Dr. J. H. K. Bonnell.

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WESTERN CANADA
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ORIGINAL COMMUNICATIONS.

PEPTIC ULCER OF THE OESOPHAGUS AND DUODENUM

BY PROFESSOR C. A. EWALD

Physician to the Augusta Hospital, Berlin, Germany.

There is no doubt that the typical Gastric Ulcer—Ulcus Pepticum or Rodens—originates through the action of the acid gastric juice in a circumscribed spot of the Mucous Membrane of the stomach that has been injured.

The same process can obviously occur in the neighborhood of the stomach also, i.e. Oesophagus above and Duodenum below —if similar conditions present themselves, that is if the acid gastric juice attacks a circumscribed damaged spot of the duodenum or oesophagus.

Thus originates the Ulcus Pepticum Oesophagi above the Cardia in the lowest part of the Oesophagus and the Ulcus Duodeni below the pylorus in the upper portion of the duodenum. In the first case there must be a regurgitation of the acid gastric juice, the tonus of the Cardia temporarily relaxing while in the other case the acid chyme (or the pure acid gastric juice) passing over into the duodenum has not its acidity sufficiently neutralized in the duodenum on account of deficient secretion of bile and intestinal juice.

Peptic ulcers are not met with lower down in the bowel than the duodenum nor higher than the lower third of the œsophagus, as the acid gastric juice postulated for their production is absent elsewhere.

The course of the ulcers is similar to that of the typical gastric ulcer—pain after food, hæmorrhage, healing with smooth scar or with cicatricial contraction (stenosis), and lastly perforation with its various sequelæ.

The characteristic symptoms of œsophageal ulcers are, the position of the pain immediately after food—a position corresponding to the site of the Cardia behind or to the left of the end of the sternum, and the retching and vomiting on attempting to swallow, with occasionally some blood in the vomit. Examination with the œsophagoscope, exposing the ulcerated spot above the cardia allows of certain diagnosis of ulcer together with its extent.

Had cicatricial narrowing occurred, the history of the the case, the age of the patient, the absence of indications of Cancer render the diagnosis possible. The œsophagoscopic picture reveals a smooth, bloodless, usually funnel-shaped narrowing of the lumen of the œsophagus.

The X-Ray picture also can in such cases be of value in a negative way, by showing that no tumour is present.

The diagnosis of Ulcus Duodeni is much more difficult, including, as it does, the differential diagnosis from Ulcus Ventriculi at the pylorus, from inflammatory conditions in and around the gall bladder, from gall stones, from chronic inflammatory conditions and tumours of the pancreas.

Perinephritic inflammations, renal calculi, and affections of the pelvis of the kidney and of the ureter require less consideration.

These latter conditions are to be recognized by the examination of the urine, by the attacks of colic appearing in paroxysms and separated by prolonged intervals of immunity from pain, as well as by the position of the pain which is referred more to the side, that is to the renal region. But if the pain is located in the position of the gall bladder or pylorus, i.e. in the right Parasternal line, it may sometimes, where the course of

the case is atypical, be extraordinarily difficult or quite impossible to differentiate the conditions just referred to. This applies particularly to the question if the ulcer be located in the pyloric region of the stomach or beyond the pylorus in the duodenum. Affections of the gall bladder and perihepatic conditions on the other hand are as a rule—as opposed to gastric and duodenal ulcers—characterized by the fact that the pains appear irregularly and independently of food, that they resemble colic, that is, are more cramp-like, increasing and diminishing in severity and that prolonged intervals which may last weeks, months or even longer, occur between the individual attacks. The attacks, too, are in many cases attended by jaundice, persist frequently night and day without a break and do not disappear when the stomach is empty. Lastly, in these cases, there is usually no blood in the stomach or in the motions, and the gastric secretion is little, if at all, altered chemically.

This applies also to the diseases of the pancreas before mentioned which may betray their presence also by fatty stools and glycosuria, and possibly by a palpable immovable tumour. Under certain conditions, the age of the patient may also be of value for the diagnosis, calculi and tumours appearing mainly with advancing years while ulcer is most frequent from 20 to 40 years of age.

When by such considerations we are able to narrow down in an individual case the diagnosis to an ulcer, the difficulty begins of exactly determining its position.

The following characteristics have been laid down for ulcus Duodenali: (1) The pains appear later than in the gastric ulcer—3 to 4 hours after food. (2) The position of the pain is more outwards to the right. (3) The thickened pylorus is frequently palpable in cases of ulcer of the pylorus. The duodenal ulcer cannot be palpated as it is smoother and is not accompanied by compensatory hypertrophy of the muscular wall. (4) In gastric ulcer, the vomit consists of particles of food which are sometimes mixed with blood or of pure blood. In duodenal ulcer, the nature of the vomit depends on the position of the ulcer. If the latter is close to the pylorus, the vomit

is indistinguishable from that in gastric ulcer. Should the ulcer be infra-papillary, i.e. below the opening of the bile duct into the bowel, we find especially in the case of an ulcer of some standing and now contracting, first food particles, then bile and last of all blood vomited. I have observed and published a case in which this sort of vomiting was so typical and recurred so regularly that the patient could with his eyes closed give the nature of the vomit at any particular moment. (5) In the duodenal ulcer, melæna (blood in the motions) occur much more frequently than Hæmatemesis (blood in the vomit).

Unfortunately all these signs taken individually are by no means regularly met with. They may be present but they may also be absent. Everyone with personal experience in this field must admit that that so frequent variations are met with in regard to the nature of the pains, their frequency, their position, and their time of appearance that little use can be made of these facts in the differential diagnosis. The same remark applies to other symptoms mentioned when met with individually. Only if, and this occurs with great rarity, all the symptoms unite in an individual case, can we make the diagnosis of ulcer of the duodenum with comparative certainty. Even in such cases, no other complications must be present to change the clinical picture.

In this dilemma it is valuable to possess another diagnostic symptom—this is the demonstration of blood in the fæces, with its simultaneous absence in the gastric contents. In the majority of such cases, the blood is not macroscopically obvious, but is present in small amount recognizable only with the aid of the chemical test—the so-called "occult bleedings," which in 1897 I was the first to draw attention to—or in the stools. The demonstration of blood in the stomach contents is made, as is well known, with Guaiacum resin or Aloin or Benzidin in the presence of resinous Turpentine oil or Peroxide of Hydrogen.

As these tests are very delicate and demonstrate quite a small amount of blood, e.g. the blood contained in three grammes of flesh taken with the food, the patient should take no flesh or other blood containing articles of diet for several days before the examination. Further in the event of posi-

tive reaction we must make certain that no bleeding has occurred from other sources, e.g. from the gums or from the hæmorrhoids lying high up. Lastly repeated examinations must convince us that the absence of blood in the stomach and its presence in the fæces is a constant phenomenon.

In almost all cases of gastric ulcers, as regular examinations shows us, occult bleedings occur as long as the ulcer remains uncicatrized. Now in gastric ulcer, blood is constantly present in the gastric contents when such is withdrawn by a stomach tube after a test meal or before breakfast, and also simultaneously in the fæces, or blood is demonstrable in the gastric contents alone. Fresh bleeding duodenal ulcers on the other hand exhibit constantly blood in the motions only and not in the stomach. The only exception to this rule is in the case of the profuse hæmorrhages, where the blood spreads simultaneously upwards and downwards. In such cases, the other symptoms must point the way to a diagnosis if such be indeed practicable. Still in many instances, the relationship just mentioned has suggested to me the right diagnosis, which has been repeatedly confirmed later by operation or post mortem.

The ulcers must, however, be fresh and bleeding, although the hæmorrhage need not be so considerable as to appear in the form of hæmatemesis or of the well known tarry stools. Frequently, neither the state of the gastric contents nor the color of the motions gives a clue to the presence of blood and the thereby great advantage of the chemical examination lies just in this, that we can thereby demonstrate bleedings which have hitherto entirely escaped observation.

When no hæmorrhage occurs from the ulcer, two possibilities must be considered in making a diagnosis. Either the ulcer is situated between the pylorus and the papilla of vater (suprapapillary) or it lies lower down in the duodenum on the outer side of the papilla (infrapapillary). The ulcers belonging to the first group are distinguishable from gastric ulcers lying close to the pylorus, only if the symptom already described, of the later onset of the pain with its position outwards to the right, is outspoken. This is generally not the case and so in the majority of instances, an absolute diagnosis

is impossible. Should vomiting occur, the vomit may include intestinal contents, if cramplike contraction of the bowel occur owing to the irritation which the acid chyme exerts on the surface of the ulcer. With an ulcer, however, lying below the papilla, gastric contents are almost invariably mixed with bile and intestinal secretions and in exceptional instances, the peculiar strata-like vomiting already described is met with.

