmacy might with great profit be added to familiarize the student with drugs and methods of compounding them.

As to the division of the course among the years, the writer would suggest that the first two years be taken up with the subjects of Anatomy, Physiology, Histology, Chemistry and Pharmacy. The third and fourth years should practically cover all the theoretical work of Anatomy, Therapeutics, Medicine, Surgery, Obstetrics, Gynecology, Pathology, etc., with, for fourth year men, as much of the clinical and practical portions of the work as time will allow. In the fifth year as little didactic work as possible should be given, the great bulk of the time being taken up by clinical work, a prominent feature of which should be the outdoor department of the hospital, where the students might be assigned to practical work as they now are in the dressing room.

A course such as that sketched above would in a large measure ensure the efficiency of the graduates, inasmuch as they would have had opportunity to clinically apply the teachings of the lecture room before being thrown on their own responsibility in private practice.

The present course is open to criticism in that, while it undoubtedly has added some scientific subjects to the curriculum which had been neglected, it adds at the wrong end. These subjects are such as ought to be included in a properly balanced Arts course, and if they are not now taught in that connection the Board of Studies might readjust the Arts course a little so as to make it and the medical course harmonize a little more, and then add to the course in medicine higher qualifications at the end. This would command the confidence, approval and co-operation of our great constituency, the public.

HOSPITAL NEWS.

At the Annual Meeting of Life-Governors of Brandon General Hospital the secretary reported patients admitted during 1906, 120. The Board of directors urged the altering and remodelling of present main building to allow for the further increase in patients. The grants from the municipalities for 1906 have exceeded those of the previous years, being \$1950.

At the Annual Meeting of the Moosomin General Hospital the following was reported: The new building has proved most satisfactory in every respect. Great regret was expressed that the present secretary, Mr. Christie, was leaving the district. The number of patients for 1906 was 173. Total cash donations, were \$2546. The town of Moosomin gave a grant of \$300. The floating debt has been reduced from \$1341.20 to \$402.75. This balance has now been paid off leaving only mortgage debt of \$3500.

Work on the new wing of the Calgary Holy Cross Hospital has been resumed and will be rapidly pushed forward. The addition will increase the capacity of the hospital to 100 beds which will be a great convenience to practitioners. The Calgary General Hospital Board of Management are using every effort to erect a new surgical wing for the institution. Already a large amount has been raised and the medical staff are being asked for suggestions.

The census of 1906 showed the population of Manitoba, Saskatchewan and Alberta as over 800,000. In two Asylums for the insane for the three provinces there were less than 800 inmates—less than one insane person to every thousand of a population.

RETURNS FOR THOSE IN RESIDENCES, DECEMBER 31ST, 1906.

	MALES.	FEMALES	TOTAL.
Manitoba	116	70	186
Alberta	88	23	111
Saskatchewan .. .	94	40	134
Keewatin	2		2
Treaty Indians .. .	2	2	4
	302,	135	437

The City Council of Regina have approved of a proposal to submit a by-law to the ratepayers for a municipal hospital.

The city of Regina will probably take over the Regina Victoria Hospital before another year.

Mr. Hopkins, Moose Jaw, asked the City Council to contribute \$7000 to clear off the present indebtedness on the hospital. This was refused, but at the same time the city council expressed its willingness to take over the hospital work.

It is stated that the Provincial Government has granted \$2,000 to the Minnedosa hospital fund.

At the annual meeting of the Governors of the Portage la Prairie Hospital Board, the financial report showed: Cash balance on hand, \$358; total assets, \$32,000. Against liabilities amounting to \$15,000.

The report of the Neepawa hospital for 1906 shows a gratifying increase in the work done in that institution. The normal capacity of the institution is 16 beds. Besides the Lady Superintendent, there is a staff nurse and five nurses in training. The following figures show increase in patients for 1906: The number of patients for 1905 was 149; and for 1906 was 234. *Obstetrical cases, 7; Operations, 86; Deaths, 10—a percentage of 4.45.*

At the annual meeting of the Queen Victoria Cottage Hospital, Yorkton, the secretary reported 239 cases treated during 1906, also the sad death of Miss Gemmell, an undergraduate nurse, through typhoid fever. Owing to prevalence of typhoid during last year all cases applying could not be admitted. An additional wing is to be built and a nurses home. It is hoped then to have both a surgical and medical board.

