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EDITORIAL

ONTARIO HOSPITALS.

The report of the Inspector of Hospitals shows how very extensive is the service rendered the Province by the hospitals of Ontario.

The number of patients treated during the year in the hospitals was 79,857. Of this number, 69,928 were admitted during the year, the remainder being made up of 4,471 carried over from the previous year, and 5,458 births. There were 4,739 deaths, or a percentage of 75.98.

The money expended during the year amounted to \$3,250,607, and of this sum \$670,733 was expended on capital account. The average cost per patient per day was \$1.47. The provincial grants amounted to \$278,187, or .081 per cent. of the total expenditures. The revenue of the hospitals from all sources amounted to \$256,510, or \$692,097 less than the total disbursements.

The report emphasizes the need for sanitarium for consumptives. During the year only 1,600 patients of this class were admitted into charitable institutions. Ten years ago the death rate from tuberculosis was 148 per 100,000, while last year it was only 90. Last year it caused 7.3 per cent. of the total death loss, and ten years ago 11 per cent. It is urged that there ought to be a sanitarium in each country or group of counties. These sanitarium would have a splendid field for operation, both in the way of prevention of the disease, and in the curing of incipient cases.

THE CARE OF THE WOUNDED.

The magnitude of the task of the proper care of the wounded often fails to dawn upon the minds of those who are best able to judge. So far as Britain is concerned there will be anywhere from 1,000,000 to 1,500,000 men engaged in France and Belgium. In the many battles that must be fought, the numbers of wounded will be very great.

Proper provision for the care of these must be made. This means ample hospital accommodation, and the requisite supplies for these. The Queen's Canadian Hospital at Shorncliffe is to be enlarged from 55 to 180 beds, and the Duchess of Connaught Hospital at Cliveden will be increased from 100 to 500 beds. But even this will be hardly noticed in the great needs of the near future. The urgent need for hospitals must be in France and Belgium. It is there that the wounded must mainly be cared for.

It is with pleasure that we notice the readiness with which the Canadian universities have offered to man a number of hospitals. McGill University, Toronto University and Queen's University offers have been accepted; and the Western Hospital in London has made an offer to furnish the staff of surgeons, physicians and nurses for another. It will be needed and should be accepted.

At the battle of Neuve Chapelle a few weeks ago there were about 8,000 British wounded to care for. This alone would tax the accommodation of half a dozen good sized hospitals. There is not the least fear that there will be too many hospitals.

Then comes in the very important task of supplying these hospitals with the bandages and dressings they shall require. Here will come into view the place that is being so well filled by the women of this country. In every hamlet, town and city there are groups of ladies who are busily engaged in this splendid work. Much more could be done with a more efficient organization. Additional volunteers could be secured, and these could be instructed as to what are most needed and how to prepare them.

Then comes the still further duty of giving. Those who can give, and there are very few who cannot, should come forth promptly and supply these willing workers with the money and the goods they must have if the hospitals in Europe are to render good service. No one should wait to be asked. This is not a question of giving once and then done with it. It is a case of continuously giving until the war is over. The supplies that go this month will soon be used up, and must be followed up by an even greater supply next month.

The greatest war economy of the day is that of the efficiency of the hospitals. By this means the sick and wounded are the more speedily and surely restored to health and are again enabled to return to duty. Just recall the awful conditions that prevailed during the Crimean war! The demand of the hour is money, goods, workers. There is enough of these in the country, and let the hospitals have them.

CANADIAN DOCTORS IN THE ARMY.

The British War Office has issued a statement of its willingness to accept Canadian doctors for service in the Royal Army Medical Corps. The terms are 24 shillings a day and rations, or an allowance in lieu of rations. Thirty pounds are granted for an outfit and seven pounds for a kit. Sixty pounds of a gratuity will be paid at the end of the war, and free passage to England.

It is stated in the circular that doctors from New Brunswick, Nova Scotia, Prince Edward Island and Quebec will be eligible; or doctors in other Provinces who may be registered in these Provinces. Ontario now has reciprocity with Britain and practitioners of Ontario should therefore be able to qualify.

To join the Canadian Army Medical Corps, which is one of the necessary conditions of enlistment for service abroad, the following qualifications are necessary: The applicant must be a British subject; he must be recommended by the officer commanding, and the assistant director of medical services of the division or district; he must be certified as medically fit for service; must be of an age under 45 years (the War Office limit, however, is placed at 40); must be a practitioner registered in the Dominion or one of the Provinces.