One can demonstrate the presence of bile and pancreatic ferment in the contents of the stomach—best in the contents removed before food though also in the vomit. Bile is readily recognized by the well known reaction given by the bile coloring matter. We show the presence of pancreatic fluid by the gastric contents, when filtered and if necessary neutralized, being able to transform starch into sugar. The gastric contents must not, of course, contain sugar at the start; should this be so, the sugar must first be removed by fermentation.

A point worthy of note is that the ulcers of the duodenum show slight tendency to cicatrisation and stenosis formation. Should such develop, there results ultimately dilatation of the stomach and of the affected area of the bowel, giving rise to the same symptoms as a stenosis of the pylorus. If the stenosis is situated below the papilla of vater, then the fluid retained in the stomach is constantly mixed up with a good deal of bile and possibly pancreatic fluid.

The complications, which result from the involvement by the ulcer of the neighboring organs (gall-bladder, liver, portal vein, stomach, pancreas) or from perforation into the free abdominal cavity, lead to the corresponding symptomatology, which, however, cannot be dealt with in detail here.

TREATMENT.

—Whether the case be one of fresh ulcer of the œsophagus or of the duodenum, the treatment is in every instance to be conducted in the first place on the general principles governing the treatment of gastric ulcers proper. We have to avoid as far as may be, in the first few days all irritation which the food might cause to the ulcerated spot and nourish the patient by nutrient enemata alone. In this way, the most favorable con-

dition for the ulcers healing is compassed. We know that gastric ulcers heal more quickly and more smoothly in proportion as the mucus membrane or rather the muscularis, can contract, i.e. the less the stomach is burdened and stretched by food. The same principle may be applied to the duodenum and in a more modified sense, to the œsophagus Thus the proposal recently made by Lenhartz in Hamburg to give ulcer patients from the commencement of the treatment considerable quantities of solid food is not to be recommended from this consideratior alone.

The fresh ulcers of the œsophagus are, however, susceptible of a local treatment. Directed by the œsophagoscope, we can bring astringent and if necessary styptic remedies to bear directly on the ulcerated spot.

Where stenosis has occurred, we can dilate the stenosis with bougies, or with Senator's dilating sounds or with Schreiber's is dilators. I prefer the dilatation with bougies, i.e., ordinary sounds of whalebone or catgut or the so-called spiral sounds manufactured from metal wire, to all other methods as they are the simplest to manipulate and act with greatest certainty.

The metal sounds especially, which possess a considerable inherent elasticity and exercise a dilating action by their weight are under such circumstances to be recommended.

If the stenosis is so narrow that it is no longer permeable for sounds, even when we try to introduce them with the aid of the œsophagoscope, then there is no course open but to resort to a Gastrostomy, and to dilate the stenosis from below upwards. In one of my cases, however, some time after the Gastrostomy, the œsophagus became again permeable, without any special attempts at dilatation having been made. I have accounted for this extraordinary circumstances in this way, that the tug, which the stomach distended with food exercised on the œsophagus, gave rise to a gradual stretching and widening of the narrowed area which was possibly also somewhat kinked.

Peptic ulcers of the œsophagus, however. are incomparably more uncommon than those of the duodenum—they do not in my experience, reach 5 per cent. of the latter.

Unfortunately, duodenal ulcers are much less responsive to medical treatment. This falls quite in line with the treatment of gastric ulcers proper, so long as the ulcers are recent. Here, too, the ulcerated spot must be first protected as far as possible—an object achieved best by the administration of nutrient enemata. Medicines—Bismuth, Tannin, Silver Nitrate, Ferric Chloride—as might be expected from the position of duodenal ulcer, do not act so directly on the ulcer as in the case of the stomach and are therefore still more uncertain than in that situation. I have found the best results from large doses of Bismuth. We make a suspension of 10 to 20 grammes of Bismuth in about 200 c.c. water and let the patient shake this well and drink it on an empty stomach. He must on doing this lie on the right side, so that the fluid may leave the stomach as early as possible and the Bismuth may be precipitated, not in the stomach, but in the duodenum.

We know that Bismuth has the tendency to deposit on the ulcerated spot. By the experiments of Moritz, Mering and others, we know that fluids rapidly leave the stomach, and we can possibly follow the course of the Bismuth suspension administered, through the pylorus into the duodenum, in the Roentgen picture. In this way, we may bring about the cure of even duodenal ulcers if they are early enough recognized and treated. If, however, cicatrisation, narrowing and inflammatory adhesions with the neighborhood have already occurred, then we must early decide for operation and resect the cicatrix or adhesion or perform Gastro-enterostomy.

*AORTIC REGURGITATION

BY T. A. MONRO, M.A.; M.D.; F.F.S.P.G.

Physician to the Glasgow Royal Infirmary and Professor of Medicine in St. Mungo's College.

The knowledge, or even the suspicion, that the heart is affected, is apt to lead to anxious questionings on the part of a patient and his friends, because every one is aware that sudden death is often due to heart disease. A vascular lesion within the head, such as cerebral hæmorrhage, often gives rise to symptoms of sudden onset, but death is not likely to occur for some hours at any rate. Even death from pneumonia is occasionally put down in popular reports as sudden death, though the illness lasts for days. But the sudden death of heart disease may be instantaneous, the patient being able to speak at one second, and absolutely dead the next. One or two other agencies, such as rupture of an aortic aneurysm, may cause death almost as quickly as I have indicated.

Two points have to be borne in mind in connection with this subject. The first is that only certain forms of heart disease involve the risk of sudden death. Among these are diseases of the coronary arteries and diseases of the cardiac muscle, whether secondary to disease of the coronaries or not. Angina pectoris is closely allied to, and may be included in, this group. It is perhaps also allowable to include aneurysm of the intrapericardial portion of the aorta. Another important member of this group is the special subject of consideration this afternoon, viz., aortic regurgitation, which is, practically speaking, the only kind of valvular heart disease which entails the danger of a suddenly fatal issue. The second point to be borne in mind here is that even in these specially dangerous types of heart disease, sudden death is not invariable. It is probably but a small proportion of cases in which the patient gets no warning at all that his health is impaired. Some get

*One of a course of Postgraduate Lectures delivered at the Glasgow Infirmary in February, 1907.

one or two, or it may be many warnings, that, though their symptoms are few, their tenure of life is precarious. Others again, go down hill in a gradual way, or by a series of steps, though life may finally flicker out rather unexpectedly.

Of the lesions at the aortic valve pure stenosis is uncommon, pure incompetence is more common, and a combination of the two is most common of all. At any rate this combination is very frequent if we are to judge by the murmurs heard at the aortic area; but in many cases the obstructive murmur seems to depend on some roughening of the valve which is of little or no practical importance, while the accompanying incompetence is a very real disease.

Physiognomy.—Aortic regurgitation is a condition which like mitral regurgitation, pneumonia, tubular nephritis and a few other diseases, may reveal itself to the observer at the first glance. When we meet with a well-marked case in an adolescent male, the physiognomy is quite characteristic, for the pallor seen in the countenance, and the exaggerated pulsation seen in the arteries of the neck, are sufficient for diagnosis, without taking into consideration the shortness of breath which may or may not be observable at the time.

Causes.—The causes of aortic incompetence and the resulting regurgitation are varied. Thus in rare instances there is congenital malformation, possibly a result of fœtal endocarditis. A flaw of this kind may not of itself render the valve incompetent, but it seems to predispose it in a marked degree to chronic endocarditis.

A second group of cases consists of those which are so commonly met with as a result of rheumatic endocarditis in childhood and early adult life. This infection is apt to attack the mitral valve even more readily than the aortic. The occurrence of endocarditis may, of course, be recognized through the discovery of a diastolic aortic murmur in the course of an acute rheumatic attack; but in most cases no cardiac symptoms will shew themselves until some time, perhaps many years, afterwards. Symptoms indeed may never appear, but when they do, they may be accounted for in at least four ways, viz., (1) renewed inflammation of the valve; (2) chronic endocar-

ditis continued from the original acute attack; (3) shrinking or sclerosing of new-formed fibrous tissue left behind by the acute endocarditis, and (4) failure of the power of the cardiac muscle to compensate for the lesion.

In a third group we have to deal with the malignant or ulcerative type of endocarditis, which is characterised by a combination of two kinds of clinical phenomena, viz., those which point to cardiac failure and those which are indicative of septicæmia. In this instance, virulent micro-organisms have attacked the valve, which has very likely been already damaged by an old endocarditis of the simple variety; and death is almost certain to be the ultimate issue though the duration of the illness may vary from a few days to many months.