At a meeting of the Calgary Board of Trade, recently, a resolution was passed calling upon the Dominion Government to establish a sanatorium some place in the mountains where a cure could be best effected.

VITAL STATISTICS

WINNIFEG, JANUARY, 1907.

	Cases	Deaths.
Typhoid	24	5
Scarlet fever	41	2
Diphtheria	40	4
Measles	5	1
Tuberculosis	3	2
Mumps	1	
Scabies	3	
Erysipelas	3	
Whooping Cough	4	
Chicken-pox	2	
	126	14

The number of cases of typhoid for 1905 was 1,841, died 138. For 1906 the number of cases was 1,426, died 109.

Calgary.—The vital statistics for the city of Calgary for the year ending December 31st, 1907:—

	Births.	Deaths.	Mar'ges
January	63	18	13
February	57	23	24
March	56	25	13
April	44	37	25
May	52	31	24
June	59	16	47
July	59	35	28
August	58	44	44
September	60	43	29
October	33	35	29
November	77	19	45
December	76	49	57
Total	676	375	378

CORRESPONDENCE

TO THE EDITOR'

I was very much interested in your able editorial on Reciprocity and especially inter-provincial. As a former vice-chairman of one of the branches of the British Medical Association in the old country, and a representative at its annual meetings I am glad to think this allabsorbing subject of *unity* in the profession is coming to the front thus early in a young colony. Thanks to the reorganization of the British Medical Association, and the untiring energy of men like Sir Victor Horsley, the profession is becoming a more united body. As a body we have great political weight, if we choose to use it. The late Sir Frank Lockwood used to say, "What fools you medical men are! There is no profession in the world that has so unexampled opportunities of thrusting its opinions down the throats of members of parliament, as well as its medicine."

There should be, as you have pointed out, a Central Controlling Medical Board so as to Standardize Medical Education, for unless the standard is raised and maintained, professional etiquette can never be very high. To my mind the standard of the preliminary or general education should be a high one. There should be one central examining body through whose hands every aspirant to the medical profession should pass, irrespective of what college or university he has or is attending.

The higher the standard of education, the more amenable to disciplinary duties one becomes, and the greater the tendency to unity of action. Let the student who has passed a severe and searching preliminary examination of a Central Board, go to whatever college or university he chooses in the Dominion he chooses, the only stipulation being that the length of time he shall study be the same in all, and with the view of Reciprocity with the Motherland, not less than is necessary for registration there, viz,—*five* years. That should be the minimum for all. The student may take the M.B. or M.D. at his own university, but he must pass, just as in the preliminary examination, an intermediate and a final examination, at the hands of the Central Controlling Medical Board, before registration is granted to practice in any province of the Dominion. If the standard be kept high, you will not only raise the standard of professional morality, but you will put a stop to "the springing up of colleges, poorly equipped" for giving anything like a high standard of medical education, and you will also, of necessity, raise the standard of those colleges which, at present, are "ill-prepared to give the training necessary." I heartily endorse your remarks about the apathy of the profession. "'tis true 'tis pity; and pity 'tis, 'tis true. If only we can unite and agree, then dealing with such subjects as "Contract work" and "fees" need give us but little trouble. The Calgary Medical Association have dealt with the subject of "Lodge and contract practice" in the proper way, by its members subscribing "not to enter" into any contract or agreement with any lodge, organization, or number of people for a monthly or yearly fee" for as Dr. Lafferty points out "the practice is bad for both doctor and patient."

As regards "fees," these will vary locally: but we ought, by uniting, agree upon a minimum fee, below which we should not go. As regards the upper limit of a man's services, that he must fix for himself. It may appear somewhat sordid to speak of fees in our "noble and unselfish profession;" since members have said that the first consideration was for human life and human health, the general wellbeing of the community. But something more than gratitude is wanted, so long as we are obliged to earn our living by our work. Other bodies of men, and professions are united for their common good, and I cannot see why the members of a noble profession should not pull together and co-operate. With this object in view I am sure that the members of the profession in Saskatoon will work together for its attainment.

