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KINGSTON MEDICAL QUARTERLY.

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The KINGSTON MEDICAL QUARTERLY is presented to the Medical Profession with the compliments of the Editorial staff. Contributions will be gladly received from members of the Profession and willingly published. JOHN HERALD, Editor.

GRADUATES IN MEDICINE.

ONCE again the time has come round when the various Universities and Colleges confer the honourable degree of Doctor of Medicine upon the young men and women who have satisfied their Professors that they have acquired a sufficient knowledge of the healing art to entitle them to this distinction. It is usual for their friends, their Professors, and the medical publications to congratulate the winners of this academic distinction upon their success, and to wish them prosperity in the calling they have chosen. As they have attained the goal for which for the four years just past they have been striving, we heartily congratulate them. The attainment of any honourable object, the winning of which has cost years of labour, is always a legitimate subject of congratulation. Should our congratulations go further? That depends upon the fitness of the new Doctor for the discharge of the duties of the profession he has now entered. His fitness for his profession again depends upon his knowledge, his natural aptitude, and the spirit which underlies and gives direction to his life. As to his knowledge, we may take for granted that his having received his degree from a reputable institution is a sufficient guarantee that he has acquired a rudimentary acquaintance with the essentials of a medical education. If during his college course he has acquired a sufficient knowledge of the medical sciences to make him feel that he has yet much *to learn, and to impress upon him the necessity of continuous* study, and to spur him on to acquire a yet more complete and more minute knowledge of the various subjects of which a successful medical practitioner must be the master, then, we would say, his college course has been a success, and he is to be congratulated upon having learned one of the great lessons of life—how little he knows—how much he has to learn.

Natural aptitude for his profession scarcely admits of a definition. It includes so much that we will not attempt to refer to more than a few of the more salient qualifications. The power to observe, even to the minutest details, the patient's appearance, disposition, surroundings; facility in acquiring evidence of disease and the ability to discern what is valuable and to reject all that is worthless; a ready sympathy with his patient's sufferings, a sympathy, however, controlled by reason—a sympathy which gains the patient's confidence, but does not lead him from his efforts to detect the true nature of the disease from which his patient is suffering; self-confidence, not conceit, but a confidence in his own knowledge and skill, which not only enables him to set about his work with a determination to be successful, but which at the same time communicates to the patient a belief that his doctor knows what he is about, and that he is not groping in the dark; the manner of a gentleman under all circumstances; the refined are repelled by one whose conduct does not come up to this standard and their confidence withheld, and the uncouth instinctively feel that a gentleman is to be trusted; secrecy as to any confidences which his patients repose in him. These are some of the more salient qualifications which we would include under the heading of natural aptitude, and which have so much to do with a physician's success. If those who are now receiving their degrees have the necessary knowledge and these special characteristics they are indeed to be congratulated.

The spirit which, in our opinion, should animate every practitioner is a desire to do the greatest good in his power to all who come under his care. In order that he may succeed in his aim he must be continually striving to acquire fresh knowledge, and he must ever be more and more cultivating and developing those qualities which always characterize the true physician. By his profession, it is true, he has to earn his living. This he will the more readily succeed in doing the more he devotes himself to the acquisition of knowledge and the cultivation of the special qualification of a true physician. He must be in love with his work, not for the emoluments to be gained, but for the work itself. If the new graduates are animated by this spirit, if they have the natural aptitude for the practice of their profession, and if they have acquired a foundation of knowledge upon which they have the desire to erect a great and permanent superstructure. they are to be thrice congratulated. Such we heartily congratulate for their own sakes, for the sake of their future patients, and for the profession at large.

If, on the other hand, any of the graduates of this year have not laid a solid foundation of knowledge, if they are not determined to add to their store of knowledge, if they have not in large measure the natural aptitude for the profession, without which success in the highest sense is impossible, if they are not guided and controlled by that spirit which makes the arduous life of a physician a continuous pleasure, and the absence of which renders his whole life a grievous burden hard to be borne, then we cannot congratulate them, but most sincerely do we commiserate them. Such an one cannot be a success—his life as a physician must of necessity be a failure. In his own interests, in the interests of the public, it were better that such an one would even at this late date in his career change his occupation and enter upon some other where the essentials of a true physician are not necessary to success. There he may succeed. In medicine he must fail.

PATHOLOGY OF ACUTE PNEUMONIA, ESPECIALLY AS TO DISTRIBUTION OF LESION.

Read before the Kingston Medical and Surgical Society.

MR. PRESIDENT, GENTLEMEN,—I was led to devote extra time to this subject on account of some cases of pneumonia coming under my notice which presented throughout somewhat misleading clinical signs. A microscopic examination of the sputum revealed the presence of the Diplococcus Pneumoniae in each case. These variations in clinical signs obviously depended upon differences in the pathology, either as to situation or kind of lesion.

While it would be unwise to invent terms differentiating each of these conditions, yet a clear conception of the pathology and bacteriology of the acute pneumonias is requisite in many cases to elucidate doubtful clinical manifestations.

Nearly all of us agree with modern authorities that Pneumonia, so-called lobar, croupous, etc., is a specific infective fever. By this we mean one possessing a specific causal bacterium, which fulfils the five requirements laid down by Koch. While these five laws are not all fulfilled by the Pneumococcus, yet the close analogy in the course of Pneumonia to that of other specific infective fevers suffices to identify it as one of that class.

Accepting this view, we expect as its causal agent always the Pneumococcus. We regard its course as a self-limited one. We are apt to consider its lesion extensive, involving most frequently the right lower lobe, and along with this predilection as to site we expect certain constitutional symptoms due to pneumotoxin in the blood.

Thus, perhaps, there is a tendency to stereotype the clinical aspect of Pneumonia, forgetting that it is really liable to assume many different forms.

Another difficulty arises from the unfortunately prevalent use of the terms, Lobar, Croupous and Fibrinous, designating Acute Pneumonia, and Lobular or Catarrhal in connection with Broncho-Pneumonia.

By the use of these terms an attempt is made to differentiate two affections having some points of resemblance upon a pathological basis. A glance at their pathology proves that the terms are not only insufficient, but misleading. Let us first look at the distribution of the lesions in Pneumonia and Broncho-Pneumonia respectively.

While in acute Pneumonia a large portion of the lung is usually involved, yet in many cases only a small patch can be found.

In others, more rare, these patches may be found disseminated. In these cases of patchy distribution the lesion may be situated upon the periphery of the lung or may be deeply seated, forming varieties of "Central Pneumonia." Again, the process, if extensive, is rarely limited to one lobe but generally spreads considerably beyond. Thus the term 'Lobar' is, strictly speaking, rarely applicable to Acute Pneumonia.

Broncho-Pneumonia consists in the extension of an inflammatory process along the bronchial tubes, the origin usually being a catarrhal inflammation in the upper air passages following such affections as Measles, Whooping-cough, Diphtheria, &c. No specific Bacterium is found as causal agent. It is simply an extension process along the larger, then the middle size, then down the finest bronchioles where it invades the air cells lying adjacent to the bronchiole.

This consolidation of a limited area of lung tissue around a bronchiole has given rise to the term 'Lobular.' The post-mortem anatomist, however, will tell us that the condition just described in cases which are at all advanced is rather exceptional. He often finds on the other hand cases in which only part of a lobule of the lung is consolidated. Again, other cases are found in which the lobular form of consolidation is scattered here and there through the lung not unlike the patchy form of Acute Pneumonia. But more often the lesion is found to involve a large portion of lung resembling the hepatization of Acute Pneumonia due to the coalescence of several of these consolidated lobules. Patches of collapsed lung frequently found around the consolidated areas denote the blocking of the bronchioles by inflammatory products. Collapse of a lobule, often, though not always, precedes inflammation and consolidation. The lesion in Broncho-pneumonia has no predilection for base or apex.

The stages of engorgement, hepatization and resolution, which characterise all acute pulmonary inflammations, are well marked in both Acute and Broncho-Pneumomia.

The terms, Croupous, Fibrinous and Catarrhal, are objectionable on account of their inaccuracy.

The exudates in these two affections so resemble each other in microscopic characters that it would be difficult indeed to select a term descriptive of the one which would not be applicable to the other.

The following elements are common to both exudates:

1. Red blood corpuscles.
2. Leucocytes.
3. Fibrin and Serum.
4. Epithelium shed from the lining of the vesicles.

The exudate of Acute Pneumonia differs from that of Broncho-Pneumonia in (*a*) Possessing red blood discs and fibrin in a much larger proportion.

(*b*) The mononucleated leucocytes are equal in number, if not in excess, of the multinucleated forms.

(*c*) The Pneumococcus is present.

I have endeavoured so far to show that closely related clinical signs in the early stages of Acute Pneumonias may be explained very often by a similar distribution of the lesion. We must, of course, always regard these cases as exceptional, the rule being that Acute Pneumonia possesses distinctive signs due to the presence in the blood of pneumotoxin. It is then only when these distinctive subjective symptoms are masked that we are left in doubt. Again, it is quite apparent that for the sake of clearness the use of the terms, lobar, lobular, catarrhal, &c., should be discouraged, and the classification of Acute Pneumonia resolved into

(*a*) Acute Pneumonia or Pneumonic Fever. Cause—Diplococcus Pneumonia.

(*b*) Broncho-Pneumonia, including septic form secondary to measles, whooping cough, diphtheria and septic processes.

Regarding the septic forms of Broncho-Pneumonia the inflammation is usually of a septic or spreading type. It may originate in two ways:

(*a*) By an extension process along the mucous membrane of the bronchioles, the starting point usually being a septic inflammation in the upper air passages or irritation set up by the inhalation of septic gases or particles.