A fourth group is constituted by the very common cases in which the lesion is a chronic sclerosis of the valve, insidious in its onset, progressive in its tendency, and grave in its results. The rigidity and thickening of the valve-segments are often associated with sclerosis or atheroma of the aortic arch, and under such circumstances the coronary arteries may be interfered with. Among the causes of these degenerative changes we may include frequent or persistent increase of strain in connection with laborious occupations; increased strain resulting from high arterial tension, as in chronic kidney disease, gout, lead poisoning, pregnancy, constipation, and excesses in eating and drinking; and toxic agents, such as alcohol, lead and syphilis. Syphilis should be suspected in the case of young men suffering from aortic incompetence, if rheumatism and the other generally recognized causes can be regarded as improbable.

In a fifth class of case aortic incompetence is relative. The valve-segments are no doubt often involved too, and may contribute to the insufficiency, but the distinguishing feature of the class is that the aortic orifice is stretched, so that the valve-segments, even though healthy, cannot meet in accurate apposition. The dilatation of the aorta is attributable to the combined influence of sclerosis or atheroma of the vessel-wall, and the distending force of the blood within.

Finally, incompetence may be due to rupture of a valve-segment, an accident which is not at all likely to happen to a

healthy valve, but which may occur, either spontaneously or in consequence of severe effort, if a segment is already diseased, or which may be brought about by an attack of ulcerative endocarditis. The result may be an immediately fatal syncope, or a more gradual failure of the heart which does not reach its final issue for several weeks or months; but occasionally life, and even some capacity for work, may be preserved for some years after the accident.

Changes in the Heart.—When the aortic valve becomes incompetent the regurgitation of blood into the left ventricle leads to dilatation of that cavity, which, if compensation is to be complete, must become able to accommodate the blood which regurgitates from the aorta, in addition to that which enters from the left auricle. To deal with this increased quantity, the left ventricle must undergo hypertrophy as well as dilatation, and when these two changes have been brought about perfect compensation may be maintained for an indefinite period. But if the aortic lesion is severe or progressive, or if a patient who suffers in consequence of an acute rheumatic attack does not rest for a sufficient length of time, the left ventricle becomes greatly dilated and perhops unable to empty itself completely. The stretching of the ventricular wall draws apart the mitral curtains, which, though perhaps healthy enough in their structure, fail to meet accurately, so that relative incompetence of the mitral valve ensues.

This in its turn leads to enlargement of the left auricle, and then to enlargement of the right side of the heart. It is in aortic disease of this kind, where the right side of the heart undergoes great secondary enlargement, that we meet with the biggest size of heart, the *cor bovinum* or bullock's heart, which may attain to three or four times the normal weight.

Changes in the Circulation.—The effects of the valvular lesion are not confined to the heart, even when compensation is good. It is well known that when a pump delivers water into one end of a system of rigid tubing, the water will escape from the other end in a pulsatile manner; whereas if the water is conducted by a sufficient length of elastic tubing, the flow is converted into a continuous one. The arterial system of our

bodies is, under normal circumstances, an elastic one, so that the blood should be flowing in a continuous stream by the time it reaches the capillaries and such delicate structures as the retina. Aortic incompetence, however, interferes to some extent with this provision of nature, because the increased quantity of blood injected by the ventricle into the aorta causes the arterial system to be distended for the moment to an abnormal degree; but owing to the leakage back into the ventricle, the distension between the beats is probably, even under the most favorable conditions, no greater than normal. Accordingly since the distension of the arteries is raised above normal by the systole of the ventricle, and is either at or below normal between the systoles, the pulsatile character of the blood-stream is exaggerated. This is easily seen in the patient's neck, where the carotids can be observed to throb with undue violence. If the radial artery is examined by the finger, while the patient's hand is held up, the abnormal difference between the states of distension and collapse is brought out in a striking fashion; so that this variety of pulse quite deserves to be called "collapsing," or "water-hammer" (after the scientific toy of that name), or "Corrigan's" (after Sir Dominic Corrigan, who described it). Pulsation may be traced into the capillaries, e. g., by stroking the forehead with the finger-nail till the skin becomes red, whereupon this redness will be seen to increase and diminish with the same frequency as the beat of the heart or pulse.

The radial pulse is of large volume, no doubt in consequence of the sudden distensions to which it is constantly being subjected. There is a difference of opinion on the question of delay of the pulse; that is to say, whether the interval between the beat of the heart and the beat of the radial artery is longer than in health or not. For instance, Broadbent firmly maintains that in aortic regurgitation, there is always delay; while Mackenzie seems to make it plain, by his graphic methods, that this opinion is erroneous.

Anaemia.—There is another way in which aortic incompetence influences the peripheral circulation. Unless the valvular defect is properly compensated by the changes in the ven-

tricle, there must be a deficiency in the supply of arterial blood to the periphery. The pallor of the face, in the case of a young patient, may at once arrest the observer's attention. The anæmia of the muscles accounts for much of the general weakness. The deficient supply to the nerve-centres explains the liability to attacks of syncope, which may at any time prove fatal. The imperfect distribution of blood to the tissues in general accounts for the shortness of breath, since respiration of the tissues cannot go on in a satisfactory manner unless the circulatory organs, the respiratory organs, and the blood are all in a healthy condition. The anomalous character of the blood-supply to the heart itself has no doubt also some unwholesome influence. When compensation is complete, anæmia will, of course, be no symptom of the valvular lesion.

Symptoms.—Some of the symptoms of aortic regurgitation have been already mentioned. They include pallor, faintness, muscular weakness, dyspnœa on exertion, paroxysmal dyspnœa, a sense of oppression in the chest, sometimes pain in the cardiac region, sometimes a pain which radiates like that of angina pectoris, and disturbed sleep with bad dreams. When vomiting occurs, it is to be looked upon as a bad omen. Mental symptoms may be present, and even a suicidal tendency. Many of these phenomena, including the mental symptoms, can be accounted for by the deficiency in the blood supply to the arterial system. My impression is that vomiting is a special indication that grave dilatation or stretching of the ventricle is taking place in consequence of the unfitness of the organ for its heavy task. Why pain is present in perhaps one-half of the cases of gross heart disease, and absent in the other half, is a wide question, which need not be discussed in detail here; but it is possible that ischæmia of the heart-muscle may have a share in its production, just as anæmia is a potent factor in the etiology of neuralgia.

It is noteworthy that the dropsy, the cyanosis, and the pulmonary congestion which are so obtrusive features of mitral regurgitation with broken-down compensation, are usually absent in aortic incompetence, or present only at a late stage. Moreover, when the heart's action in aortic regurgitation is very

irregular, or very rapid, the presumption is that compensation is seriously impaired.

Physical Signs. — The murmur is diastolic in rhythm (V.D.). It is usually audible at the aortic cartilage and the neighboring portions of the sternum. It is propagated towards the lower end of the sternum, and also towards the apex; conduction by the sternum, and convexion by the regurgitating blood being the probable agencies in the two cases. The murmur is often heard much better at the lower sternum than at the aortic cartilage, where, indeed, it may be quite inaudible. Though audible at the apex, it may be lost over the right ventricle. It is often a soft murmur, and might, in a good many cases, be missed altogether by a careless observer. In some instances, however, it possesses a musical quality.

Other murmurs which occasionally form a part of the phenomena of aortic incompetence have received special names. Thus "Duroziez's murmur" is a double murmur which can sometimes be made out in the femoral artery. "Flint's murmur" is presystolic in rhythm, and is heard at the apex. It is probably due to the regurgitating blood falling upon the anterior curtain of the mitral valve, and thus producing a certain amount of obstruction to the flow of blood from the auricle into the ventricle.

Certain other signs are of importance, but need not detain us long. The apex-beat is displaced downwards (perhaps by two or three intercostal spaces) and to the left (it may be as far as, or beyond, the anterior axillary line), the pulsation of the ventricle is diffuse, and the area of cardiac dulness is increased to the left and downwards. The exaggerated pulsation of the arteries, the peculiar qualities of the pulse, and the pulsation of the capillaries, have been already dealt with at sufficient length.

Special Features of Degenerative Cases.—I pointed out at the commencement of this lecture that to see the most complete picture of aortic regurgitation, we must study it in the young subject. When the valvular lesion is due to degenerative changes, and particularly in elderly patients, the collapsing character of the pulse may be but imperfectly developed,

partly because of the somewhat rigid condition of the aorta and radial artery, and partly, no doubt, because the frequently associated aortic stenosis interferes with the suddenness of the ventricular systole. Under such circumstances, a sphygmographic tracing is apt to show a rounded or flattened top. In cases where the aortic arch is dilated, and where, accordingly, there is relative incompetence, with or without incompetence from structural change in the valve-segments, the second aortic sound is likely to be of low pitch and to possess a ringing quality.