ANDREW CROLL, M.CH., M.D., (EDIN.)

Saskatoon, February 21st, 1907.

General Medical News

The Province of Quebec has applied to the Privy Council for admission to Imperial Reciprocity.

Professor Donald MacAlister, Cambridge University, President of the British Medical Council has been called to be Principal and Vice Chancellor of Glasgow University.

The solicitor and Medical Health Superintendent of Winnipeg have been instructed to draft a by-law to fix standard of milk sold in the city.

A physician in Ontario was fined \$10 and costs for failing to report a case of small-pox *promptly* as the Public Health Act requires.

R. A. Bonnar, at the last Student's Association Meeting gave a very instructive lecture, one very good point he advocated was the appointment of medical experts by the government.

The Women's Hospital Aid, Minnedosa, are publishing a cook-book, the recipes of which have been given by the ladies of the town and vicinity.

A new university is to be established in Chicago by Andrew Carnegie for the teaching of Science and Arts, Law, Theology, etc. It is to be called the Carnegie University.

At a recent meeting of the Health Committee, Winnipeg, a letter from Dr. Inglis (coroner) and G. F. Galt, secretary-treasurer of the Hospital Board urged the necessity of building a public morgue, the present one being quite inadequate and in a very defective condition. A number of other good reasons were given for a new morgue and the suggestion was made that the hospital give the land adjoining the old morgue and the city and government combine in building a new one. The Board of Control are taking up the question.

In the test case, tried recently in Calgray, judgment was given in favor of Dr. Lincoln, allowing him to practice without Provincial Registration in Alberta. An appeal has been granted Mr. Muir, who appeared for the College of Physicians and Surgeons.

We are pleased to see that Dr. Clingan of Virden, was victorious in suit brought against him for mal-practices in connection with treatment of fractured leg. The judge gave his decision in favor of the defendant, Dr. Clingan, for the total amount of his account.

The Canadian Medical Association will meet in Montreal, September 11th, 12th, and 13th, under the presidency of Dr. McPhedran, Toronto; General secretary, Dr. George Elliott, 203 Beverley St., Toronto.

On the eve of his retirement from the presidency of the Calgary Medical Society, Dr. Lafferty entertained the members at a most enjoyable banquet—a perfect success in every way—the profession as a whole turned out and spent a delightful evening together, each member doing his share by contributing song, story, or speech. At the close the hope was expressed that many such sociable evenings might be spent together.}

Personals

Dr. Hartin has left Kalso, B.C., and entered partnership with Dr. Hall of Nelson.

Dr. W. Howard Dickson of Grand Forks, B.C., has taken the practice of Dr. Boucher, Phoenix, B.C., who is going to Europe for a year's course of special work.

Dr. Robinson of Ferguson, B.C., has taken Dr. Hartin's practice in Kalso.

Dr. Truax, North Vancouver, B.C., has taken up practice in Grand Forks.

Dr. J. B. Cade of Slocum City has removed to White Horse.

Dr. and Mrs. Stewart of Newdale are spending the winter in Vancouver.

Drs. Kendall and Nicholson have entered partnership in Vancouver.

Dr. J. E. Elliott of Ymir has succeeded Dr. Hamilton at Arrowhead. Dr. Hamilton has taken up hospital practice at Revelstoke.

Dr. C. E. Arthur, Nelson, B.C., was unanimously elected president of the British Columbia Trustees' Association at its third annual convention, recently held at Nelson.

Dr. and Mrs. G. W. Leech, Brandon, Man., are enjoying a trip through B. C.

Dr. E. G. Mason, Calgary, at the annual meeting of the Alberta Club, was elected president.

Dr. Matheson, Brandon, visited Winnipeg for the bonspiel.

Dr. Low, Regina, visited Winnipeg on his way to the West Indies, where he has gone for a holiday.

Dr. Harry Watson, Winnipeg, we are glad to hear, has recovered from his serious illness and is able to resume his work.