(*b*) From the presence in the blood of septic organisms, together with the products of their growth and multiplication. The starting point may be a septic inflammation anywhere in the body.

This latter constitutes the pyaemic form of Septic Pneumonia.

Bacterial cause in either case.

Parasitic forms of staphylococci and streptococci.

The lesion in septic forms is extensive, usually starting from a small focus, and extending until nearly the entire lung tissue is involved.

Illustrative of some of the above conditions, I refer briefly to some cases which recently came under my notice.

Case I.—Male, æt. 21. Saw him first on Wednesday, Oct. 5th. There was a condition of intense malaise. Pulse and temperature normal; no cough. Next day, temperature rose to 102°, there were chilly feelings but no definite rigor. The same evening he began to cough and bring up rusty sputum. Examination revealed blowing breathing in larger tubes. No dullness. No pain. Respiration normal. A microscopic examination of the sputum showed the Pneumococcus. Next morning he was removed to the Hospital; after arrival there, patient had chill and temperature rose to 105°. He also complained of pain behind right ear. Examination detected a fluctuating abscess of about 1 inch in size. This was opened and flushed out with Bichloride after which the temperature dropped to 101°. The respiration count was now [illegible]; pulse 100. Temperature 101°.

Upon physical examination of chest a spot of dullness about 2 inches in size was found at lower and back part of left lobe. The patient did not cough, and complained of but little pain. All this time he was under the usual treatment for pneumonia, especially of the supporting plan. The abscess, though flushed out frequently, continued to spread, involving the subcutaneous connection tissue at the side of the neck for a considerable area. The dullness in the lung went on extending until now both lungs were involved. Pulse, temperature, and respirations increased; the evening record five days from commencement of illness showing: Pulse, 140; Temperature, 105⅜; Respirations, 48. Fatal outcome at four the following morning.

The general course of the attack pointed strongly to pneumonia of a septic type, infection occurring through the circulation, the starting point being the streptococcus abscess. It is not surprising in many of these cases to find the pneumococcus present in the sputum since the septic process lowers the tissue resistance.

The gradual ascent of the temperature from the beginning to the close of the attack, the ever progressing extension of the lesion, and death of the patient from poisoning of the cardiac centre and collapse rather than asphyxia, were all points which led me to attribute the virulence of the causal agent to septic organisms.

Case II.—Female, æt. 35. Saw her first on Sunday, Nov.

15th. Temperature, 104⅖. Pulse, 100. Respiration, 26. Her illness commenced the previous evening with chilly feelings, but no definite rigor, or no severe pain. She complained of a sense of heaviness in the chest, was very restless, face flushed, nostrils dilating.

Examination of the chest revealed no change in pulmonary resonance, no pleural friction, no crepitant rales but well marked bronchial breathing for a small area on either side of sternum.

A constrained cough brought up small quantities of a blood streaked sputum which upon microscpic examination showed the presence of the pneumococcus in fairly large numbers.

She was transferred to Strange ward, General Hospital, where the case ran the typical course of pneumonia. Recovery by crisis on the sixth day.

This case illustrated that form known as Central Pneumonia, where the lesion is deeply seated, radiating from the roots of the lung. This constitutes a rare form, and when present is difficult to recognize by ordinary physical signs, a microscopic examination of the sputum being usually necessary for its diagnosis.

Case III.—Child, æt. 17 months. Illness commenced Dec. 17th. Saw it first two days later. Found temperature 104°. Pulse running. Respirations very rapid. Considerable cyanosis. Bronchial breathing over the greater part of both lungs. No cough, but simply a condition of extreme air hunger. With plenteous use of stimulants the child survived the crisis, which occurred on the fifth day. Recovery uninterrupted.

I mention this instance only on account of the infrequency of such cases, Pneumonic Fever being rare in children as compared with Broncho-Pneumonic Fevers.

Case IV.—Male, æt. 23. Case of secondary Pneumonia following La Grippe. After a few days' illness with grippe patient was left with troublesome cough. I was called. Found temperature 101⅖. Pulse 80. Chilly feelings. No rigor. No pain, but a dry, hacking cough. Physical examination revealed impaired dullness of lower portion of right lung, crepitant rales and bronchial breathing. Pneumococcus found in the sputum. The case ran the usual course of Pneumonia, except that the temperature never rose higher than 103°. Crisis occurred on sixth day, complete recovery following. In this case nearly the whole of the right lung became involved.

Pneumonia may be found secondary to Typhoid Fever, Septicaemia, Influenza, Typhus Fever, and prolonged renal disease.

The points of difference, clinically, between primary and secondary Pneumonias, some of which are illustrated by the above case, are :—

1. The insidious onset in secondary Pneumonias, unlike the very abrupt onset in primary form.

2. Secondary forms are more dangerous to the life of a patient.

3. The initial rigor is frequently absent.

4. The temperature rises gradually and does not go so high as in primary Acute Pneumonia.

5. Pleuritic extension and its never varying sign—severe pain in the side—is often absent in secondary Pneumonias.

6. Cough is very frequently absent.

7. There is usually greater disturbance of the skin and renal functions.

8. Herpes is usually absent.

These few imperfect notes from a very limited experience were sufficiently striking to excite in me an interest in this subject. I am sure that from the case-book of the older practitioner a much larger and more interesting group could be gathered.

When we consider the many different avenues for infection making its way into the lung and multiply this by the greater number of infective causes, we are not surprised at the variety of acute pulmonary lesions, and hence very often symptoms and signs which are obscure and puzzling become intelligible.

Fortunately, in the majority of instances, the clinical picture of these affections is definite and unmistakable.

However, the fact that a large number of cases remain difficult to recognize by the usual signs makes the study of this subject of importance to the general practitioner. Above all, it emphasizes the necessity of a bacteriological examination for the correct diagnosis and more faithful prognosis in doubtful Pneumonias.

GORDON W. MYLKS.

THE DIAGNOSIS OF CHRONIC GASTRIC AFFECTIONS.

Read at an Open Meeting of the Kingston Medical and Surgical Society, Jan. 25th, 1899.

GENTLEMEN :—At the request of those who have had in hand the arrangements for this meeting, I shall now endeavour to illustrate the various means which we have at our disposal for the differential diagnosis of the more common chronic affections of the stomach, gastritis, ulcer, cancer. I am sure that every one of us has had under our care many patients suffering from one or other of the diseased conditions to which I am about to invite your attention ; and I am equally confident that no class of cases has given us more difficulty in making a diagnosis which perfectly satisfied ourselves. These chronic diseases of the stomach are usually insidious in their onset, and as a consequence, the sufferers do not seek our aid until such progress in the disease has been made as will perhaps render our diagnosis more easy, but at the same time lessens our hope of successful treatment and increases the gravity of our prognosis. In the interest of the patient and for the sake of our reputation the earlier a diagnosis is made the better. It is then in the earliest stages of most of these affections that we can confidently promise relief and that in only one of them that we cannot assure our patients of ultimate and permanent cure. An early and accurate diagnosis is therefore of the utmost importance in these cases.

Upon what data shall we make our diagnosis ? Upon the following :—

I. The Subjective Symptoms.
II. The Physical Signs.
III. The Examination of the Stomach Contents.

I. THE SUBJECTIVE SYMPTOMS.—There are certain symptoms which are more or less common to all of the chronic gastric disorders, and yet those symptoms vary to a greater or less extent according to the nature of the affection from which the patient is suffering, and by noting these variations we are enabled to gain at least an inkling as to which particular disease we have to deal with in any given case. I shall refer very briefly to a few of the more prominent of those common symptoms.

1. *Vomiting*—The points to be noted are:—

The time of vomiting with reference to the ingestion of food—the relief obtained—was it preceded by pain; and the nature of the vomited matter.

The time at which vomiting occurs. In gastritis it occurs usually from ½–1¼ hours after eating; in ulcer soon, almost immediately, after eating; in cancer it may be absent throughout the disease; when present it does not bear any constant relationship to the time of eating.

The relief of pain. Vomiting in gastritis partially relieves the feeling of uneasiness which is generally an accompaniment of this condition; in ulcer, the pain is relieved; in cancer, pain is not a constant symptom and when present is not relieved by vomiting to the same extent as is that of ulcer.

Did pain precede the act of vomiting? In gastritis the act of vomiting is not usually preceded by actual pain, but rather by a feeling of uneasiness or discomfort; in ulcer the act of vomiting is usually preceded by a sharp localized pain; in cancer pain may be entirely absent and when present is not so definitely localized as in ulcer.

The nature of the vomited matter. As I shall later on speak more definitely of the stomach contents in these diseases, I shall content myself at present with referring to the gross characteristics of the vomited matter. In gastritis, the vomita will consist of partially digested food and mucus; in ulcer the food will be but little digested and frequently it will contain blood of a bright red colour; this blood may be in large amounts; in cancer, when vomiting occurs, the vomited matter will consist of partially digested food, and if blood is present it will be in smaller amounts than in the case of ulcer, and of a darker colour—being partially digested.

2. *Pain.*—This symptom is more or less common to all of the gastric disorders to which I have invited your attention.

In gastritis actual pain is not usual, but there is almost invariably a feeling of fullness about the stomach—a sense of discomfort—and the patient usually complains of tenderness upon pressure over the stomach. If flatulence accompanies this feeling of uneasiness, and it usually does, the sense of discomfort is relieved by the eructation of gas. There is in this condition no localized pain, but rather a general feeling of tenderness diffused over the whole region of the stomach.

In ulcer pain is almost a constant symptom, increased upon taking food and relieved by vomiting. The pain is sharper than in gastritis, localized—somewhat of a boring or gnawing character, and frequently felt in the back behind the stomach.