Estimation of the Degree of Lesion.—It is an interesting and very useful exercise of the judgment to try to determine the severity of the valvular lesion from the data afforded by a physical examination of the patient. This investigation can be carried out whether compensation is complete or not, but its results are unreliable unless sufficient time has elapsed for those changes to take place in the left ventricle and other parts of the heart which usually result from aortic regurgitation. This being granted, we may recognize six signs at least which, to a certain extent, indicate, by the degree to which they are developed, the degree of incompetence of the aortic valve. These signs are: Enlargement of the heart, exaggerated pulsation of the carotids, collapse of the radial pulse, capillary pulsation, pallor of the surface, and replacement of the aortic second sound by the diastolic murmur. With regard to this last sign, it is easy to see that the sudden tension of the aortic valves and neighboring part of the aorta, at the instant when the valve closes, will be much reduced if there is much leakage, and that the intensity of the aortic second sound, which is due to that tension, will be reduced as a consequence. Conversely, a well marked aortic second sound suggests that the regurgitation is inconsiderable; but according to Broadbent, if we wish to be sure that we really hear the right sound, we must listen for it in the neck, over the carotid artery.

Prognosis. — The outlook in aortic regurgitation varies very much in different cases, and the physician, in forecasting the future, has to take several facts into consideration. To a certain extent, the severity of the lesion, as estimated by physi-

cal signs in the way I have shown, is a useful guide. In cases where cardiac symptoms are not ordinarily present, the ease with which these are induced by exertion indicates the extent to which the reserve power of the heart has been drawn upon to compensate for the lesion, and is therefore a valuable prognostic sign. If the lesion is due to the acute endocarditis of early life, and the patient rests sufficiently long for the necessary hypertrophy to take place, compensation may remain satisfactory for many years, and allow the individual to pursue a laborious occupation, or at any rate to lead an active busy life, in excellent health. If, however, owing to the severity of the original lesion or to inadequate care in the early stages, or to any other cause, compensation is insufficient, the outlook is very grave. Three modes of termination may be recognized. Sudden death from syncope is common. In other instances, the dyspnœa, pain, want of sleep, and inability to take food, bring about a gradually fatal exhaustion. In a third group of cases, secondary or relative incompetence of the mitral valve is brought about, and leads to the train of symptoms seen in mitral regurgitation with broken-down compensation.

When aortic incompetence develops after the degenerative period of life has begun, we are never safe to conclude, except after a long period of observation, that compensation is fully established. For the lesion is very likely to be progressive in its tendency, and the reserve power of the heart is much less than in early life. Moreover, unless the murmur has been discovered accidentally, it is probable that the lesion has been in existence for some time, and that compensatory enlargement of the ventricle has been taking place all the while in a quiet way. It is when the heart can no longer undergo hypertrophy in proportion to the slowly progressive disease of the valve that symptoms ensue, and attention is directed to the actual condition of the organ. In these circumstances great improvement may take place under appropriate treatment, but an early relapse may be looked for, and the end will probably come within a period of months or perhaps a year or two.

Treatment.—I need scarcely emphasize the importance of protecting children who have already shown a rheumatic ten-

dency from such influences as severe exposure which would favor the development of fresh attacks. It is more needful to dwell on the inestimable value of those measures which can be employed immediately after the valve has been damaged, with a view to promote the ventricular hypertrophy which is essential for perfect compensation. As it is important that the lesion should be recognized at the earliest possible moment, the heart ought to be examined from time to time after an attack of rheumatic fever, and in connection with troublesome growing pains and other rheumatic phenomena in childhood; while frequent examinations are an obvious duty in the course of rheumatic fever and other acute diseases.

When the development of aortic incompetence is detected in a young subject, or in any individual in whom it is due to an acute, and therefore, it is to be hoped, stationary lesion, the patient should be confined to bed in the horizontal posture for two months. After this he may be allowed to spend his days on a couch, but still in the recumbent position, for six weeks more. After this again, he should take life very easily indeed for a period of six months or a year. Moreover, if he is attacked by any febrile or other depressing ailment, he should be sent to bed till all danger that the ventricle may be strained through temporary loss of tone of its muscle has passed away. He should also be cautioned against jumping out of bed suddenly, especially in a cold room at night, to empty the bladder; since the sudden assumption of the upright posture and the withdrawal of pressure from the abdominal arteries tend to diminish the blood supply to the head, while the contraction of the cutaneous vessels tends to throw increased work upon the heart. Constipation must, of course, be guarded against.

When compensation fails, the patient must take to bed. If the symptoms point chiefly to the left ventricle, cardiac tonics such as strychnine, ammonium carbonate, and atropine, should be administered. Morphine should be given hypodermically in sufficient quantity to procure sleep; as long as the chest is free, or nearly free, from signs of moisture in the pulmonary alveoli or bronchial tubes, this drug may be given without hesitation. Digitalis in this condition is contra-indicated, since it prolongs the diastole, and aggravates the great danger

that the arterial blood-supply will fail.

The circumstances are entirely changed, however, when secondary incompetence of the mitral valve supervenes, and leads to severe dropsy, with pulsation of the veins in the neck, swelling of the liver, and oliguria. Mercurial purgatives should then be given to drain fluid from the vessels of the digestive tract, and at the same time the food, and especially the liquids, should be restricted to a very moderate amount. Digtalis, or some similar drug—though I cannot name any one that equals it—is now allowable, and may be found not merely of great value, but quite indispensable, if the dropsy is to be materially reduced. But as soon as this drug ceases to be necessary, or ceases, after a thorough trial, to cause further improvement, it should be stopped altogether, in view of the ever present danger of fatal syncope.

If the patient is fortunate enough to recover so far as to get entirely rid of his symptoms, he should remain at rest for many weeks, as if the lesion had recently occurred, so as to permit of further hypertrophy of the ventricle under favorable conditions. Too often, however, recovery will be very incomplete, so that permanent disablement remains, together with a considerable risk of sudden death

In cases where the valve-disease is due to degenerative changes in an elderly subject, it is not advisable to keep the patient too long in bed. We cannot promise him any great gain from a prolonged rest, and once he has got rid of his symptoms, he may be allowed to get up for a little, and even to move about the house, provided he avoids undue exertion and exposure, the climbing of stairs, constipation, and excesses in eating and drinking.

When the urgent symptoms of broken-down compensation in aortic regurgitation have been relieved, arsenic may be administered as a tonic, with or without nux vomica or strychnine. Broadbent speaks highly of phosphorus. In degenerative cases it will be well to add a small dose of potassium iodide to a tonic prescription of this kind; while in those cases where angina pectoris constitutes an element in the suffering of the unfortunate patient, vascular relaxants, with or without morphine, will be indicated.

THE RELATION OF MIND AND BODY

BY ALFRED T. SCHOFIELD, M.D.

Hon. Physician, Friedenheim Hospital, London, Eng.

That mind and body are in some way connected was known long before the Greeks associated a mental state with a physical cause by inventing the term "melancholy" (black bile). It is indeed only within the last century that the practice of medicine has been severed from its connection with the black arts, witchcraft, astrology, phrenology, quackery, and knavery of all kinds; most of them being more or less psychological in their nature. The medical man of the present day values too much his freedom from the errors and mysteries of mediæval medicine not to look with a somewhat jealous eye upon anything that distracts him from his physical studies. He knows too well what his profession owes to the induction methods of diagnosis, to exact observation aided by modern instruments of precision, and the advances in physiology, pathology and bacteriology, to be over anxious and turn aside, to the study of the interaction of the physical with the psychic.

Yet, real as the advance has been, may I venture to suggest that it has perhaps become too one-sided in its character.

In medicine, as in most human pursuits, progress is too often like a journey in an Irish car—accompanied by an unnecessary amount of oscillation from side to side. All science advances; but in medicine particularly the zig zag course of this advance due to rival theories and schools of thought, eloquently demonstrates the unstable equilibrium of the human mind.

Philosophy in medicine is not in fashion just now. The sturdy, practical, scientific character of the medical school training, the mechanical and chemical plane on which our physiologies move, the strictly material nature of modern pathology, all tend to foster the belief that any consideration of the psychic in medicine is archaic in character and futile in result.

To talk of the patients' spirits in a case of phthisis, when the bacillus swarms in the sputa seems to savour of "idle

words." What folly, to speak of mind influences in typhoid fever, when the enteric ulcer can be seen (post-mortem) in the pathological theatre! We can catch and stain and double stain the microbes of many infectious disease; what nonsense it seems then, to talk of fear as a casual factor! * * * * In spite, however, of all this, the psychic is ever with us, and some consideration of the part it plays in the human organism can never really be either out of date, or futile, or beneath the attention of busy man.

It may be that one reason why an ill-concealed impatience is often felt—when psychic causes are pointed out to the skilled experimentalist is that they suggest a something which he can neither weigh nor measure; and he very naturally thinks that any attention they receive is diverted from exact research and the exclusive consideration of the material.

The British Medical Journal (April 12, 1890), suggests as another reason, the inherent difficulty of the subject itself. The influence of the mind on the body is a subject whose study involves so many of the fundamental and difficult problems in Nature, that it would be strange if it were popular amongst men whose first aim is to be practical!