In order to overcome the difficulty presented by the lack of reciprocity with the English authorities in the matter of registration, as is the condition at present in some Provinces of the Dominion, the circular points out that the War Office states it is willing to accept Canadian university graduates registered in Canada, provided the Provincial Medical Boards which do not already reciprocate with the General Medical Council, express a desire for reciprocity with the Council. This course, it is pointed out, must be taken in relation to the General Medical Council, otherwise the law forbids acceptance, and Provincial Medical Boards are reminded that until this is done many medical practitioners in their districts are ineligible. To avoid delay, the circular advises that notification of a desire for reciprocal relations with the General Medical Council should be made by cable.

CARE OF THE FEEBLE-MINDED.

In the midst of the heavy responsibilities resting upon all of us at the present moment, we must not overlook the immediate needs that lie around us for our own people. One of the most urgent of these needs is the providing of proper ways and means of caring for the feeble-minded.

Quite recently a deputation waited upon Hon. W. J. Hanna and Hon. Dr. Pyne. The deputation, which was headed by Mayor Church, was received in a very sympathetic manner, and was informed by Mr. Hanna that the need existed and that something must be done. He suggested that a committee be appointed to formulate a workable scheme. A committee consisting of Dr. Hastings, a Controller, a member of the Board of Education, and one from the charities was agreed upon.

It is now quite evident that something will be done for this unfortunate class of persons. The question mainly is one of finance.

THE CHIROPRACTIC BILL.

This bill was thrown out by the committee of the Ontario Legislature. So far so good; but we have frequently warned the medical men of this Province that they must be on the alert against all such legislation. When the osteopaths sought to secure special legislation some three years ago, the chiropractors appeared and said that all they wished was to be left alone. It then became apparent that they would ask recognition at no distant date.

The position of the profession of this Province to assume is that no legislation of this sort be granted to any body of persons who may desire to practise in some special way, until the whole subject of the treatment of diseases and injuries has been gone into thoroughly by a commission..

When such a commission has been appointed, and Mr. Lucas repeated the promise of the late Sir James Whitney to this effect, the duty of the medical men will be to appear before the commission and give such evidence as will be convincing. This can best be done through the many medical societies, such as the Ontario Medical Association, the Toronto Academy of Medicine, and city and county solicitors.

THE CANADIAN MEDICAL ASSOCIATION.

On another page we give the letter sent out by the executive to the effect that owing to the conditions brought about by the war, the annual meeting will not take place this year. We entirely concur in this action. Under present conditions a meeting in the extreme West could only end in failure, or a very partial success at best. The attention of the medical profession is too much engaged in other momentous ways to enable it to give due attention to the affairs of this gathering.

ORIGINAL CONTRIBUTIONS

A MEDICAL SLANDER CASE IN 1831.

BY THE HONORABLE MR. JUSTICE RIDDELL, LL.D., Etc.

IN *The Canada Lancet* of January, 1913, appears an account of a medical slander case in Upper Canada in 1827. It was tried before Mr. Justice James Buchanan Macaulay, who was himself the son of a medical man.

Four years afterwards in the same Court House at Niagara, before a different judge, another medical slander case came on for trial, which is of some interest,—perhaps more to the legal than to the medical profession.

Dr. Raymond received from the Governor a licence to practise, November 13th, 1825. As no record appears of his passing the examination of the Medical Board, it is probable that he was otherwise qualified, either by holding a diploma from a British institution or otherwise under the Act of 1827, 8 George IV., c. 3.

He was in June, 1831, called on to attend one John Cain, at Armstrong, near Niagara. He found him suffering from an abscess in the knee, which the doctor treated properly. But the patient had a much more serious trouble, which was diagnosed as pleurisy, and there is no reason to doubt the accuracy of the diagnosis. The doctor “bled copiously,” which was “usual in most cases.” John Wesley had recommended a glass of tar-water taken warm every hour, which was at least harmless, while the “Yarb doctor,” Samuel Thomson, prescribed tea of mayweed or summer savory, or a sweetened infusion of horehound leaves, equally innocuous. But with the regular profession then and for long after, the great panacea was bleeding.