In cancer pain may be entirely absent, but when present is more localized than in gastritis, but is not to as great an extent relieved by vomiting as is the pain of ulcer. It is not so constant as the pain of ulcer, and is not so uniformly aggravated as is that pain by the ingestion of food. At times, however, this pain may be severe, lancinating in character.

As to the time of the occurrence of the pain, in general terms it may be stated that the pain of gastritis, which is due to the distention and irritation of the stomach by the products of fermentation, does not come on for at least half an hour after the ingestion of food. The pain of ulcer is usually aggravated immediately after the patient eats, and in cancer the pain is also intensified by the taking of food.

Other symptoms might be referred to, such as irregularities in appetite, eructations of gases, pyrosis, palpitation, drowsiness, constipation and diarrhoea. As these symptoms are not so much complained of and have not as much value for differential diagnosis, I will content myself with their mere mention.

II. THE PHYSICAL SIGNS.—In making a physical examination of the stomach we employ Inspection, Palpation, Percussion and Auscultation.

1. *Inspection.*—The best position for the inspection of the stomach is behind and above the head of the patient, who should be lying on his back, with the abdomen bare. In this position, if the abdominal walls are not very thick, and if the stomach is well distended, its outlines may be distinctly seen. If the lower curvature is visible below the umbilicus the stomach is dilated, and if a swelling is noticeable at the pylorus there is in all probability a malignant growth in that region. In order to outline the stomach more effectually it may be distended either by pumping air into it through a stomach tube, or by causing the patient to take separately a drachm and a half of Bicarbonate of Soda and Tartaric Acid dissolved in water. This I will now administer to

the patient before you. In this way, as you perceive, the general outline of the stomach is fairly well defined and mapped off from the surrounding organs. By this means also a tumour at the pylorus is more definitely marked out, and at the same time tumours lying behind the stomach become less distinct.

Gastrodiaphany, or Transillumination of the stomach, is another aid to the eye in the process of inspection. This process must, of course, be conducted in a dark room. By the aid of the gastrodiaphane the stomach is illuminated and its general contour and size fairly well defined. It is not, however, absolutely reliable, as the illumination is conveyed to the intestines if they are distended with gas. Tumours of the anterior wall of the stomach, however, are clearly demonstrated by this process. Before passing the gastro-diaphane the patient should drink about one pint of water. I will endeavour to illustrate this process at the close of this paper.

2. *Palpation.*—In making palpation, the patient should be upon his back with his knees drawn up so as to relax the abdominal muscles. The patient's attention should be as far as possible withdrawn from the fact that you are palpating the stomach. The more you succeed in fixing the patient's attention upon something else, the more relaxed will his abdominal muscles become and therefore the more deeply will you be able to palpate. The hand of the palpator should be warm and the palmar surfaces of the extended fingers placed gently across the patient's abdomen in the region of the stomach. The pressure should now be gradually increased along with a rotatory motion, the fingers being flexed from the third joints. In the diseases under consideration, what can we thus ascertain? If the stomach is not entirely empty, more or less gurgling will be elicited. This has no particular significance. Should the stomach be distended with gas, a drumlike feeling will be communicated to the palpating hand. This will indicate that fermentation is going on and this will be found to exist most markedly in the diseases under consideration in the following order:—Gastritis, cancer, ulcer. If the stomach is empty and a sense of resistance is encountered in a more marked degree than in the normal condition, we may have to deal with a diffuse cancerous growth in the walls of the stomach, fibrosis of the stomach or chronic catarrhal gastritis.

A tumour may be felt—if felt at the pyloric end of the stomach, it is in all probabilty cancerous, but it may arise from cicatricial thickening from the healing of an old ulcer. The cancerous mass will have a hard, firm feel and will be nodular. The diagnosis must be confirmed by the clinical history of the case and the examination of the stomach contents. Care must be taken to differentiate between tumours in stomach and tumours in neighbouring organs, especially in the pancreas. If when palpating over the abdomen we are enabled to make out a tumour, we must determine first whether it is in the abdominal walls or within the abdomen; and secondly, if within the abdomen, in what organ it is located. If in the abdominal walls it will be freely movable with the parietes and it may be easily grasped. If within the abdomen the abdominal walls may be freely moved over it, unless it be adherent to the parietal peritoneum. If the tumour is of pancreatic origin, or if it be behind the stomach, distension of the stomach by gas will remove the tumour from the palpating hand. Tumours at the pylorus, greater curvature or anterior wall of the stomach may thus be distinguished from tumours behind the stomach. Tumours in the posterior wall of the stomach cannot thus be differential from those behind the stomach. Whether the tumour moves with respiration or not will assist in the diagnosis. We will have to rely, however, mainly upon the clinical history and the results of the examination of the stomach. According to Welch, out of 1300 cases of gastric cancer only 68 were found in the posterior wall, so that the difficulty will not be one of frequent occurrence.

The character and intensity of the pain or tenderness elicited by palpation will throw some light upon the nature of the gastric affection. If no tumour can be felt, and the act of palpation causes tenderness diffused over the stomach, we have in all probability a case of gastritis. If, under similar circumstances, a sharp localized pain is caused by palpation, we may fairly infer that we have to deal with an ulcer in the stomach. The pain caused by palpation in case of cancer is normally more pronounced than that of gastritis, and not so sharply localized as is that of ulcer.

3. *Percussion.*—With the patient in the same position as for palpation we can fairly accurately map out the area of the

stomach. The percussion blow should be gentle and a tympanitic note will be elicited, which is characteristic of the stomach. I think the best results are obtained by percussion over the neighbouring organs and gradually approaching the stomach. Thus in one direction we get the clear note of the lungs, or in other directions the dull note of the spleen or liver, and then the tympanitic note of the stomach. The greatest difficulty is in distinguishing the note of the stomach from that of the transverse colon. We may assist the ear in this case in the following manner: If the colon is full of gas have your patient drink, say, a pint of water and then percuss in the upright position. The percussion note of the colon will be tympanitic and that of the lower border of the stomach on account of the fluid will now be dull. The size of the stomach may be more readily made out by percussion if it has been previously distended by gas in the manner already pointed out. The only fact of diagnostic value obtained in this way is that the stomach is enlarged. This may be due to either gastritis or a cancerous or simple obstruction of the pylorus, and these are differentiated by the means previously referred to and by the examination of the gastric contents.

4. *Auscultation.*—By the aid of a stethoscope placed over the cardiac orifice, the seventh left intercostal cartilage, the passage of fluid down the œsophagus and into the stomach may be heard. With the stethoscope in this position ask your patient to take a drink of water; a spurting sound will first be heard, and then in from 5 to 12 seconds a second sound is heard, called the "deglutition murmur," which indicates that the fluid has passed from the oesophagus to the stomach. In obstruction of the cardiac orifice this "deglutition murmur" will be delayed, sometimes as much as a minute. If the obstruction is marked regurgitation of food will take place, which upon examination will show that stomach digestion has not taken place. The usual cause is malignancy at the cardiac end of the stomach.

By giving the patient a sudden shake while your ear is near his body you may normally detect a splashing sound. This is of no significance unless heard after the usual time that the digestion of an ordinary meal occupies.

III. The Examination of the Stomach Contents.—The contents of the stomach may be obtained for examination pur-

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EXAMINATION OF GASTRIC CONTENTS.

In making an examination of the stomach contents we desire to obtain information of the condition and digestive power of the digestive juices, and to determine the presence of any abnormal constituents, such, for instance, as the products of fermentation. To obtain this information so as to give the most accurate results upon which to base conclusions, the sample of stomach contents should be obtained by " expression " after a test meal on a food-free stomach (as has been described by Dr. Herald).

Our examination will be Physical, Chemical and Microscopical, and should be undertaken in the order given.

In our Physical examination we note (*a*) The amount. After the usual test breakfast of Ewald removed after one hour's digestion, we should not find more than 40 cc. (1¼ oz.) Larger amounts mean usually loss of both motor and absorptive power of the gastric walls.

(*b*) The general characters: (1) The amount of mucus. This will be found to be increased in nearly all forms of gastric affection, but is particularly abundant in most forms of chronic gastritis. (2) The presence of food fragments. This, of course, means loss of digestive power. (3) The odor. We can detect by this means the odor of the fatty acids, and of some other fermentative products which are at times found in affections of the mucosa. (4) The color. The normal color of the gastric contents after the usual test meal is light yellow or light brownish yellow. The presence of blood can at once be detected owing to its reddish discoloration.

We next proceed to examine the contents chemically. We must first filter the contents through paper, as the tests are more readily applicable to the filtrate.

1. Test first for acidity with litmus paper. Acidity may be due to hydrochloric acid, free or combined, to acid salts or to fermentative acids (lactic, acetic, butyric, etc.)

2. If acid, we should next determine the total acidity by titrating 5 cc. of the contents with decinormal sodic hydrate solution (4 grammes Na OH to 1000 cc. water) using a 1 per

cent. alcoholic solution of phenolphthalein as an indicator. We place the measured gastric contents in a capsule with several drops of the indicator and add drop by drop from a burette our Na OH solution till our solution becomes and remains uniformly red. Each 1 cc. of the Na OH solution used equals .00365 gramme of acid calculated as hydrochloric acid. Normally from 2 to 3.25 cc. are required to neutralize our 5 cc. contents used.

3. We next determine if the acidity is due to free acids. Normally HCl is the only acid present, but in diseased states fermentative acids may be found. A brick red solution of Congo red in water is perhaps the best test. To a drop of Congo red add a drop of the filtrate. If free acid is present, the red changes to dark blue.