To the Journal (of that date), the study obviously is not of practical value; the "practical" being clearly identified with the "easy" men, by implication, associated with the "material"—a fallacy that is still sometimes repeated by those who regard men with the eye of a mechanical engineer.* * *

The text-books of a period give great insight into the spirit of their time; and every thoughtful student of modern works on physiology and medicine must be struck with the increase of the scientific tone at the expense of the philosophic. The most recent physiologies agree in dealing *solely* with apparatus, structure, mechanism and function, or a mere description level, characterised, it is true, by the most minute accuracy of detail. But there is also such a complete absence of all consideration of the necessary co-ordinating and combining power which alone can make of these diverse machines, and many members one harmonious unity, one perfect man, that the whole reads more like

a work on physics than the story of the somatic life of a human being.

And yet the unity and diversity displayed by the body in general, and by its members in particular, as much postulates a central guiding force as the co-ordinate evolutions of a large army prove the existence of a commander-in-chief. Once this is grasped the importance of the study of this central directing power will be no longer denied, and its practical value will not be lessened if the power proves to be mental rather than material. * * * *

Turning from the teaching to the practice we cannot fail to see the natural result. That which is ignored in physiology is not likely to be admitted in pathology; what is never taught in the clinique is not often practised in the sick-room. For though the influence of the mind over the body, as well as of mind over mind, is every where seen and felt, it is at the same time neglected and ignored—in out-patient departments, in hospital wards, in consulting rooms and by sick beds—and hence the amazing spectacle so constantly seen of men laboriously trained in all the medical wisdom of the twentieth century patiently investigating the causes of disease, or earnestly considering methods of cure, without thought of the ever-present mental factor; and sometimes hardly realizing that the case is that of a suffering human being and not merely of a machine that is out of order.

The study of mind is now mainly relegated to the philosopher, the priest, and the alienist; but a sound specialism after all can only be built on a solid and broad generalization. Philosophers and priests, however, are students of the mind and soul, and alienists of the diseased mind; what we need are physicians trained in the knowledge of mind and body, and who thus would prove better specialists than any of the three.. Philosophy, theology and medicine touch each other today as they have ever done at certain points, and there is a transition ground which is common to all. On this ground the physician should stand with as much authority as priest or philosophers. The church no longer treats the soul and ignores the man; and the

fact that the human being is a whole—spirit, soul and body—is increasingly coming to the front. And in the same way the wise physician must grasp the underlying unity of the spiritual and material, and recognize that if the body may, does influence diseases of the soul, so does the mind influence states and diseases of the body.

CLINICAL MEMORANDA

The Use of Antistreptococcic Serum.

By the use of the word "Antistreptococcic," I do not wish any reader to infer that I am alluding to Parke Davis' serum. I am using this word in a general sense, and in order to avoid mentioning the name of any manufacturer.

Personally, I have the highest regard for Parke Davis' preparations. I have used their Antitoxine for eleven years, without a rash following in any case. I even gave my own child (æt. 3 months and only weighing 9 lbs.) 500 units as an immunizer, with no unpleasant results.

I wish to report my own experience with serum in a case of suspected erysipelas.

Last spring I had a small pimple inside my nose; some ten days or two weeks after, on Sunday, I noticed my nose very tender. This increased with some swelling, till Thursday, when it was red, shiny, swollen up to the eye on the right side. I then spoke to two medical friends, who advised a dose of serum, fearing erysipelas, although both remarked on the absence of the distinct outline.

About noon on Thursday, I took 10 c.c. in my left side, just below the ribs. As a result my left side, below the site of injection, became much swollen, down to the groin, also the left half of the scrotum. The swelling on the left side was probably one inch thick, extending only to the mediam line, red and very "itchy." This continued till Monday. On Tuesday morning it had all gone. I had gone down to my office as usual at 2 p.m. with no sign of a rash. At about 2.30 some itching began. Then a patient came in and I had to apologize to her for not being able to keep still. She remarked that there was a rash all over my neck. After she had gone out, I opened my clothes and found myself sovered with white wheals the size of my hand and raised ¼ inch; my temperature at this time was 96. At 5 p.m. I went home and took a bath with soda bicarb, and then went down stairs. The wheals had

now disappeared and a regular erythematous rash came on with the most intense irritation, and I could not get warm, although I was sitting over a big fire. My temperature at 5.30 was 92 4-5, pulse 100. I was particularly careful to make sure my thermometer registered correctly. My wife came in at this time and said that my eyelids, nose and lips were purple and the rest of my face pale; my lips were also very much swollen. I called in another medical man a little later, and by this time my temperature was 95. I then went to bed with chills, vomiting and diarrhœa. Twice when I went to the bathroom my wife came to see why I was so long and I was stretched out on the floor, unable to get back to bed till I had rested. I then took ¼ of morphia to relieve the irritation and went to sleep for a few hours. I woke up at 2 a.m. and got out of bed for more morphia and directly I stood up I fell back on the bed. I took another ¼ morphia and slept till morning, when I felt better, although I did not completely recover for four or five days.

My object in reporting this is to ask if this serum is a safe remedy. I am in the prime of life, weigh 176 lbs., and practically do not know what it is to have a sick day. My heart and nervous system are about as perfect as they can be.

If, then, the serum has such a depressing effect on a robust man, why may we not expect a similar effect in a patient who is weakened by diseases, in which case death would follow, not from the disease, but from the depressing action of the serum? (I may say that the swelling in the nose proved to be an abscess).

I have not had much experience with the antistreptococcic serum, having only used it in two other cases, both of which died. One was a case of malignant scarlet fever with abscess formation, and the other a case of puerperal infection, the woman being attended by a midwife who used a dirty syrnge on her, and was in a very bad shape when I first saw her—temperature 104½, pulse 145.

I know that in the future I shall be afraid to use it, and will not do so unless it is advised in consultation.

WESTERN CANADA MEDICAL JOURNAL

GEORGE OSBORNE HUGHES, M.D. *Editor*

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Editorial and Business Offices
8 Commonwealth Block, Winnipeg, Man.

EDITORIAL

Need of Qualified Lecturers on Medical Subjects.

A year ago the Saskatchewan Provincial Medical Officer gave a series of lectures throughout the Province on matters of Public Health, advising many useful precautions against disease that could be taken in daily life. The beneficial result of these lectures is seen this year, judging from the Health Reports.

We are glad to note that Winnipeg and Vancouver are instituting popular Health lectures. It is, of course, the duty of every medical man to educate his patients on points of hygiene, but these public lectures have a great effect. By such means the general public can be properly educated to understand the benefit of, and need for, properly protective legislation. The very fact that so-called "Health lectures" are given by people ignorant of the subjects on which they so glibly discourse (and

which are listened to), shows that the importance of scientific medicine to the welfare of the people is being recognized. The St. Paul's Medical Journal says: "Physicians can do much in many ways to teach the people to discriminate between medical truths and medical follies, and can advise in regard to medical legislation."

A series of such lectures should be given by medical men in every town and district.

Importance of Medical Inspection.

The report of the great mortality among the Indian children in industrial and boarding schools, shows the vital necessity of giving scrupulous attention to the subject of hygiene in the schools and also points out that medical advice and supervision would be of great benefit. Evidently lack of ventilation and the congregating together of children suffering from tuberculosis, etc., were the chief causes of the high mortality. The report lately issued on children attending the London Public schools shows that the authorities there are aware of the importance of medical inspection. "No higher service can be rendered humanity than to care for the welfare of the rising generation."

Western Movement Favoring Municipal Hospitals.

A letter recently appeared in the Winnipeg Free Press concerning the grant for municipal patients in the General Hospital. The question brought up was whether Winnipeg should have a municipal hospital as Regina, Calgary and Saskatoon now have. The Municipal Association discussed the desirability of every town having such a hospital as the indigent sick were a municipal responsibility. It is doubted whether a hospital which has three classes of patients—free, private and semi-private—can be

run as economically, and, also, whether the staff can attend as efficiently, as in the case of a hospital with only one class. In European cities all the wards are free and paying patients are cared for at institutions run by private enterprise. At first, in our small towns the question must be difficult, but not in the large cities. The Austrian and German method of the government recognizing its responsibility for the support and administration of the hospitals seems best.

Formation of Winnipeg Clinical Society.

We note with pleasure that the medical men of Winnipeg have formed a *Clinical Society,* the object of which is to make use of clinical material at hand. The great strides being made in medical science demand constant intercourse among medical men that they may discuss the various points brought to their notice through their work and their reading. Personal discussion is most educative in any line of life, but especially so in medical work. Again the young and inexperienced man can by such intercourse with his experienced brother be greatly helped and encouraged The presence of a case for demonstration brings out many points of interest to all. In every way the mingling together of men with the same object should be of great benefit both to the men and to science, not to mention the social pleasure. As Dr. Hunter so well says in the *Canada Lancet,* "We are segments of a fraternal circle, we are members of a professional body, united in each other, dependent on each other and with the pulse beat of a common purpose, thrilling through us all. The self must give way to the *fraternal.* Solidarity is the password of progress. *Self-seeking must change into social serving.*"

Opening of the Winnipeg Free Dispensary.