The patient grew worse and his brother, in whose care he was, became dissatisfied with the medical man. He had no hesitation in saying openly that “the d—d old scoundrel might just as well take a pistol and blow his brains out as murder him by inches”—“if he dies, I shall always think he murdered him.” The doctor himself was full of hope, and did not think there was any necessity to send for another medical man, and for a time refused to do so. But the friends were insistent and at length Dr. Lafferty was sent for. Dr. Lafferty was one of the best-known men at the time in the district; born in New Jersey, the son of the Attorney-General of that Province, he became an army surgeon. Taking to wife in 1800, a half-breed Indian woman, he settled down to practise his profession at Drummondville. Without much medical learning, he was

of great natural ability and sound common sense. He became a member of the Legislature in 1828 for Lincoln and was defeated in 1834 by only one vote. He died in 1842, aged 65. "A fine old gentleman of the old Canadian school," and skilled in the old way, he had no use for new-fangled methods or instruments, and could never be brought to see the advantage of the stethoscope (which he called the "telescope"). Dr. Lafferty could not at that stage say whether Dr. Raymond's treatment had been proper, but he administered purgatives to the patient then *in extremis*. This treatment gave some relief, but there was no hope, and the unfortunate man died.

The brother was very violent; he told Dr. Raymond that he was not fit to practise, he was an impostor, an old woman, he knew nothing and should not impose himself, being so ignorant, upon the public. This kind of talk the angry brother repeated to several and at length Dr. Raymond brought an action against him for slander.

The case came on for trial at Niagara, September 17th, 1831, before Chief Justice John Beverley Robinson (not yet a baronet or even a C.B.) The facts above detailed were clearly proven and it would seem that nothing could save the defendant. But in those days the law and practice were full of traps for the unwary, and often a litigant with an honest and unanswerable case failed by reason of some slip of his attorney. We have changed all that and now it is impossible for anyone to lose an honest case through the mistake of his lawyer in reducing his claim to writing.

In those days what is now called the "Statement of Claim" was called the "Declaration." It contained a statement of what the plaintiff claimed, and had to be headed or entitled in some "Term of Court." This was intended to indicate the time when, or at least before which, the wrongs complained of were committed. The declaration was always to be entitled after the time when the cause of action was stated to have accrued. Moreover, if the heading were "General," i.e., "Trinity Term," "Michaelmas Term," etc., this was read as the first day of term, and the cause of action was therefore alleged as accruing on or before the first day of the term. If it was intended to allege the cause of action as accruing during the term, the declaration had to be entitled of a subsequent day in that term, and not of the term generally. All this learning may be read in the classic pages of Tidd (Uriah Heep's favorite author) 8th edition, Vol. I., p. 428, and is now as dead as Julius Caesar. The declaration in Dr. Raymond's case was entitled "Trinity Term, I. William IV." Trinity Term began that year (1831) on June 20th, accordingly the wrongs were by the "General" heading alleged to have been committed on or before June 20th. But the evidence dis-

closed that the words were uttered later, none of them before June 26th, and the plaintiff was "non-suited." He could pay the costs, amend his pleading and bring his action down for trial again, but it does not appear that he did so. He might also sue his lawyer for negligence and would almost certainly have succeeded.

A defect that was fatal in those days, a judge at the present would sweep aside with a contemptuous smile. Law has made in the eighty years almost as great strides as medicine. And it is pleasant to know that all the great advances made in either science have been made by those active in their profession.

RENAL CALCULI IN WOMEN, WITH REPORT OF A PYELO-LITHOTOMY IN AN UNUSUAL CASE.*

BY ARTHUR C. HENDRICK, M.A., M.B., F.R.C.S. (Edin.)

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STONE in the kidney is a condition of mid-adult life, operations for renal calculi being rare before the age of ten or after sixty years, the average in 28 cases in the General Hospital being 39.4 years.

Women are slightly less liable than men, 1 to 2 in the General Hospital, Toronto. Renal calculi belong more especially to the age of "stress and strain," often, however, with symptoms dating back to adolescence.

Either kidney may be affected. In 38 cases in this hospital, 20 cases were of the right kidney, 16 of the left kidney, and 2 cases were bi-lateral. Though at first uni-lateral, sooner or later both kidneys are affected, 50 per cent. of post-mortem returns being bi-lateral. At first the stone is uni-lateral, but later becomes bi-lateral.

Definition of renal calculus.—A renal calculus is an agglomeration (fusion) of crystals, held together by a cement and not crystallizations of certain inorganic salts. Hence one must trace the origin of the crystals in the urine and also the origin of the cement substance. Let us consider the cement substance first.