4. If free acids are present, we next determine whether free HCl is the acid giving the acidity. The most common test is that of Gunzburg whose solution consists of Phloroglucin 2 grammes, Vanillin 1 gramme, Absolute Alcohol 30 cc. To a drop of the filtrate add a drop of this solution and then very carefully evaporate. A rose red ring forms at margin of evaporating drop if free HCl is present. This test will determine the presence of HCl down to .05 parts per mille. Gunzburg's solution darkens on exposure to light and should be kept in the dark, and in a dark bottle. Free HCl should always be present in normal gastric contents after the test meal.

There is another test solution which gives good results and which will indicate even smaller quantities of HCl than the above, and has the added advantage that it can be employed to determine quantitatively the amount of free HCl present. This test solution consists of a ·5 per cent. alcoholic solution of dimethyl-amido-azo-benzol. This gives a red coloration at once with free HCl. To determine the amount of free HCl we simply place several drops of this test solution in a measured quantity of the gastric contents and add our decinormal Na OH solution till the red color disappears. (Of course care is taken to keep the solutions intimately mixed during titration.)

5. In cases where great accuracy is desired we may require to determine whether any HCl exists in a combined state. For normally the albuminous constituents of the food require to be saturated before HCl appears in the free state. Dr. Simon, in

his work on "Clinical Diagnosis," finds that by using a few drops of a 1 per cent. aqueous solution of alizarin as an indicator in a measured quantity of gastric contents, and then titrating with our Na OH solution till a pure violet coloration occurs, the difference between the total acidity as determined by the use of phenolphthalein and of alizarin as indicators equals the HCl present in a combined state. In our laboratory we have not made any series of tests to test the efficacy of this method, but it seems to work well after some practice in determining the point of the 'end reaction.'

6. If free acid is present we must always test for lactic acid. The presence of lactic acid one hour after a test meal always means fermentative processes. True, there is a minute amount of lactic acid in bread, and lactic acid is formed in small quantities at times by fermentation in the mouth. But, practically, these may be disregarded in the great majority of cases. As the presence of considerable amounts of lactic acid (with deficiency or absence of HCl) is looked upon as a diagnostic sign of Carcinoma of stomach, it is often of importance, however, to exclude these sources in such cases. Boas advises a special test meal, which consists in the administration of 8 to 10 ounces oatmeal gruel made with water, after washing out the stomach and mouth. This is best given at night, and 8 or 10 hours after the contents are expressed. The tests here are, however, only applicable to the lactic acid, not to the other constituents of the gastric juice. In our ordinary examination Uffelmann's reagent is used to indicate lactic acid. This reagent is made by taking 3 drops of saturated aqueous solution of perchloride of iron, 20 cc. of 5 per cent. carbolic acid, and diluting with water till the solution is of an amethyst blue tint. Into a long glass (test tube or graduate) of this solution add the filtered stomach contents drop by drop. A lemon-yellow precipitate falls in the presence of lactic acid. This test is, however, not always satisfactory, as excess of HCl or presence of glucose or of acetic or butyric acids may interfere with the test. Yet for ordinary clinical purposes this test usually suffices. If the test be unsatisfactory it is best to shake 10 cc. of the gastric contents up with 30 cc. of ether, repeating twice, removing the ether by pipette. Then evaporate the ether, carefully dissolve the

residue in water and apply Uffelmann's test. Of course this method is more accurate, but it requires time, apparatus and some slight skill in chemical manipulations. Quantitative analysis of the lactic acid is complicated and beyond the limits of this article.

7. The fatty acids (acetic, butyric, etc.) are at times present, the products of fermentation. These acids usually rise and fall with the amount of lactic acid.

Having determined the condition of the acids we next proceed to examine for the usual gastric ferments, i.e., pepsin and its zymogen, pepsinogen, and the milk curdling ferment or its zymogen.

8. The pepsin is tested for by determining the digestive powers of the gastric juice. In the absence of free HCl do not look for pepsin—but pepsinogen. To test for pepsin add a small shaving of coagulated egg albumin to 10 cc. of the juice. Keep at body heat for 1 to 2 hours. The shaving ought to be digested in this time if pepsin is present. When the contents do not show free HCl, then it is necessary to add two or three drops of 25 per cent. HCl to the contents, and then observe digestion. The acid transforms the zymogen into pepsin. For a quantitative analysis the only method we possess is by making a series of dilutions (graded) and then testing the digestive power of these diluted juices. It is a complicated process, and I will not further refer to it, particularly as in ordinary practice quantitative estimation is rarely called for.

9. In making the test for the milk curdling ferment we simply add 3 to 5 drops of the juice to 10 cc. milk and keep this at body heat. If the ferment is present the milk clots in 10 to 15 minutes. If no reaction be obtained the milk curdling ferment's zymogen may then be tested for by neutralizing the gastric juice with lime water and then proceeding as before, as the lime forms the milk curdling ferment from its zymogen.

10. While tests for the condition of the various food constituents of the test meal are occasionally performed, the only ones which are at all commonly examined for, are peptones and the condition of the starch. We will consider the latter only. After the test meal in a normal stomach the starchy elements should be so far changed as not to give the ordinary starch reaction nor the re-

action for erythro-dextrin. Ordinary tincture of iodine or Lugols solution may be used—add a drop or two to several drops of the filtered contents. A blue or reddish color indicates starch or erytho-dextrin respectively.

This completes the chemical examination of the contents. Finally we have the microscopic examination. Portions of the unfiltered contents are taken and placed under the various lenses, including an oil immersion ($\frac{1}{12}$). By this means we can determine the presence of starch granules (milk and fat globules), blood, pus, epithelial cells, crystals, the nature of food debris, and bacteria, including here sarcinae and yeasts.

The entire examination need not occupy more than 20 to 30 minutes, apart from the time required to complete the digestive test of the pepsin. The reagents and apparatus for chemical examination are quite inexpensive, and as the necessary technique of manipulation is readily acquired, there is no reason why every physician should not make use of this important adjunct to his clinical diagnosis.

W. T. CONNELL.

KINGSTON MEDICAL AND SURGICAL SOCIETY OPEN MEETING.

On January 25th the Society held an open meeting, to which the physicians of the district were invited. A large number of acceptances were received, but as physicians' acceptances are always provisional, very many could not be present. Considering the time of year and the general prevalence of La Grippe, the Society have every reason to be pleased with the attendance from outside.

The first session was held in the Fenwick operating theatre of the General Hospital, where, at 9 a.m., Dr. J. C. Connell opened proceedings with an operation for the removal of lymphoid tissue in the pharyngeal vault (Adenoids). Dr. Connell describes the case and operation as follows:—

Patient E. M., æt. 8, brought on account of a constant cold in the head. The mother says that the nose is always more or less stopped up and discharges constantly ; the child breathes heavily through the mouth and snores loudly at night and the voice is affected, certain letters not being clearly pronounced. As is often the case, the mother thinks that the slightly enlarged tonsils are the cause of the mouth-breathing. Examination, however, shows that the obstruction is in the nasopharynx. If children are tractable the small mirror will enable us to see the adenoid tissue, but in any case the forefinger can be passed up behind the soft palate and the presence of the mass determined. There is no operation attended with happier results than that which is done for the removal of post-nasal adenoids. The child breathes through the nose and sleeps quietly, phonation becomes clear and distinct, hearing improves and the intellect brightens.

Operation.—This is done under primary anaesthesia with chloroform. I consider that the risk from the anaesthetic is extremely small when the operation is done in this way. If the tonsils require excision they are first attended to. The patient being anaesthetised by Dr. Third, the mouth gag was introduced. The tongue was then depressed with the index finger of the left hand, and the slightly enlarged tonsils removed with Ermold's instrument. Then a modified form of Gottstein's curette was introduced behind the palate and the growth removed by several sweeps. The child was then quickly turned on the side to allow the free escape of blood without the danger of its being inspired into the larynx. The nasopharynx should now be explored with the finger to determine if every part of the growth has been removed. If such is not the case the curette must be again introduced.

The only after-treatment necessary is to wash out the nasopharynx twice a day with a mild alkaline and anti-septic solution.

The meeting then adjourned to the Doran wing, where a number of gynaecological demonstrations were given by Drs. Garrett and Wood.

The first case was an incomplete abortion at the sixth month. The history was that of a woman who had had one child. Labor had been long and tedious owing to rigidity of the cervix, and was only completed by artificial dilatation and application of the forceps high up. The initial cause of the abortion was fright, produced by an alarming fire in the neighbourhood. On arrival of the medical attendant the usual signs of inevitable abortion were present. For several days the case went on without much, if any, progress, the same rigid, unyielding cervix which caused the delay at the birth of the child was present again and firmly refused to dilate, notwithstanding the strong efforts of the uterine contractions to overcome it. After several days contractions ceased, and the hemorrhage, which had never been extensive from the beginning, was checked, but vaginal examination showed that the cervical canal was dilated only sufficiently to admit one finger. When brought to the hospital the woman was exhausted, not only from the protracted uterine efforts, but also from the continued slight hemorrhage. Atter being thoroughly anæsthetised an effort was made to forcibly dilate the cervix, but the task, usually a comparatively easy one, was the most difficult that could possibly be imagined. Steel dilators and the fingers were the instruments used, and after three-quarters of an hour of steady work the cervical canal was sufficiently dilated to admit two fingers. Further than this the cervix refused to yield without the use of force, which would likely prove dangerous or possibly fatal. Stellate incisions into the cervix were taken into consideration, but as the rigidity involved the whole cervical canal as high up as the contraction ring of Bandl, the incision would have had to go that high—at least two inches—to be of any service. Incisions so extensive as these would be hard to control, and a further rent in them during the succeeding manipulations might have involved large blood vessels, or worse still, have extended into the general peritoneal cavity. With two fingers passed through the canal the head was felt to be packed into the lower part of the upper uterine segment. Forceps could not be applied, and every effort to push the head up with the tops of the fingers and bring down a shoulder, with the idea of turning, failed. The size of the head was reduced by craniotomy, and after prolonged use of long broad-ligament forceps and toothed sponge-holders, the head was pushed up and the shoulder allowed to engage. Evisceration was now performed, which allowed the pelvis to be caught by the forceps and dragged down to the cervix. First, one foot, and then another, was delivered, and now, aided by the evisceration and craniotomy operation, the body was delivered by gentle but patient and prolonged traction. During the latter portion of the operation hemorrhage was rather profuse and the patient was in a poor condition, owing to the previous drain of blood, to bear further loss. The magnificent benefits to be obtained from the use of normal salt solution were here amply verified. When it was ascertained that the operation was to be a long one, and one that could not be completed without the loss of a considerable amount of blood, large aspirating needles were introduced into the pectoral regions and a steady flow of the solution by means of gravitation was kept up throughout the remainder of the operation. The amount injected was a little over three pints. Its free use sustained the patient thoroughly throughout, and it is doubtful if the operation could have been successfully completed otherwise.