A Free Dispensary has been opened in Winnipeg by a number of medical men. Owing to the many immigrants arriving in the winter without money or proper clothing there is often much suffering. Those who need advice sometimes do not care to go early enough because they have not the necessary fee. All medical men give free advice, we know, but it should be best that certain hours and places are reserved for free medical advice, and so we feel sure that the medical men of the city will send their patients who cannot pay any fee, to this institution.

Dispensaries where smaller payments are made than the just fee have been the curse of London and the continent, and in some cases the average income of the medical men has been so lowered that they find it a hard fight to exist. The reason for this is that when a lowered fee is charged the inevitable time comes when an institution for the purpose of assisting the deserving poor becomes the millstone that sinks the profession.

The need of a *Free Dispensary* was greatly felt in Winnipeg and we hope the one recently started will be the means of relieving much suffering amongst the poor this winter.

GENERAL MEDICAL NEWS

MEDICAL SOCIETIES

The organization meeting of *The Winnipeg Clinical Society* was held at Dr. F. W. E. Burnham's office, 373 Broadway, on November 20th, at 8.30 p.m. The following were present: Drs. Milroy, Munroe, Scott, Carscallen, Hughes, Kenny, Burnham, Dorman, R. G. Montgomery, Lehmann, Gordon, Mackay, Rorke, Tees, Bond, Jonkers, Berger, Riley, Anderson, Sharpe and Dr. Mary Crawford.

On motion of Drs. Carscallen and Hughes, Dr. Kenny was elected chairman, and outlined the object of the meeting, expressing himself in favor of the organization of a Clinical Society.

On motion of Drs. Nichols and Milroy, it was decided to organize a Clinical Society.

The election of officers resulted as follows:

President—Dr. T. M. Milroy.

Vice-President—Dr. W. Robson Nichols.

Treasurer—Dr. J. E. Lehmann.

Secretary—Dr. C. T. Sharpe.

The following Committee were elected to draw up a constitution and by-laws: Drs. Kenny, Bond, Rorke, the President, Vice-President and Secretary ex-officio.

On motion of Drs. Carscallen and Kenny, it was decided that the *Western Canada Medical Journal* be the official organ of the Society.

Place of meeting—Medical Library—and that the President be authorized to arrange a suitable date with the College of Physicians and Surgeons.

Dr. F. W. E. Burnham then gave an illustrated lecture on Uterine Hæmorrhage.

Dr. Burnham stated that the object of the lecture was to demonstrate the various pathological conditions of the Uterus

which are accompanied by hæmorrhage or discharge and to impress upon the members the need of careful investigation of every case of uterine hæmorrhage and the great value of routine examination of uterine scrapings in the diagnosis of various pathological conditions of the uterus. The causes of uterine hæmorrhages had been divided into:

(*a*) Those arising out of or connected with pregnancy; (*b*) the result of New Growths, (*c*) and of Vascular lesions. But for demonstration, Dr. Burnham divided them into (*a*) Those diagnosed from uterine scrapings; (*b*) those which could not.

First, taking those which could not be diagnosed by the aid of curetting or which, for various reasons, it would be unwise to curette. By the aid of the lantern he presented cases representing the following conditions: (1) Separation of a normally situated placenta. (2) Separation of an abnormally situated placenta. (3) Separation of the membranes from the placenta. (4) Tubal Mole. (5) Hydatidiform Mole. (6) Hæmophilia. (7) Fibros Uteri. (8) Myoma. Each case was elaborated on giving the physiology, histology, morbid anatomy, and symptomatology.

The second series, the actual sections were projected on the screen so magnified that the lymphocytes, polymorphonuclear leucocytes, and plasma cells could be easily distinguished. The following conditions were demonstrated: (1) Glandular Hypertrophy; (2) Polyp-Cervical, Uterine; (3) Retained Placenta; (4) Retained Decidua; (5) Endometritis; (6) Tubercle; (7) Chorio-Epithelioma.

Then followed views of the anatomical preparations with a life history of the affection. It is worthy of remark that the ten cases cited by Dr. Burnham representing as many different pathological conditions had a similar clinical history, shewing the need of very careful investigation of every case of Menstrual irregularity. The warnings given by the lecturer, in certain contingencies were made impressive by fatal cases. It was evidently Dr. Burnham's desire to give his hearers the benefit of the most accurate information and to make a difficult subject

appear easy. In taking the Symptoms of uterine hæmorrhage and leading the hearer through the labyrinth of diseases which may cause it, Dr. Burnham has introduced an instructive and interesting method of teaching pathology. Dr. Mary Crawford very ably assisted by taking charge of the lantern.

The lecture was listened to with great attention, and a hearty vote of thanks was tendered Dr. Burnham on the conclusion of his address.

The meeting then adjourned and spent a most pleasant social hour as Dr. and Mrs. Burnham's guests.

C. T. SHARPE, M.D.,

Secretary.

The Medical Association of Saskatchewan met at Indian Head, November 8th and 9th. The meeting began at the Hospital, where Dr. Kemp performed an operation. In the afternoon Dr. Seymour, the Provincial Health Officer, gave a paper on "Typhoid," and Dr. Thomson, the President, also contributed a paper. Regina was decided upon as the next place of meeting.

The Winnipeg Medical Association met December 6th. A paper on "The Origin of the Islands of Langerhans in the Pancreas," was read by Dr. Swale Vincent. Dr. Gunn presented a case of leprosy of eight years standing in a Galician boy of 14 years of age.

VITAL STATISTICS

REGINA.

April 1st to Nov. 30th.

Typhoid	145
Diphtheria	21
Smallpox	33
Chickenpox	3
Mumps	1
Erysipelas	3

WINNIPEG.

November, 1907.

	Cases.	Deaths.
Typhoid	24	..
Scarlet fever	52	1
Diphtheria	44	3
Measles	13	2
Tuberculosis	1	..
Mumps	15	..
Erysipelas	7	1
Whooping cough	9	..
Chickenpox	1	..
	169	6

Births, 270 (135 males, 139 females).
Marriages, 157.
Deaths, 130 (78 malts, 52 females).

VANCOUVER.

Births, 90. Marriages, 43. Deaths, 96.

NEW WESTMINSTER.

Births, 20. Marriages, 11. Deaths, 16.

CIVIC HEALTH MATTERS

The health conditions prevailing in the Indian industrial and boarding schools are very unfavorably reported on by Dr. P. H. Bryce, chief medical officer of the Departmtnt of Indian Affairs. Out of 1,537 pupils reported upon, nearly 25 per cent. are dead, and in one school 69 per cent. In most cases the cause given is tuberculosis.

The Provincial Live Stock Commissioner, Mr. F. M. Logan, is soon to be in Vancouver. His work is to be on the lines desired by the Health Officer. Mr. Logan has the sup-

Health Officer's powers were confined to the city limits, but the government recently widened Mr. Logan's powers to envision of the milk supply of the province. The Medical able him to reach the shipper as well as the vendor..

HOSPITAL NEWS

The report of the B. C. Hospital for the Insane, for the year ending December. 1906, gives the following: 150 patients admitted, increase of 27 over 1905, 108 of which were males and 42 females; 83 were suffering from a first attack; 5 from a third and 4 from the fourth. In 31 cases impossible to know 56 were married; 12 widowed; 74 unmarried; 79 patients were discharged during the year—55 men and 24 women—the largest number ever discharged in one year.

Dr. Doherty, in his report, states that the great factor in successful treatment is the necessity of properly trained nurses, male and female. The standard of wages for nurses and attendants has been raised by the government. The segregation of the curable from the incurable is carried out as far as possible, while feeble and infirm are given very comfortable quarters in a special ward. During the year the employment of the patients has been thoroughly systematized with very beneficial results. For this year the institution can show the lowest per capita cost. It is now only $177.79 per patient per annum. Total expenditure for 1906, $66,596.19. Above this $7,194.83 was expended on capital account and $61.80 in transportation. The institution pays great attention to the amusements, fresh air, exercise and diet of the patients, and the results are shown to be gratifying.

The sanitarium at Tranquille, B.C., can accommodate no more patients at present as the present quarters are merely temporary, so it is useless at present to send any for admission.

After considerable discussion the grant from the Winnipeg City Council to the General Hospital was increased to $40,000.

Calgary has decided to have a new hospital. Its hospital assets are some valuable buildings, 60 valuable lots, 7 acres of

land and a $75,000 by-law, duly passed by the ratepayers. The building proposed is not to cost more than $140,000. Specifications must be in by Feb. 1st.