Dr. W. Nicholls, F.R.C.S. (Eng.), Winnipeg, was been appointed one of the examiners in Physiology for the University of Manitoba.

Dr. Roddick, Dean of the Medical Faculty, McGill, on his retirement, was presented by the students at their annual dinner, with a silver loving cup.

Dr. McConnell, Morden, and Dr. Thornton, Deloraine, were elected as Liberal Candidates for their constituencies.

Dr. McSorley, Michel, recently paid a business visit to Fernie, B.C.

Dr. Crosby is assisting Dr. Davidson of Manitou.

Dr. McMillan of London, Ont., is in charge of Dr. Tupper's (Claresholm) town practice while Dr. Creighton is engaged in the country.

Dr. Forbes of McLeod, paid a short visit to Claresholm.

Dr. George Pirie of Calgary, who has been East visiting his parents, has returned.

Dr. Smellie, M.P.P., Fort William, is in Toronto attending the Ontario Legislature.

Dr. Robertson, Stoughton, Sask., has returned from a visit to Toronto and other eastern cities.

Dr. D. J. Goggin, who has been visiting Regina and Edmonton has now returned east.

Dr. Armstrong, Gladstone, Man., has been nominated as Liberal Candidate.

Dr. O'Hagan of Fort William, has gone to Egypt.

Dr. and Mrs. Wilson, Vancouver, have returned from their visit to Los Angeles, California.

Miss Chalmers, who was formerly Head Nurse in the Victoria Hospital, Regina, has been appointed Lady Superintendent, succeeding Miss A. Smith, and Miss Travers has been appointed Head Nurse.

Dr. H. D. McDermid of the General Hospital staff has gone to relieve Dr. Armstrong at Gladstone for a few weeks.

Dr. Howard J. Barnes, D. Sc. F.R.C.S. Assoc., Professor of Physics, has been appointed to the Chair of Applied Science, McGill University, in place of Professor Rutherford, who goes to Europe.

Dr. Stewart Canrose has returned from his visit to Ontario.

Dr. and Mrs. Brant of Cardston, have just returned from a two month's trip to Illinois, Washington, Toronto, Chicago and St. Paul.

Among the visitors to Winnipeg during Bonspeil were: Dr. Wright of Russell, Man.; Dr. Bradley of Saltcoats; Dr. Low Regina; Dr. Matheson, Brandon; Dr. Montgomery, Deloraine; and Dr. Crosby of Manitou.

Dr. C. F. McArthur of Airdrie, has been visiting Calgary.

Dr. J. L. Schaffer of Boissevain has returned from Ottawa. We were pleased to read that one of his last acts was a protest against the way post office authorities carried out their obligation to the public of Western Canada.

Dr. W. J. Roche, M.P., Minnedosa, was in Winnipeg on his way home from Ottawa.

Dr. F. W. Hart had a summons to Barrie, Ont., on account of his father's sudden death.

Dr. W. Black of Winnipeg, has gone east for a visit.

Professor Vinscent gave an address before the Medical Student's Association, Friday, February 22nd, on "An Ideal Medical Education."

Dr. Bishop of Crossfield, Alta., has taken a partner into his drug business.

Dr. Saul Bonnell, Fernie, B. C., has just been elected Mayor of that town.

Dr. McTavish, Jail Surgeon, Vancouver, was presented with a handsome ebony gold headed walking stick by the members of his first Aid to the Injured Class of the Police Force. Chief Chisholm made the presentation.

Dr. Kerrigan, Liberal Candidate, was returned by a majority of 60 at the recent provincial election held at Skeena, B.C.

Dr. Stevenson, Virden, has left to take a post graduate course at Chicago.

Miss Cruikshanks has been appointed Head Nurse of the Victoria Order of Nurses, Vancouver, B.C.

Dr. Tyndall, Brandon, is relieving Dr. Hicks of Griswold for a few weeks.

Dr. Bird, Broadview, Sask., has been appointed Mayor of that town.]

Dr. Harvey, QuAppelle, has received the appointment of Medical Adviser to Piapot's Muskowpetungs and Pasqua's Reserves, *vice* Dr. Kalbfliesch, resigned.