Her recovery was slow and tedious, owing to the low state of vitality and the diminished blood pressure, absorption of toxines was readily accomplished, and she suffered for a considerable time from sapraemia. However, with careful nursing and a judicious dietary, aided by quinine and stimulants, she was able in the course of a few weeks to leave the hospital in an excellent state of convalescence.

Three points in the case seem particularly worthy of consideration. First, the condition of the cervix, a condition which seemed to be a natural one for her, and which refused to dilate under any circumstances. Second, the great difficulty experienced in delivery, requiring evisceration and internal version by means of long-handled haemostatic forceps; and, third, the vital importance of a thorough and persistent use of normal salt solution in maintaining life during and after the loss of a considerable amount of blood.

The second case was one of pelvic abscess. The history contained nothing unusual. The patient was a farmer's wife, the mother of several children, the youngest three years old. The source of the infection could not be attributed to any known cause, but was doubtless through the vagina by way of the cervix. The clinical history was not well marked. A dull, aching sensation on one side, and a general feeling of uneasiness, and of not being quite well, were the only symptoms complained of. Vaginal examination discovered an ovoid tumor in the left broad ligament. The uterus had lost its natural normal mobility, and there was a stony hardness of the vaginal vault on the side affected.

The operation determined upon was that of vaginal incision and drainage. Under an anaesthetic the patient was placed in the extreme lithotomy position and an incision made through the vaginal mucous membrane, extending around the left and posterior portions of the cervix, and the flap partly dissected back. The ureter and uterine arteries were next located and, guided by the index finger, the sac was entered. The instrument used for this purpose was a pair of Palmer's uterine dilators, which had been sharpened to a dull point. This instrument makes an excellent one for such work. It has the proper length and curves, the blunt points prevent injury being done to blood vessels or ureter should they accidentally be encountered. The screw at the handle fixes the blades when the puncture is being made and allows them to be opened wide and fixed there on being withdrawn. After the escape of the pus, which flowed freely, the finger was introduced and the cavity explored. The sac was next irrigated with sterile water and a T drainage tube, surrounded by a loose pack of washed-out iodoform gauze, was inserted into its cavity. After ten days the patient left the hospital with the cavity almost healed.

The third case, one of cystitis, and probably gonorrhoeal in its origin, served well to illustrate the ease and rapidity with which the female bladder can be explored by means of Kelly's cystoscope and head mirror illumination. Under an anaesthetic the patient was placed on the table in the genupectoral position, and the urethra dilated by means of Kelly's calibrator. A 12 c.m. cystoscope was passed up the urethra into the bladder and the obturator withdrawn. Air at once entered the bladder, causing it to distend, and through the cystoscope every point of the bladder could be readily made out. The inflammation had its seat almost entirely at the trigone. At this time advantage was taken of the position to illustrate how readily the ureteral orifices can be brought into view and catheterized with ureteral catheters should it be necessary to differentiate the urine from the two kidneys. An application of a two per ct. solution of nitrate of silver was made to the inflamed surface, after which the bladder was washed out with sterile water.

The meeting then adjourned to the Fenwick Operating Amphitheatre, where Drs. Anglin and Mundell performed Bassini's operation for the radical cure of Hernia. The history of the case and a description of the operation are given below.

J. F., aet. 27.—An active, vigorous young man, by occupation a plumber, came to us complaining of a rupture on the right side, which distended the scrotal pouch. He gave the following history:—

The rupture was first observed when he was five years old, but gave very little trouble until when a lad of sixteen in assisting a blacksmith to lift a heavy weight, the patient felt something suddenly give way. He fell in a faint, and it was found that the hernial protrusion had descended into the scrotum.

From that time until the present he has suffered many things at the hands of various truss manufacturers, and consequently was anxious to submit to an operation giving promise of a radical cure of the rupture. On examination it was seen that we had to deal with an oblique inguinal hernia, descending as far as the testicle, the sac evidently containing bowel only.

The particular form of operation decided upon was that known as Bassini's, a procedure which while securely closing the breach in the abdominal wall, still furnishes a canal for the safe transmission of the spermatic cord, and provides for the total obliteration of the hernial sac.

An incision was made through the skin and superficial tissues, beginning at the level of the anterior superior spine of the ilium and carried obliquely downwards, parallel with and half an inch above Ponpart's ligament, ending at the centre of the external ring. The aponeurosis of the external oblique muscle being exposed, a director was passed in at the external ring and the aponeurosis slit up to fully half an inch above the internal ring—the cut edges then being lifted up and freed from the structures beneath internally to the margin of the rectus and externally to the shelving edge of Ponpart's ligament.

The cord and sac were now examined and found intimately adherent—the really difficult and tedious part of the operation being the complete separation of the hernial sac from the structures of the spermatic cord and the surrounding tissues. The sac was carefully opened between forceps and the opening enlarged with the fingers. The contents—a portion of ileum—no omentum—were returned into the abdominal cavity, and the sac sutured with catgut close up to the internal ring and cut off, the stump being allowed to drop back within the ring.

A strip of iodoform gauze was then passed beneath the cord and its vessels, and these structures held up, while four points of interrupted suture were inserted, bringing together the edges of the internal oblique and transversalis muscles and the shelving edge of Ponpart's ligament. These sutures of kangaroo tendon were passed with McEwen's blunt-pointed hernia needles, beginning below close to the pubes and above, leaving only sufficient space to allow for safe transmission of the cord without undue pressure on its vessels.

The cord was now laid upon this row of sutures, and with continuous suture of tendon the divided edges of the external oblique aponeurosis were brought together, beginning above and leaving room below for the passage of the cord.

The skin edges were then united by continuous suture of catgut, and no drainage employed. Aristol was dusted on the wound, and pads of bichloride gauze held firmly in place by two-inch wide strips of surgeon's adhesive plaster. Over all absorbent wool and spica bandage completed the dressing.

After the first twenty-four hours, during which time pain was relieved by morphia, the patient experienced no discomfort, passing the time in reading, whistling and singing for the amusement of surrounding patients.

Slight swelling of the epididymis occurred, but soon subsided. The dressings were not disturbed until the eighth day, when the wound was found clean and dry. Firm dressings were reapplied and the patient kept in bed for two weeks, after which he got up daily and left the hospital at the end of three weeks wearing an ordinary abdominal supporter which he was advised to discard after wearing for three months.

After luncheon the afternoon session was opened by a visit to the Hotel Dieu Hospital, where Dr. Ryan took the visitors in charge. This hospital has now accommodation for 70 ward patients, besides a large number of rooms for private treatment. Later at the medical building Dr. A. P. Knight gave an address on Evolution and Disease. This address was well illustrated by lantern slides, but as it would not be interesting to our readers without these we have not attempted to reproduce it.

Dr. W. T. Connell followed with a short talk on the "Microscopic diagnosis of some common diseases," illustrating his remarks by lantern slides and numerous specimens.

Dr. Connell's remarks were in substance as follows :—

Those practitioners who are unacquainted with the diagnostic possibilities of the microscope must find themselves somewhat handicapped nowadays. For we now recognize that the causal agents of many of our common diseases are bacterial in nature, and the microscope reveals these disease agents to us, and apart from this in other cases often reveals to us many diagnostic features. In many affections of the lungs, urinary organs, skin and blood, we find microscopic examination simply invaluable.

Of course, the first essential in microscopic diagnosis is the possession of a good microscope. I am not going to recommend any particular maker. All I need say is, that when you get a microscope get one upon which you can fit all apparatus necessary for careful microscopic work, such as the Abbe condenser and oil immersion objectives. These two latter are absolutely essential for the observation of bacteria.

Just as important as the microscope is the knowledge of how to use it. Microscopical technique can only be acquired by practice, and, I might add, by practice under teachers. True, a good technique may be acquired alone, but it will take months to learn what under teachers would require days or at most weeks. I would consider that at least four to six weeks' steady work would be required for the acquisition of a good working technique.