The following has been passed that the various hospital Boards in the province co-operate in petitioning the provincial government to pass legislation compelling outside municipalities to contribute for persons sent to the hospitals when such are free patients.

Drs. MacDonald, MacKid, Sanson, Stewart and Blow are permanent lecturers to give courses of lectures to the nurses on medical subjects. These doctors are also to act as examiners.

Application for the B. C. sanitarium has to be made to Dr. Fagan or Dr. Irving, the acting superintendent. For the present none but British Columbians are admitted.

Regina proposes to have a municipal hospital, the present directors are to continue the management of the institution until after the sitting of the Legislative Assembly, when a bill will be put through authorizing the transfer of the property to the city.

At a meeting of the Portage la Prairie Hospital Board a letter was received from Dauphin Hospital stating that the directors regard the present system of building and maintaining hospitals by private enterprise unfair and suggesting a conference. On motion this was approved and delegates to the proposed convention are to be sent. Brandon also seems to agree with this view.

Dr. R. W. Large, Vancouver, has had constructed at Bella Bella a tent cottage along similar lines to those at Gravenhurst, Ont.

The town and municipality of Neepawa are arranging to pay off the deficit on the hospital and assume the responsibility.

The Misercordia Hospital, Winnipeg, will be opened to the public on December 22nd and 23rd. The Sisters of Misercordia are in charge of this hospital. The cost of this new ad-

dition, including power house and installation, has been $180,000. This is the only hospital of its kind west of Ottawa. Tests are being made at Ninette—the site chosen for Manitoba sanitarium—as to the quality of the water required for drinking purposes.

Dr. J. M. Eaton is canvassing for funds for the Manitoba Sanitarium throughout the Province.

At Red Deer, a Memorial Hospital has been established to commemorate the services and heroic deaths of three young men of Red Deer, who went to South Africa with the Strathcona Horse—Charles Cruickshanks, Angus Jenkins and Archie McNichol. $3,000 has been spent this year for increased facilities and appliances for hospital accommodation.

Vancouver has grown so rapidly that its hospital accommodation is inadequate; 5 to 7 extra beds have had to be installed in each of the public wards, and the authorities consider a new wing necessary. About $75,000 will be required for the erection of a large wing.

The appeal in Montreal to raise funds to establish cots for sick children in the hospitals in memory of Lady Victoria Grenfell, met with such a response that a sick children's hospital has been founded there. Ottawa and Toronto have their cots, and Winnipeg, no doubt, will soon have a sick children's hospital.

The third annual meeting of the Margaret Scott Nursing Mission, Winnipeg, was held Oct. 26, 1907. In her address, Mrs. Scott said she heartily endorsed the plan of having the heads of the various charitable institutions meet and discuss means to prevent their work from overlapping. The nurses of this mission at the end of its first year had made 7,000 free visits. In the second year 11,986 visits and at the end of the third year 13,284.

The Society needs now larger quarters. The staff consists of Mrs. Scott, her assistant missionary, three fully trained nurses from the hospital, a working housekeeper, and other household help.

The City Council has made an annual grant of $240 to the funds. The Provincial Government granted $1,000, and the Dominion Government makes the usual allowances for services to immigrants. The Society owns its home subject only to a mortgage now of $1,000. The hospitals of the city are in too congested a state to make it possible for them to accommodate all the sick among the poor. Such cases among the poor as are better treated at home and for whom there is no room in the hospital, the Mission attends.

Visits during past year as follows:

To Typhoid patients	757
" Obstetric patients	4,252
" Infants and sick children	3,733
" Surgical cases	1,345
" Aged and chronic cases	910
" Miscellaneous	2,287
Total	13,284

MEDICAL NEWS

Twenty-two out of thirty-three candidates for admission to the practice of medicine in British Columbia were successful at the examinations held last week in the provincial government buildings. The names of the successful are as follows: Drs. W. C. Acheson, V. E. D. Casselman, W. T. Chambers, W. Y. Corry, C. P. Covernton, W. G. Gable, C. E. Gillies, G. B. Hendeson, J. D. Hunter, O. G. Ingram, R. W. Irving, G. G. Little, G. V. Lockett, J G. McKay, R. M. Port, T. F. Saunders, W. E. Spankle, J. W. Thompson, J. L. Todd, J. L. Turnbull, R. C. Weldon and W. A. Whitelaw.

The majority of the successful ones will at once commence the practice of medicine in this province. Three ladies who took the examination were unsuccessful.

Dr. Brydone Jack, at a recent meeting of Vancouver City Council, brought up the necessity of having a municipal contagious and infectious diseases by-law. Dr. Underhill asked for the establishment of a city morgue.

Hereafter no Japanese immigrant can set foot on Canadian soil till he pass a medical examination.

The third International Sanitary Congress met at the City of Mexico, December 2nd. The Congress has for its purpose the adoption of uniform sanitary regulations for all republics of North, Central and South America.

Dr. Gordon Bell, Winnipeg, gave a lecture to the general public on "Tuberculosis." He pointed out that it was almost impossible to cope with this disease without a city sanitarium.

There is a very good paper on what Medical Societies should be and the cause of the failure of many, by John Hunter, M.B., Toronto, in the *Canada Lancet* of December.

The Manitoba Veterinary Association prosecuted W. B. Desmarteau, who had been practising at Morris, on the ground that he was not legally qualified. As he could not produce his diploma he was fined $20 and costs or 20 days.

Dr. John Todd, who has been recently appointed Professor of Parasitic Protozoology in the Faculty of Medicine, McGill University, is visiting Victoria. He will take up his duties in February. The chair is a new one at McGill. Dr. Todd spent seven years in the Congo Free State studying "Sleeping Sickness," and since has been engaged in research work in Liverpool.

The Ontario Dental Colleges have adopted a rule that no company or corporation shall hire or employ a dentist who is not a member of the College.

At Toronto, December 2nd, the students from Western Canada met to organize a Western Students' Association. This will include the students in the various colleges who come from Manitoba, Saskatchewan, Alberta and British Columbia. The large number of students from the west this year was noticeable. The object of the Association is chiefly fraternal.

The conditions of the Rhodes Scholarship are as follows:

(1) The election takes place each year in January.

(2) The Scholarship is tenable for three years and is worth $1,500 per annum.

(3) There is only one Scholarship for the Provinces of Saskatchewan and Alberta at present.

(4) To be eligible the candidate must be a British subject, unmarried, not less than 19 and not more than 25 years of age.

(5) Must have reached end of second year's work at some degree granting University or College in Canada.

(6) Candidate can elect to apply for scholarship either of Province where he resides or where he has received education.

The great opportunities which are given medical and research work at Oxford should induce medical students to apply for the above.

The *Vancouver Province,* we are glad to note, has taken up the question of the careless way in which vital statistics are recorded. Dr. Arthur of Nelson, B.C., has also pointed out the great necessity of more accurate information, and that the law which really exists for this purpose should be enforced. Regarding the time allowed for registration of births this needs alteration.

PERSONALS

Dr. Burris, Kamloops, B.C., is on a visit to Rochester, Minn.

Dr. McIntyre, Winnipeg, has sold his practice to Dr. L. A. Knight, Ninga, Manitoba. Dr. McIntyre has been compelled through ill-health to give up his Winnipeg practice and leaves with his family early in December for Summerland, B.C.

Dr. Knight, who takes over Dr. McIntyre's practice, has been in practice at Ninga for twelve years. He will arrive in Winnipeg about the middle of December.

Dr. Claire has returned to practice in the east.

Dr. Charles Kerr, who has been in charge of Dr. McIntyre's practice for the last six months, has started practice at Maple Creek, Sask.

Dr. West, Vermilion, Alta., had the misfortune to have his office burnt out lately.

Dr. Roach, M.P., paid a short visit to Winnipeg en route for Ottawa to attend the session.

Dr. Higgins, Victoria, B.C., has been appointed one of the resident surgeons of the Hosmer mines.

Dr. Bennett of Mission, B.C., is on a hunting trip in the Vancouver Island Mountains.

Dr. Stevenson and family, from Manitoba, have taken up residence on Tenth Avenue, Fairview, Vancouver, B.C.

Dr. J. G. McKay has been appointed assistant superintendent of the New Westminster asylum in succession to Dr. Claire, who resigned. Dr. McKay is a graduate of McGill and had been in practice at Revelstoke, B.C.

Dr. Isidore Wm. Bourke, a retired surgeon-major from the English army, who has been practicing in Dawson, will now practice in Vancouver, B.C.

Dr. Baker, Edmonton, accompanied by his mother and sister, have gone on a visit to the east. He will be away about six weeks.

Dr. S. S. Scovil, Rat Portage, visited Winnipeg recently.