The cement substance is an "irreversible colloid," that is, one which does not re-dissolve when placed in a non-saturated solution. Hence the insolubility of renal calculi. This irreversible colloid is probably fibrinogen or fibrin, according to Schade, and therefore an inflammatory reaction is a necessary precursor of a calculus. This is not hard to believe, when one realizes that a single large oxalate crystal may in passing down from the kidney, cause all the typical signs of renal colic with hæmaturia.

* Read at the Section of Surgery, Toronto Academy of Medicine, 16th March, 1915.

The Source of the Crystalloids of the Urine.—These are: (1) Uric acid and urates. (2) Oxalates. (3) Phosphates.

The urine is essentially a solution of salts, its chemical and physical properties being those of a complex mixture.

It has been shown by Nerst that two salts having the same "ion"—or less accurately, the same base or acid in common, may mutually each decrease the other's solubility, whereas those salts which contain no base or acid in common may mutually increase each the other's solubility.

1.—*The Source of Uric Acid and Urates.*—Uric acid of which .8 grams are excreted in 24 hours does not exist as such in normal freshly voided urine, hence one must explain the nature of the original solution and the cause of the subsequent separation.

Uric acid probably is excreted by the convoluted renal tubules as the bi-urate or acid urate M.H.U. the most stable of the compounds of uric acid, and probably the most soluble.

The urinary excretion of birds is solid and in the form of the quadri-urates, which the late Sir William Roberts considered as the only physiological type of uric acid salt, whether in the blood or in the urine, but most recent chemical physiologists disagree with this statement.

Again, in the new-born infant certain uratic concretions are found in the kidney tubules which approximate to the quadri-urates, but these are explained by the fact that the liquid excretion is not yet fully established, whilst in the human adult, since the mechanism of excretion has become perfectly suited to the elimination of liquid urine, the uric acid will therefore tend to assume the more soluble form of the bi-urate.

Uric acid then is probably excreted by the convoluted renal tubules as the acid salt, the bi-urate.

In the presence of acid urine this bi-urate salt is precipitated as the quadri-urate. (${}_2\text{M}'\text{HU}-\text{MH}_2\text{PO}_4-\text{M}'\text{HU},\text{H}_2\text{U}-\text{M}_2\text{HPO}_4$). But in the aqueous solution the quadri-urates are very unstable and decompose into uric acid and the bi-urates. ($\text{M}'\text{HU},\text{H}_2\text{U}-\text{aq. H}_2\text{U}-\text{M}'\text{HU}$). It has been observed, however, that the neutral salines in the urine and its pigments inhibit this action.

Since the bi-urate is changed to the quadri-urate by the action of the acid urine, there is no more important fact to be remembered in the treatment of gravel and renal calculi than that uric acid cannot be deposited from alkaline urine, and that it cannot be deposited even prematurely in the renal passages in urine that is neutral or feebly acid.

Hence uric acid gravel or calculi may be due to the following causes::

A.—Excessive acidity of the urine.

B.—Excessive concentration of the urine.

C.—Deficiency in neutral salines.

A.—*Excessive Acidity of the Urine.*—(1) The diet is important. Meat since it increases the excretion of the acid sodium phosphate, the normal cause of the acidity of the urine, should be avoided and vegetables and fruits substituted since their acids are excreted as the carbonates in the urine, therefore reduce its acidity.

(2) Alkalies are given; e.g., potassium citrate.

(3) Dilution of the urine. Plenty of fluids are to be given; water, Vichy water, milk.

(4) Avoid too long intervals between food, since fasting increases both the acidity and the concentration of the urine. Since sleep is the equivalent of fasting, the measures of relief should be given towards the end of the day.

(5) Free evacuation of the bowels is important for this reason.

The tissue purins (C_5N_4) are probably synthesized from the proteins and the carbohydrates of the food, and by oxidation these purins, hypo-xanthin, xanthin, uric acid and urea are formed in successive stages, the final oxidation of uric acid to urea taking place in the liver. If this last step fails uric acid may be in excess. Also, it is possible that there are certain intra-cellular ferments in the liver which cause destruction of the uric acid, i.e., uricolysis. Therefore, defective action of the liver may leave the uric acid in excess because not changed to urea.

B.—*Excessive Concentration of the Urine.*—(1) Plenty of water; e.g., Vichy water, which contains sodium bi-carbonate.