What diseases are we then able to diagnose more efficiently, or to confirm our clinical diagnosis? Early pulmonary tuberculosis, diphtheria and gonorrhoea (important particularly in women) can be diagnosed early and efficiently. Microscopical examination affords the strongest confirmatory evidence in pneumonia, influenza and bronchial asthma. The microscope will at once set at rest a suspicious Tinea, and a careful microscopical examination will often afford a better clue to the seat and extent of trouble in affections of the urinary tract than will the symptoms combined. For the differentiation of the various anaemias and the absolute diagnosis of malarial infections the microscope is requisite. Taking up the materials in order which we examine for diagnostic purposes, we will first consider the sputum. We examine the sputum most commonly for Tubercle bacilli, and these bacilli should be examined for in any case of prolonged bronchitis, or in any case of localized lung lesions persisting for some weeks. Many cases of pulmonary tuberculosis are thus found in their really incipient stages. I can call to mind at least two cases within the past year, where a very careful stethoscopic examination failed to reveal more than slight jerkiness in inspiration (over the left apex in both cases) yet the microscope shewed Tubercle bacilli. (Both these patients were complaining of feeling depressed and had an occasional cough, raising a small amount of muco purulent material.) Now it is in these stages that climatic and medicinal treatment really does good. If we wait till the disease declares itself by consolidation or cavitation of an area of the lung, our medical measures are often too late. I prefer the long method or Ziehl-Neelsen method for staining Tubercle bacilli, as it gives in the end more satisfactory results. (Specimens were shown illustrating Tubercle bacilli in sputum in large and small numbers, and also sputum and lung from cases showing a mixed Tubercular and Steptococcus infection, which mixed infections are not at all uncommon in phthisis.) Now while the method used for Tubercle bacilli stains all the bacteria in the films, I prefer for Pneumococci and influenza bacilli staining with gentian violet or Eosin and Methylene Blue. Pneumococci are always (rarely absent) found in acute pneumonias. They may be found, too, in some cases of acute bronchitis and Broncho-Pneumonia. Influenza bacilli are always found, and in considerable numbers, when la grippe attacks the respiratory mucous membranes. In acute asthma an examination of the "pellets" of sputum almost always reveals Curschmann's spirals, and often the Charcot crystals. Stained specimens (eosin and methylene blue) always show a great number of eosinophile cells (derived from blood) in the sputum.

In cases of suspected diphtheria, cover-glass films may be stained and examined direct from the throat for the diphtheria bacilli, by taking a swab preparation. (A swab can be readily improvised by taking a small smooth splinter of wood and wrapping about its end with a sterile forceps, some absorbing cotton from the centre of a packet and then rubbing or rather twirling this against the suspected patches.) The great difficulty met with in examining a swab direct is the fact that there are always present so many saphrophytic organisms in the throat, that unless one is a trained observer it is difficult to differentiate the diphtheria bacilli. Hence it is often, or usually advisable to make a cultural test by inoculating blood serum or glycerine agar tubes and incubating. The saphrophytes flourish poorly while the diphtheria bacilli (and pus micrococci) flourish well upon it and can be readily distinguished by colony formation and microscopic examination in 14 to 20 hours.

Pus, including suspected gonorrhoeal pus, can be prepared like the pneumonic sputum. Early in gonorrhoea the gonococci are present, almost alone, while later, other organisms obtain entry and are apt to deceive one unacquainted with the morphological and staining characters of the Gonococcus. The Gonococci are found mainly in the pus cells urethal and (in women) the cervical epithelium. Pus from abscesses, boils and such sources, is prepared and stained like pus from suspected gonorrhoea. The pus from chronic or cold abscesses at times contains Tubercle bacilli but these can only rarely be found by microscopic examination.

I have only time to point out some points in urinary diagnosis by microscope. It is always necessary to obtain the sediment for microscopic examination. By the use of the centrifuge this can be obtained in a few minutes, otherwise it must stand at least 3 hours in a conical glass—always examine (for casts more particularly) the lowest portion of the sediment. Microscopic examination should always be preceded by a careful inspection and chemical examination of the specimen. For too many physicians albumen in the urine means "Bright's Disease" (whatever this may be). An albuminuria is found in any inflammatory affection below the secreting parenchyma of the kidney, hence albumen does not mean renal involvement without the appearance of renal epithelium or tube casts, and for these the microscope is required. Of course with an albuminuria dependent upon lesion below the kidney we would always find pus and epithelial cells of the involved part. The reaction of the urine (and color of the sediment) is also of importance in diagnosticating the nature of chemical sediment—an acid urine precipitates only an amorphous sediment—urates, which can be recognized by color. An alkaline urine throws down earthy phosphates. Triple phosphates mean always ammomoniacal fermentation in the bladder. Uric acid is found only in quite acid urines. Some physicians find great difficulty in determining the nature of cloudiness in a sample of urine which has not been examined for some hours after its passage and in which there may be no sediment. "Mucus" is the common term which I have heard applied to this. It usually consists of bacteria which obtained entry and are rapidly multiplying in the urine. These bodies can be readily noted under the usual high power (400 diameters) of the microscope.

The evening session was held at the General Hospital. Dr. Third gave a demonstration on fluoroscopic and X-ray work, showing and illustrating the apparatus at work, including his own improved fluoroscope.

Dr. Herald followed with his paper, and gave a practical illustration of diagnostic methods of Chronic Gastric disorders.

Dr. W. T. Connell then spoke of the methods of examination of the gastric contents, carrying through the analysis of several specimens. Both these papers appear in this issue of the QUARTERLY.

Dr. J. C. Connell then opened a discussion on Eye Cases for the General Practitioner and for reference to the Specialist. He spoke as follows:—

The committee in charge of this meeting of the Kingston Medical and Surgical Society has invited me to open the discussion upon the subject of eye cases to be treated by the general practitioner and to be referred to the specialist.

It seems to me, however, to be impossible to answer such a question in general terms or to make any arbitrary division which will be applicable to the practice of many practitioners.

In the first place there is no fixed standard of education in these diseases. It is possible to graduate in medicine and to qualify for practice in Ontario without attending a clinic on diseases of the eye, without reading any text book on the subject, and indeed without any knowledge whatever of any disease of the eye.

It is entirely optional how far one may qualify himself to treat these diseases. The general practitioner may not know even the names of the various diseases of the eye, or he may, on the other hand, be as well trained as the average specialist and treat his cases as successfully. Every man, therefore, must answer the question for himself according to his light.

In the second place there is the patient's point of view. If no specialist be near at hand, the doctor is forced to do what he can even though he may feel his knowledge and experience are inadequate.

So far as I can in the time available, I will give my views of what work should be done by the specialist.

1. Cases for operation. All the more serious operations of the eyeball, those for deformities of the eyelids, and complicated operations for strabismus should be done by the specialist. The simple tenotomy for strabismus, operations for pterygium, and chalazion and for obstructions in the lachrymal passages may be done by the general practitioner.

2. Injuries. Those which are superficial or involve the eyelids only, need not come to the oculist. All those which penetrate the eyeball or result in intraocular lesions should be seen by the consultant.

3. Intraocular diseases, requiring the use of the ophthalmoscope in diagnosis, properly belong to the specialist. There are few in general practice who become proficient in the use of the ophthalmoscope.

4. Errors of refraction. No general practitioner will care to give time to the fitting of glasses but in this connection it would be of interest to discuss how far the numerous opticians and doctors of refraction are to be trusted. My experience goes to prove that they sell glasses to every one who can be persuaded to buy, error or no error, and that only in cases of presbyopia are they likely to be correct.

5. In the external diseases of the eye the general practitioner with the average amount of eye lore, may not require help. It is only in the more severe and in the complicated cases, e.g., hypopyon keratitis, that the specialist need be called upon.

At 10 p.m. the visitors and members of the Society repaired to the British American Hotel, where host Crate had prepared one of his excellent dinners, to which all did full justice. Speeches and anecdotes closed what all agree was a very successful and interesting meeting.

EFFECTS OF TEMPERATURE ON THE HEART BEAT OF THE FISH EMBRYO.

THE observations detailed in the following paper were carried out in the biological laboratory, Queen's University, in May, 1895. The biological department of the University has no proper reference library, and this will explain why I make no reference to the literature of the subject.

The embryos used were obtained in Cataraqui Bay, at the eastern end of Lake Ontario, and were the embryos of the common perch. There were two batches of eggs, of different ages. One was, I judged, a week or ten days older than the other. The older ones had pigmented eyes and bellies, longer jaws, and the circulation extended out beyond the anus. The younger batch, at the beginning of the experiments, had developed no pigment in the eyes or body, and the circulation was confined to the head and the paired anterior vitelline arteries. Venus sinosus, auricle and ventricle were apparent in both batches: the body was transparent and well-formed in both; the tail homocercal; pectoral fins were clearly formed in both, and larger in one batch than in the other.

The embryos were used for two separate sets of experiments: (1) to study the effects of temperature, and (2) to study the effect of certain drugs upon the heart-beat.

In elucidating the first point the embryos were placed in water at four different temperatures, viz.: at 3° C.; at 10° C., being the temperature of the lake water running in the laboratory; at 16° C. and at 22° C. The lake water was kept cooled down to 3° C. by placing ice in it; the water at 16° C. and at 22° C. was kept at these temperatures by heating a slow stream of water passing through two Florence flasks and flowing thence to two glass jars, in which the embryos were kept.

General Results.

The embryos being perfectly transparent the heart's action was easily seen.

1. The extremes of temperature employed were O ° C. and 22 ° C., at which extremes embryos died in a very short time. Death was preceded in the former case by diminished heart action, and in the latter by greatly increased heart action.

2. Increase of temperature increased the number of heart beats, stimulated growth and development, and shortened the time required for hatching out. Diminished temperature had the opposite effect.

3. The number of beats per minute of course increased with the age of the embryo.

4. The younger embryos were affected to a lesser degree by changes of temperature than the older ones. They were less sensitive to changes.

5. The average rate of beat in the older embryo at 22 ° C. was about 130 per minute. In water at 3 ° C. the average beat was only 30 per minute.