Dr. Truax has been recently appointed quarantine officer for Vancouver, B.C.

Dr. Swinden, who recently started practice in Winnipeg, has opened an office at 248 Tache avenue.

Drs. Findley and Dalby, Vancouver, have returned from their visit to Kamloops, B.C.

Dr. T. Saunders, Fernie, B.C., has been spending a short holiday at the Coast.

Dr. Walter Babty has been appointed temporary assistant to Dr. Fagan, the Provincial Health Officer of Vancouver, B.C.

Dr. Clendennan has been appointed surgeon to the C.P.R., Edmonton.

The Hon. Dr. J. O. La Chapelle of Dawson City, recently paid a visit to Edmonton on his way to Montreal.

Dr. W. F. Coy of Mount Pleasant, Vancouver, has been spending a short holiday at North Bend.

Dr. Allan, Vancouver, has been on a visit to Chilliwack, B.C.

Dr. Herbert Lake, who was operated on for appendicitis at the General Hospital, Calgary, is making a good recovery.

Dr. T. S. Tupper, Claresholm, has been visiting Edmonton.

Dr. Lockburn Scott, who has been practising for some time at Winkler, Man., has opened an office in the Syndicate Block, Winnipeg.

Dr. and Mrs. Gibb have returned to Victoria, B.C., after a visit of five months in Great Britain and the continent. Dr. Gibb took post graduate work, specializing in surgery.

Dr. Williams, Vernon, B.C., has left en route for St. John's, N.B., and then for England, later on to Kimberley, South Africa. He expects to be away about three months.

Dr. and Mrs. West of Prince Albert have moved to Lethbridge.

Dr. Tupper, Claresholm, paid a visit to Regina.

We are glad to say Dr. O'Brien, Dominion City, is now quite recovered from his illness.

Dr. Nelson Cooper, Asquith, Sask., is building a private hospital.

Dr. J. A. Hunter, Victoria, has gone to Fernie, B.C.

Dr. Christie, Rocanville, Sask., is visiting Brandon.

Dr. J. C. Hargrave, Medicine Hat, had a narrow escape from drowning recently.

Dr. Oscar Norman, Weston, has come to reside in Winnipeg.

Dr. Curle, Port Essington, B.C., is a visitor to Vancouver.

Dr. Graham, Victoria, is visiting his old home, Regina.

Dr. Wright, Oak Lake, is visiting Winnipeg.

Dr. Crookshanks, Rapid City, has been visiting Brandon.

BORN

McKENZIE—On November 15th, at Rossland, B.C., the wife of Dr. R. P. McKenzie, of a son.

McKENZIE—On December 4th, at Winnipeg, the wife of Dr. C. A. McKenzie, of a daughter.

MARRIED

CAMPBELL—HOGG—At Knox church, Winnipeg, Dr. Alexander M. Campbell of Winnipeg, was married to Miss Annie Josephine Hogg, daughter of late Rev. Joseph Hogg. Dr. and Mrs. Campbell left for a visit to St. Paul, Chicago and other cities, and will take up residence on Sherbrooke street on their return.

GIBSON—ROBB—At Nanaimo, Dr. Robert Gibson, of Vancouver, was married to Miss Robb of Montreal. Dr. and Mrs. Gibson are on a visit to Victoria and Puget Sound cities.

OBITUARY

HOWITT—At Etoimami, Sask., Dr. J. A. Howitt died last week. Dr. Howitt, besides being a medical man, was a poet and journalist. His family live at Hespeler. We offer them our sincere sympathy.

UNIVERSITY NEWS

Henry Marshall Tory, M.A., B.D.; D. Sc.; LL.D., Associate Professor of Mathematics in McGill University, has been appointed organizer of the *Alberta University,* and is expected to begin his duties January, 1908. His work will be to fix the time of starting, organize the different departments, state the basis on which the University shall be run and look after equipments, etc. The date of the first convocation has not yet been fixed and will not be decided till the Premier returns; 250 have registered for first convocation. It is hoped to have the faculty of Arts in operation in the fall 1908.

At Vancouver the work of "University College" was begun last September, McGill co-operating in the work. This was done somewhat on the lines so well known in England. The standard is that of McGill, and so long as this remains the students take the McGill examination. The Legislature of British Columbia created a local Board. There is a staff of nine this term. An endowment fund of $100,000 is being built up. $50,000 has already been secured conditional on remainder being raised. There have been leased from the Government about 40 acres of the Naval Reserve as a College site and it is hoped in two years to have a fully equipped University building erected. There are already 74 students on the roll.

The election of the first Senate of the *Saskatchewan University* was recently made; 12 men elected, four for three years, four for two years and four till next July; 265 members of the convocation voted. Judge Wetmore, as chancellor, is an ex-officio member of the Senate, also the Commissioner of Education, Hon. J. Calder, and the principal of the Normal School, T. E. Perret, the president of the Educational Council and the president of the University.

There will be a meeting of the Convocation at Regina January 8th.

There have been suggestions made by leading educationalists in the West—that the three Provinces should unite in establishing one large university. Each province might have within its borders one faculty or more. British Columbia could have applied Science—a faculty suitable to a mining and lumbering province. The other two might divide arts, law and medicine. Each would thus share in the advantages of a modern university — be fully equipped and at same time have the nucleus of its own university when the province was really ready. Many think that no one province is strong enough to support a thoroughly efficient university. It is thought that by co-operation nearly at once a university could be secured which in short time would be on a level with any university on the continent.

COLLEGE NEWS

A most successful conversazione was held in Manitoba Hall, Nov. 27, by the Medical Students' Association.

Dr. Irwin has returned to Hartney after two weeks spent at the Mayo Brothers' Hospital, Rochester.

Dr. Armitage, who has been suffering from typhoid, has now gone home to Manitou.

Dr. D. Macdonald is now back.

Dr. Pierce is taking a trip east.

Drs. McKinnon and Schwalm were visiting the city; also Dr. E. M. Blakely of Sintaluta.

Dr. Andrew will be in charge of the externe department of the Isolation Hospital, nd Dr. Boardman of the General next month.

Dr. Murdoch of Rainy River wants a final year man to take a position in town from middle of December for a month.

Dr. Blakely intends practising in Southern Manitoba.

CORRESPONDENCE

TO THE EDITOR:

Sir,—I read with much interest the Case Report by Dr. Cobbett on Appendicitis with suppurative peritonitis in a child, in the October number of the Journal. In a general way nothing but commendation can be accorded the doctor for his skilful management of the case and congratulation on the successful outcome. Yet his description is open to one criticism, namely, that he used points of the compass to designate directions on the abdomen. Now, while such terms as northeast and southwest are quite intelligible on the surface of the earth, they convey no meaning when used for descriptive purposes on the surface of the body. Yours truly,

SUBSCRIBER.

Winnipeg, Oct. 23, 1907.

ACKNOWLEDGMENTS

We beg to acknowledge, with thanks, the following reports: The Journal of Mental Science, Report of the American Oncologic Hospital, the Bureau of the Census of S. U. D. north-Director, Report of the Canadian Association for Prevention of Consumption and other forms of Tuberculosis; Insanity cured by a New Treatment, by C. W. Suckling, M.D.

NOTICES

Examination for registration in Saskatchewan will be held at Regina, second Tuesday in January.

Chandler & Fisher, Ltd., surgical dealers, owing to large increase in business, are removing from Lombard street to more commodious premises in the Fairchild building. They will move out about Christmas.

It is possible now to obtain the services of an hourly or visiting nurse in Winnipeg. The visiting nurse will call for an hour and give bath, rubbing, dressing or any skilled treatment which may be required. This is a great boon for those who do not need a resident nurse and possibly cannot afford one. No infectious case is taken and only cases that are under medical direction. Miss Hood has been appointed the visiting nurse for Winnipeg.

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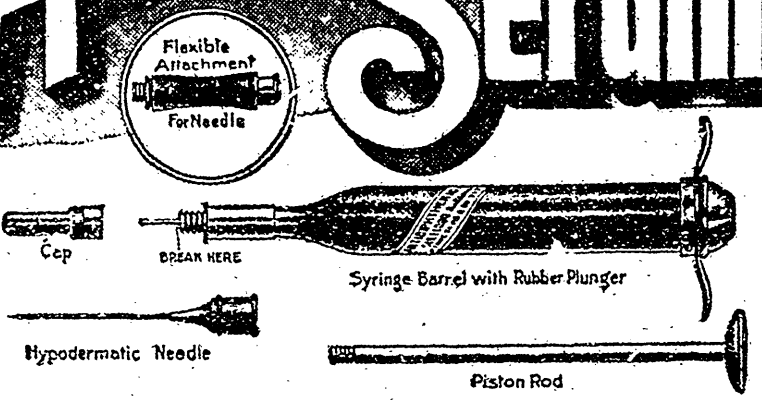

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