(2) Free evacuation of the bowels; e.g., by calomel, and a saline as Carlsbad in the morning, which contains sulphate of soda.

(3) Regular daily exercise in the open air to promote the complete oxidation of the purins to urea.

C.—*Deficiency of Neutral Salines in the Urine.*—Since it has been shown that the neutral salines inhibit the change of the quadri-urates in the urine to the bi-urates and uric acid (MHU, H_2U —ap, $MHU-H_2U$), it is important in some cases to increase the salines in the food. This may be done by—

(a)—Taking more common salt with the food.

(b)—Increasing the meat in the diet, since meat contains the inorganic salts. For example, the frequency of stone in the children of the poor is thus accounted for, their diet consisting of bread, potatoes, etc., and very little meat. So in India, where rice is a staple food, stone is very common. Again, stone is uncommon in sailors, since they consume plenty of salt.

II.—*Oxalates*.—About $1\frac{1}{2}$ grains are excreted in 24 hours. The oxalates are derived from: (a) the food, (b) gastric fermentation, (c) pancreatic disease.

Most oxalates of the food are in the form of the insoluble calcium oxalate; e.g., in potatoes, beets, spinach, tea and coffee. The calcium oxalate is not absorbed as such, but probably is decomposed by the HCL, of the gastric juice, so two opposite conditions may arise, viz.:

(1) When there is hyperchlorhydria, i.e., excess of HCL., more of the oxalate will be dissolved, and therefore more will be absorbed.

(2) When a chlorhydria or hypochlorhydria, then with the HCL diminished if the diet consist of much carbohydrate there may be abundant fermentation of the fermentable carborydrate in the stomach or duodenum forming oxalic acid, which comes to the same thing as taking them in the food.

(3) When too much fat in the diet fatty acids may result and these combine with the oxalates to form soaps, which are absorbed.

However, when calcium oxalate crystals appear in a highly acid and highly-colored urine long after the urine has been voided, it is said to result from decomposition of urea and is of no clinical importance.

Endogenous production of the oxalates is very small. Generally oxaluria is an indication of a low state of health.

Patients with oxaluria often suffer from all the symptoms of unilateral renal calculi, to the extent even of hæmaturia, but postural treatment and X-rays are negative. Vesical irritation and frequent micturition may be prominent symptoms. In women the gynæcologist has therefore to be on guard not to put down backaches and vesical irritations to displacements or pelvic inflammations without first making a careful examination of the urine.

Oxalate calculi are the commonest calculi removed by operation. Before quantitative examination was made the uric acid and urates were thought most common.

Renal calculi are seldom composed of one salt, but like a geological formation give a vivid picture of the various stresses and strains through which the individual has passed.

Treatment.—Since the sources of the oxalates are:

1. The food.
2. Hyperchlorhydria.
3. Hypochlorhydria plus gastric and duodenal carbohydrate fermentation the treatment is indicated.

(a) Limit the amount of oxalate-containing food; e.g., rhubarb, tomatoes, and especially tea. The French look upon oxaluria as the

gravel of the poor. Since vegetables and tea contain much oxalates they should be limited and a generous diet of milk, eggs, and meat, except veal, allowed.

(b) To correct disorders of digestion—(i) By rest and change of environment. (ii) Plenty of hot water an hour before meals.

(c) Modify conditions of the urine so that it will not be favorable to the deposit of the oxalates. The acidity of the urine is to be increased by giving acid sodium phosphate 10 grains t.i.d, since this is the natural solvent of the oxalates. (ii) Give nitro-hydrochloric acid to relieve gastric or pancreatic insufficiency. (iii) Salts of magnesium may be given since Mg. forms a soluble double salt with the calcium and thus keeps it as a solution.

Both these conditions may be attained by a meat diet, since meat contains Mg. and increases the excretion of acid sodium phosphates in the urine. Magnesium may also be given as a mineral water; e.g., Kissingen, or Hunjadi water, but not Apollinaris, since this contains lime. Potassium is a valuable drug also, as a citrate. As a diuretic it dilutes the urine, and by combining with the calcium it forms a non-ionizable double salt, thus putting the calcium out of action (Martin).

The calcium oxalate calculus is usually single and on account of its physical appearance has been called a mulberry calculus. It is usually mixed with uric acid, and dark brown or black from admixture of blood pigment. Calculi are seldom found embedded in the kidney substance unconnected with the calyces or pelvis of the kidney.

They are formed either in the calyces or the kidney pelvis.