6. The heart beat of embryos in water at 10 ° C. (tap water from the lake) was higher in the afternoon than in the morning. This result did not become apparent until I began to tabulate my statistics in October. I can see no cause for this increase unless it be due to the continued effect of daylight. The laboratory has a northern exposure, and none of the embryos were ever exposed to direct sunlight.

7. Both the younger and older embryos hatched out in 5 days in water at 22 ° C.; whereas those in water at 3 ° C., at the end of 12 days seemed to have changed very little or none at all. In water at 10 ° C., some were hatched out in 3 days after collecting them.

8. Embryos whose heart beat was very slow in water at 3 ° C., when transferred suddenly to water at 22 ° C., doubled the rate of heart beat inside of two minutes.

These results corroborate the ordinary laboratory experiments of excising the heart of the frog and applying heat and cold. They suggest the conclusion that in the practice of medicine, valuable and specific effects may be obtained by varying the temperature to which patients are subjected without the aid of stimulants or depressants of any other kind. Of course the limits in variation of temperature in mammals are very narrow, and would have to be kept in mind in practice.

A. P. KNIGHT.

MOVABLE KIDNEY.

(Read at a meeting of the Kingston Medical and Surgical Society.)

Rayer in 1836, first drew attention to Movable Kidney and cited twenty cases. Since then observers have occasionally noted the condition, as Hare, 1858; Rollett in 1866, who put the proportion at 1 in 250, and in recent years Lindner, who considered that 1 in 5 or 6 was nearer the average. Glenard, 1885, said 1 in every 4. This wide diversity does not indicate that movable kidney has increased in frequency during these years, but rather that greater attention has been devoted to the examination of patients with respect to the situation of the kidney.

Definition.—Until a few years ago "floating" and "movable" were synonymous terms, but "floating" is now regarded as a rare congenital condition in which the kidney moves freely about in the abdomen, being attached only by the peritoneum—a mesonephron; while "movable" is one in which the kidney moves with or without its fatty capsule, and as a rule lies behind the peritoneum. Bidwell (*Lancet*, 1898,) uses the term "floating" for a freely movable kidney, and "displaced" when only very slight movement is permitted. Osler, 1898, defines "floating" as when the organ can be felt below the level of the umbilicus—"movable" down to the level of the umbilicus, and "palpable" barely felt on deepest expiration.

Aetiology.—It is far more common in women than in men. Ebstein considers the proportion as 7 to 1. Einhorn (*Med. Record*, 1898) 10 to 1. Edebohls, in an address before Med. Society of New York, Feb., 1899, stated that 20 per cent. of all women have "movable" kidney.

The right kidney is more often displaced than the left, according to Ruttner (1890) 7 times—to Greig Smith 4 times, and to Einhorn 20 times.

To the corset and tight waistband, by means of which the skirts are suspended, is assigned a very important place in the causation of this displacement. Sulzer considers that the relaxation of the abdominal walls after child-birth tends to induce the kidneys to leave their normal position, and Landau thinks one of the most frequent factors is the disappearance of fat and the consequent loosening of the peritoneum—as in rapid emaciation. Einhorn believes that there is an individually varying predisposition as regards the degree of fixation of the kidney or its possibility of being displaced. Greig Smith (*Abd. Surgery*, vol. II.) states that long flexible spines, with sloping lower ribs and flat slender waists, give the bodily conformation that most favors renal mobility.

Clinically we find two classes of patients in whom movable kidney is present. 1st. Young adults (females) with the bodily conformation suggested by Greig Smith, or the predisposition of Sulzer as predisposing and corsets, &c., or a traumatism as exciting causes.

2nd. Patients generally about the middle period of life with pendulous or relaxed abdominal parietes, as in women who have borne several children in rapid succession.

Remarks.—One can appreciate the importance of the corset as a causative factor by an examination of the anatomy of the region, especially the peritoneal attachment of the kidney. We see the kidney lying under the sloping surface of the liver, and Cunningham (*Jour. Anat. & Phys,* 1895) draws attention to the transverse ridge across the ant. surface of the right kidney; hence any downward pressure of the liver would have more effect than if the surface were perfectly flat. Again, the right kidney is partly held in its place by the peritoneum that lies in front of its upper half, but this peritoneum is tucked up between the kidney and liver and passes on to the posterior margin of the latter, forming part of the coronary ligament, one of the chief supports of the liver, but any steady downward pressure of the latter organ would tend to drag down this ligament and so dissect it off the front of the kidney and thus weaken the main support of that organ. So that the corset would not only directly displace the kidney by forcing the liver down against it, but would indirectly favor displacement by taking away its main support—the lower layer of coronary ligament.

2nd. The right is more often displaced than the left. This is of course evident as we have no organ on the left side like the liver to force it down; and there is another point that seems to me of importance in connection with the left kidney and that is, that, while on the right side there is only easily displaced peritoneum lying over the upper half of the front of right kidney, on the left side there are really two ligaments assisting in retaining this organ in its place—the costo-colic, which runs across the outer side of the ant. surface, and the gastro-phrenic.

In the second class of patients, viz.: Women with pendulous abdominal walls it is easy to understand the production of the displacement. The axis of the upper abdomen is directed downwards and forwards towards the abdominal muscles, and to a great extent the proper tensity of these muscles retains the viscera in their normal situation. Relax this support and the viscera would fall downwards, and we would have what Einhorn considers is the usual condition present with movable kidney, viz., ptosis of the abdominal viscera. In this second class of patients the right would, in my opinion, be more often displaced than the left, because, though the transverse mesocolon would draw downwards equally on each kidney, there would be added to it on the right side the downward traction of the stomach through the duodenum, but on the left side it would be opposed by the upward traction of the costo-colic and gastro-phrenic ligaments spoken of above.

Examination of Patient.—McNaughton (Brooklyn *Med. Journal*, Feb., 1898) advises the examination in the recumbent position with the thumbs in front and the fingers behind. Suckling (Edinburgh *Med. Journal*, Sept., 1898) advises thumb behind and fingers in front, but no manner of manipulation has given us as much satisfaction as Hare's classical description—with the "patient lying down the physician should place the fingers of the left hand on the postero-lumbar region under last ribs, gently pushing forward that part. The ends of the fingers of right hand should then be placed in front, just below the costal cartilages. On the beginning of a deep expiration the kidney, if movable, will be felt between the two hands."

Symptoms. Briefly, the symptoms are dyspeptic, a sense of traction in right side, especially on exertion, neurasthenia, pain radiating towards pubes, and occasionally intermittent hydronephrosis. Dietl's crises are attacks of pain, nausea, vomiting, chills and sometimes collapse, said by him to be associated with movable kidney, and lastly, chronic appendicitis which according to Edebohl's (*Med. Record*, 1899) is present in 80 per cent. of cases of movable kidney and is looked on by him as a most important and common symptom. His explanation of it is that the return circulation of the super. mesenteric vein is compressed by the kidney against the head of the pancreas. This may explain it, yet as the artery of the appendix, and therefore the vein, is not terminal in the female as in the male, being frequently connected with the ovarian plexus through the appendiculo-ovarian branch, it is possible this theory of Edebohl's may be only a factor in the causation of the condition.

Treatment.—Hahn strongly urges surgical treatment for movable kidney, so also do Edebohls and Keen, but the majority of observers from Rayer, 1836, down to the present day advise conservative measures. Greig Smith and Treves advise giving palliative treatment a free and fair trial before operation ; while Einhorn is decidedly averse to surgical interference, maintaining that dietetic-mechanical treatment with appropriate bandaging meets all indications.

I have seen a number of cases of movable kidney, but with one exception, they were examples of the second class, i.e., relaxed abdominal walls. In three of the latter both kidneys were misplaced, and in all the above they were subject to gastro-intestinal disturbances due, no doubt, to traction on the sympathetic plexus, and more pronounced when walking, standing or exerting themselves. There were also sensations of weight, discomfort and traction in the abdomen. I am satisfied that these symptoms were due to the visceral ptosis as a whole, rather than to any one organ, as the kidney. In all, a proper bandage applied to the abdomen relieved the symptoms to a great degree but in one case, that of a young married woman who had borne no children, the symptoms were not improved by mechanical support, hence, nephrorraphy was performed. This case illustrated clearly the difference between the two classes. She presented the bodily conformation of Greig Smith and gave a history of several attacks of severe pain, paroxysmal in character, almost like nephritic colic but coming on after any unusual exertion ; tongue was coated and marked dyspeptic symptoms were present. When seen at the height of an attack the pain was intense with a very tender area a little above the situation of the appendix, some vesical tenesmus but no hæmaturia, nausea, some vomiting, but no fever. A diagnosis of renal colic was made, but on making a thorough examination the next day, a markedly displaced and movable kidney was found. She stated the paroxysm gradually subsided after lying down but left her very prostrate for some days afterwards.

She had always enjoyed good health until about a year before, when she was thrown out of a rig, alighting on her back and the right loin striking a ridge on the roadway. Since the accident the attacks had come on, gradually getting more severe.

Bandaging was given a fair trial without, however, any material benefit, and on April 6th of last year I sutured the kidney to the lumbar muscles, using kangaroo tendon and following the method of Morris, *i.e.*, shortening the adipose tissue, and then with three main sutures passing through the shortened capsule, muscles, aponeurosis and one-half inch in depth of the renal substance, the kidney was supported. The muscles were sutured with catgut and the skin with silkworm gut, one of the latter taking up the fatty capsule as well. Since the operation she has had none of the paroxysms and now enjoys good health, though a slight degree of tenderness still remains, due no doubt to some neuritis of the renal plexus.