OBITUARY

Sir Michael Foster, Unionist member of Parliament for the London University since 1900, died January 29th.

News has been received of the tragic death of Dr. Flood, R.N.W.M.P. patrol surgeon to Major Moodie's party.

Sir William Hingston, one of the best known medical men in Canada, died February 19th. Sir William Hingston was a graduate of McGill and Edinburgh Universities. He also received diplomas from the highest scientific bodies in Austria, Russia, Bavaria, France and the States. He was the organizer of the first Board of Health in the Dominion and was knighted for his distinguished medical services.

Our Local Editors

The following have kindly consented to act as Local Editors for their district: Dr. Fagan, Victoria, B.C.; Dr. Brydone-Jack, Vancouver, B.C.; Dr. Arthur, Nelson, B.C.; Dr. Mason, Calgary, Alberta; Dr. Lowe, Regina, Alberta; Dr. Matheson, Brandon, Manitoba; Dr. Chisholm, Fort William; Dr. Lineham, Dauphin, Manitoba; Dr. Thornton, Deloraine; Dr. Poole, Neepawa; Dr. Nichols, Edmonton, Alberta and Dr. Croll, Saskatoon.

Announcements

Original Articles, Letters and Reports should be addressed to "The Editor," P. O. Box 450, Winnipeg.

Letters relating to Sale and Advertising Department should be addressed to "The Manager," P. O. Box 450, Winnipeg.

Local Papers containing reports or newspaper clippings should be marked and addressed to "The Local Editor."

Letters, whether intended for insertion or private information, must be authenticated by names and addresses of the writers not necessarily for publication.

Correspondents not answered by letter are requested to look at "Answers to Correspondents" the following month.

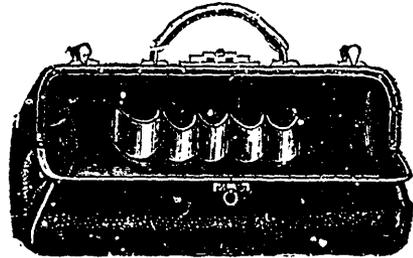
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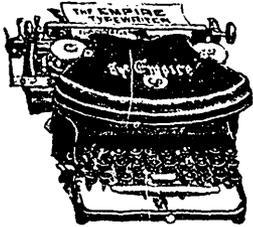
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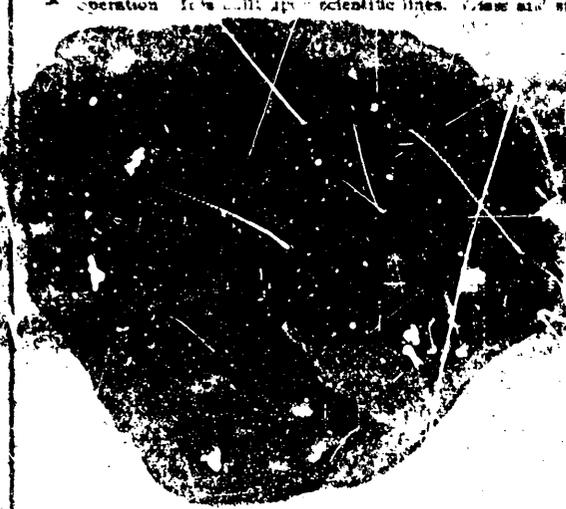
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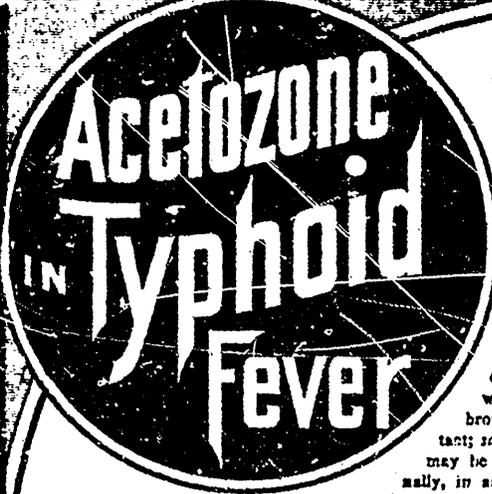
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