III.—*Phosphates*.—About 2-6 grams are excreted in 24 hours. The phosphates of Ca. and Mg. constitute about one-third of the total phosphates in the urine. They are derived chiefly from the food.

They are only soluble in acid urine, for when the urine is faintly acid, neutral or alkaline they precipitate as "white gravel" the amorphous calcium magnesium phosphate. When the alkalinity is due to ammonia, as in decomposition of urine they form the ammonium magnesium phosphate or triple phosphates.

Phosphaturia is due to undissolved earthy phosphates of Ca. and Mg. derived largely from the food, and is usually an indication only of diminished acidity of the urine. For example, after a meal rich in the salts of the vegetable acids or carbonates there may be temporary phosphaturia.

In children, owing to intestinal inflammation, calcium is not eliminated by the bowel, and may appear in the urine as calcium phosphate (stellar phosphate) without increase in the total phosphatic excretion. This may cause scalding and frequent micturition.

In nervous and neurotic patients, or those under a severe nervous strain there may be phosphaturia owing to diminished formation of HCL on account of general depression of metabolism.

Some patients are dyspeptics and suffer from hyperchlorhydria, constipation, dull aching in the loins, scalding urine and frequent and unsatisfactory micturition.

In the severe cases called phosphatic diabetes, besides pain in the back there may be aching in the supra-public region, and cystitis may arise, but there is no decomposition of the urine. Pronounced phosphaturia may be a prelude to bacteriuria, especially when accompanied by dyspepsia and intestinal derangement of long standing.

Treatment.—(1) In children the diet should be poor in calcium salts and a partly meat diet substituted for the milk.

(2) In adults in depressed metabolism give the patient the mineral acid she cannot make; e.g., nitro-hydrochloric acid.

(3) Diet.

(4) Change of surroundings, relief from worry. When triple phosphates are present, relieve the cystitis. When hyperchlorhydria is prominent, then administer fruits and vegetables more freely in the diet.

Calculi of the earthy phosphates are greyish white in color, hard, with irregular or crystalline surface, and are found as stated in neutral or slightly alkaline urine.

It is an interesting point of contrast that neurasthenics tend to oxaluria when they have very acid urine—and to phosphaturia when the acid is not very acid.

PYELOLITHOTOMY.

History of the case. Mrs. H., age 44, was admitted to the Private Patients' Pavilion of the General Hospital June 16th and gave the following history: Has been married 24 years, two children, no miscarriages. Always well until six years ago, when she began having trouble in the left side. The family physician considered the symptoms as probably due to a movable kidney and treated for such, but without much success. The symptoms would improve for a time and then return. The recurrences became more frequent until almost every month the patient would have attacks of pain in the left side with nausea and distress generally. Finally, during the last year the condition got much worse and the patient noticed the urine smoky in color during and after the attacks of pain.

I was asked to see the patient on June 7th and found the following: The patient has been confined to bed for the last week, looks pale and worried and is losing weight. She lies mostly on her back with the

left leg flexed. She cannot lie on the left side and has been unable to do so for some time. The patient complains of pain and tenderness in the costo-muscular angle, and also over the kidney area in front. The pain radiates down the front of the thigh, but not directly across the abdomen.

The abdomen does not move freely on respiration. On palpation marked tenderness was elicited in the costo-muscular angle, and over the kidney area in front.

The right kidney was not tender on palpation and nothing unusual could be made out. This is important in view of what the X-ray shows, for one will see the right kidney pelvis completely filled with stones and the kidney atrophied.

A diagnosis of stone in the left kidney was made, but before operation was advised, X-ray and renal insufficiency tests were made.

The skiagrams were taken only after the bowels were thoroughly cleared by the usual routine.

The plate shows the right kidney pelvis packed with stones and the kidney substance atrophied. The left renal pelvis shows a small stone opposite the tip of the transverse process of the second lumbar vertebra.

In order to confirm the findings of the X-ray, which has an error of about 5 per cent. in most experiences, Dr. Warner Jones was asked to perform the phenol-sulphone phthalein test of the functional capacity of the kidneys.

Both ureters were catheterized and .6 mg. in 1cc. of solution of the phenol sulphone phthalein given, and the urine collected in test tubes. The coloring containing a 25 per cent. solution of NAOH.