Before closing I desire to draw attention to a paper by Jules Comby at the last meeting of the British Medical Association at Edinburgh, in which he stated that movable kidney was not rare in children, as he had found a considerable number of cases—18—during the last few years. Of these 16 were girls and 2 boys. In this we see the proportion between female and male retained, but no corset can enter into the consideration as a cause here. Comby did not express his opinion as to the reason of the relative frequency in the female child, but in the discussion Murdoch, of Edinburgh, thought it might be in the conformation of the pelvis, but we know there is not enough differentiation between the pelvis of the male and female child to explain it. Perhaps the difference in development may be nearer the solution whereby in the female the Mullerian duct becomes converted into the larger structure, viz., the female genital passages, while the Wolffian duct becomes obliterated, whereas in the male the Wolffian becomes converted into the smaller structure—the vas deferens—and the Mullerian duct becomes obliterated.

Again, if these examples in children be not congenital, then possibly the relative size of the liver in the foetus and the probable gastroptosis or visceroptosis present (14 of the 18 had marked dyspeptic symptoms), and, lastly, the arrangement of the hepatic peritoneum of the foetus, for, as late as the fifth month of foetal life, I have found the right kidney behind the liver, and therefore the upper half of anterior surface entirely uncovered by peritoneum, may be influential causative factors.

Lastly. My experience, since my attention has been specially directed to movable kidney, seems to justify the conclusion (1) that it is much more common than was formerly thought; (2) the necessity of thoroughly examining a patient complaining of any abdominal trouble, as many cases are overlooked, I am satisfied, being considered colic, indigestion, &c.; (3) Just as eye strain has reached such prominence as a factor in headache, so I believe some, at least, instances of "migraine" may be due to reflex action through the solar plexus, pneumogastric and other cranial nerves, from a movable kidney.

D. E. MUNDELL.

REPORT OF SOCIETY MEETINGS.

Feb. 6th.—The regular monthly meeting was held this evening, the President, Dr. Herald, in the chair. After the settlement of business matters relating to the open meeting, Dr. W. T. Connell presented some specimens (*a*) some slices of cooked bacon, showing Cysticercus Cellulosae (Measly Pork). (*b*) Liver, deeply pigmented with bile, from a case of intense jaundice due to a calculus plugging the common duct. (*c*) Heart from a cow, showing the tricuspid orifice and right auricle almost completely filled with an organized thrombus. The cow had presented signs for some time preceding death of obstruction in the heart.

Dr. Mundell then read his paper on Movable Kidney, which is found elsewhere in this issue. This paper was discussed by the members present.

March 13th.—A regular meeting was held this evening, Dr. Herald in the chair.

Dr. Anglin gave the clinical history, and Dr. W. T. Connell presented the specimens from a patient who had been successfully operated on four weeks previous (Iliac Colotomy) for the relief of obstruction of the bowels due to Carcinoma at the junction of the sigmoid flexure and rectum. Early secondary nodules were found on the undersurface of the liver. The patient died of progressive asthenia.

Dr. W. T. Connell showed (*a*) the heart from an infant dying on the tenth day after birth, showing wide open foramen ovale. The child had been cyanotic from birth. (*b*) The lungs, liver, spleen and kidneys from a monkey dying of acquired Tuberculosis. The lungs shewed the mixed characteristic of Tuberculosis as seen in man and cattle.

Dr. Mylks read his interesting paper on Acute Pneumonias, which appears in this issue.

BOOK REVIEWS.

THE READY REFERENCE HAND-BOOK OF DISEASES OF THE SKIN. GEORGE THOMAS JACKSON, M.D, p. 633. Third Edition. Lea Brother & Co., New York and Philadelphia.

As the name implies this is not an exhaustive treatise upon diseases of the skin, but rather a condensed epitome of what is now known of these diseases. The author opens his book with a short account of the physiology and anatomy of the skin and its appendages. Then follow some general considerations upon diagnosis. Next we have therapeutic notes, in which the author refers to the agents which are now employed in the treatment of diseases of the skin, both by internal medication and by external application. In this part of the work useful hints are given as to the best methods of dispensing the various remedies. The classification of skin diseases, as given by Crocker, which is Hebras' classification somewhat modified, forms the next part of the work. This classification, however, is not followed in the body of the work, but the diseases are taken up in alphabetical order. This arrangement is an advantage when one knows the name of the disease he wishes to look up, but is rather a defect from the student's standpoint. However this defect, if defect it be, is overcome by having the classification already referred to, in which the author gives not only the name of the various diseases but the most prominent primary lesion. In the body of the work each disease is discussed separately—the Aetiology, Symptomatology, Diagnosis and Treatment being fairly fully discussed. The appendix contains some 80 odd formulae for baths, lotions, ointments, powders, caustic applications and mixtures for internal administration, which will serve as a good guide to the student or practitioner in writing prescriptions for the treatment of diseases of the skin. While this book will not take the place of the larger and fuller works upon this subject (and we do not suppose that the author intended that it should) it will be found a very useful and reliable work of reference for the practitioner, and a great boon to the medical student who with all his other studies cannot find time to thoroughly study the larger works.

"THE PRACTICE OF MEDICINE." By WOOD & FITZ. J. B. Lippincott Company, Philadelphia, pp. 1071.

A work on Practice of Medicine is of value only when the information contained therein is up to date and arranged in such a manner as will enable the busy practitioner to readily find what he is in search of. According to this standard the work under review is a valuable one. The whole range ot the Practice of Medicine is grouped under six divisions, and these again under subdivisions. Each disease is treated in a regular systematic manner—Definition, Aetiology, Morbid Anatomy, Symptomatology, Diagnosis, Prognosis, Treatment—so that in any particular disease one can readily obtain the author's views on any one of those points. Under Aetiology we have both the predisposing and the direct or exciting causes. Under Morbid Anatomy is included the pathology. The Symptomatology embraces the course and duration, while under Diagnosis we find the means of physical examination, as well as the chemical and bacteriological aids to diagnosis. The Treatment embraces those recommended by various authorities and gives the author's own special preferences. All in all the work is one which commends itself to the student or the practitioner, containing, as it does, an epitome of what is at the present known of disease arranged in a systematic manner.

PERSONALS.

Dr. G. W. Mylks has just returned from a short visit to the Hospitals in New York and Baltimore, where we have no doubt he added to his knowledge and experience.

Dr. R. W. Garrett leaves for England on May 6th next and will be absent six weeks. During his stay across the water he intends devoting much of his time to his special work. We wish him a pleasant trip and we are sure he will make the most of the opportunity.—The immediate benefit will be his.—Afterwards his patients will receive the benefit of his large experience.—*Bon Voyage.*

NOTES.

W. E. SAUNDERS & CO., LONDON, ONT.

We join with many others of the profession in expressing sympathy with the above firm on account of the disastrous fire which occurred in their extensive establishment lately. The loss is put at $18,000. This, however, is not the greatest loss from a fire in an establishment like that of W. E. Saunders & Co. The loss of time, the disarrangement of business and the difficulty of finding suitable buildings in which to carry on their business are matters which can hardly be calculated in dollars and cents. We are pleased to know, however, that the firm were enabled to carry on their business almost uninterruptedly and now they are prepared to cater as successfully as ever to the wants of their many customers. We heartily wish them prosperity.

QUEEN'S MEDICAL CONVOCATION.

A YEAR ago Queen's held her first separate Medical Convocation. That Convocation was an experiment, but an experiment which gave such satisfaction to the medical students that it was decided by the authorities to continue to hold a separate Convocation for the laureation of the graduates in medicine. This year Convocation was held on the afternoon of Friday, April 7th. The students were there, being both visible and audible. Their songs were good. Some of their jokes at their fellow-students' or their professors' expense created many a laugh and were always taken in good part, as they were devoid of sting, and too much cannot be said in praise of the order they maintained when the addresses were being delivered. This is as it should be. When strangers of distinction give their time and travel long distances in order to comply with a request from the University authorities, they should certainly be accorded a gentlemanly reception. Dr. Donald McLean, of Detroit, and Rev. Dr. Milligan, of Toronto, were the speakers on this occasion. Both addresses contained much valuable advice, especially intended for the members of the graduating class, but equally applicable to all medical students who expect in time to be graduates. These addresses we may have space to give more fully in a succeed number of the QUARTERLY. Medals and prizes were presented to the successful students by Principal Grant, Drs. Fowler, Mundell, Ryan, Campbell and Knight, and a scholarship donated by the Chancellor was for the first time presented by Sir Sandford Fleming himself. The degrees were then conferred with the usual ceremonies and solemnities, and the second Annual Convocation of the Medical Department was over.

The following gentlemen received the degrees of M.D. and C.M.:—

Amys, C. H.
Baker, J. Y.
Chapman, A. B.
Conner, F. E.
Cooper, E. G.
Devlin, J. L.
Goodchild, J. F.
Goodwill, V. L.
Grant, A. F.
Harriss, J. A.
Huffman, R. W.
Hunter, H. A.
Menzies, R. D.
Mitchell, J.
McCrea, H. H.
Nugent, A.
Richardson, A. W.
Sadler, G. S.
Shaw, A.
Simpson, W. J.
Snyder, T.
Watson, E. C.
Williamson, A. R. B.

COOMBS' EUREKA MALTED FOOD.—It will be seen by advertisement in our present issue that this valuable preparation, which has attained the leading place in Britain in its class, is now available to the profession in Canada. This food has been very fully proved by the profession in Britain, and carries unlimited testimony as to its high dietetic and digestive value. According to the leading analysts "it is equally well suited for the growth and development of the young, and for the sustenance and nourishment of the old." The manufacturers have instructed their representatives here to supply samples to medical men, who advise us that all applications for samples will be promptly met.