The coloring appeared from the left ureteral catheter in 6 minutes, but no urine whatever was collected from the right ureteral catheter at any time. This indicated that the right kidney was not functioning, and so confirmed the X-ray findings. Forty-five per cent. of the phenol sulphone phthaleine was secreted in 2 hours, a fair average, since Kelly and Burnam, in five cases of uni-lateral kidney, the other having been removed by operation. Give an average of 39.1 per cent. in 2 hours.

Under the circumstances there was only one thing to be done, viz., to remove the calculus from the functioning kidney. The question was as to the best method. Until recently the operation of election has been nephrotomy, i.e., the usual lumbar incision to expose the kidney, and then incision through the kidney substance to open into the calyces and the renal pelvis. The objection to this procedure is that one damages the renal parenchyma, and that is a serious affair when the

patient has but one kidney, so it was decided in this case to perform the operation of pyelolithotomy, i.e., remove the stone through an incision in the pelvis of the kidney.

The kidney was exposed by the usual lumbar incision. The perirenal fat was not increased in amount and there were no unusual adhesions. The kidney was readily brought out through the incision, lower pole first. The kidney was increased in size considerably, due probably to a compensatory hypertrophy. The posterior aspect of the renal pelvis was cleared of fat and on palpation a small stone was felt near the opening of the ureter. An incision one-half inch long was made in the long axis of the posterior aspect of the renal pelvis, taking care to avoid any unusual vessels. A scoop was passed down for about 2½ inches, when the stone was sounded, and by manipulation lifted out through the renal incision. Since the X-ray showed a single stone, nothing more was done in the way of exploration. The incision in the renal pelvis was closed with No. 2 iodine catgut and Halstead's mattress suture, no especial attempt being made to cover the incision with fascia. The kidney was returned to its niche, and a small rubber drainage tube passed down to lower end of the niche in case of oozing, and the rest of the wound closed in layers with iodine catgut sutures and a few tension sutures of silk worm.

The drainage tube was removed in 24 hours, a small strip of gauze left in another 24 hours, then everything was removed. There was no leakage of urine and the drainage opening closed in four or five days. The wound healed by first intention and the patient left the hospital on July 8th in good form. She has been perfectly well since, has been gaining in weight and has no returns of her symptoms.

REMARKS.

1. The unusual history of complete destruction of the right kidney without symptoms.
2. The great hypertrophy of the left kidney.

I have made an analysis of the cases during the last five years of the women patients admitted to the General Hospital, with a diagnosis of stone in the kidney. There were 38 cases in all. Of these 19 were operated upon. In 10 cases stone was found on the right side. In 7 cases stone was found on the left side. In 1 case stone was found in both kidneys. In 1 none in either kidney.

Operated upon with hæmaturia, 3; oxaluria, 2.

Not operated upon with hæmaturia, 1; oxaluria, 4; urates, 2; phosphates, 2.

X-ray was positive in one case, no stone found.

THE TREATMENT OF LOBAR PNEUMONIA.*

BY J. ROGERS, M.D.

Brucefield, Ont.

BEFORE proceeding with the treatment of pneumonia I should like to quote a paragraph that I read not long ago on the Prognosis:

"It is held by many authorities that primary uncomplicated pneumonia is a self-limited disease tending to end in recovery; others have stated that in such cases the mortality should be nil. But for pneumonia complicating other pre-existing diseases no such prognosis is given. One author believes that even in the latter cases when the cases prove fatal these are not due to the pneumonia, but to the underlying conditions.

"For example, cases treated for pneumonia complicating cirrhosis of the kidney or liver, diabetes, carcinoma, advanced arterio-sclerosis or extensive pulmonary tuberculosis, when resulting in death, the fatal issue it seems was not due to the pneumonia, but to the pre-existing conditions. But when pneumonia occurred in the course of a non-fatal acute or chronic malady, the pneumonia in itself did not render the prognosis unfavorable."

I think we might divide our cases into three classes: (1) Those that die through the malignancy of the infection and will die do what we will. (2) Those that will get better with scarcely any medication; and (3) those that need careful medical aid and nursing to accomplish recovery. It is to this last class that our treatment must be mainly directed.

In the very earliest stage of the disease occurring in a healthy sthenic individual who has been seized with a chill followed by fever and an angry bounding pulse with marked anxiety and nervous excitement, *veratrum viridi* or *aconite* should be used in minim doses every half hour for five or ten doses until the patient's pulse becomes less angry and his skin moist. A hot foot bath at this time will also tend to relieve thoracic congestion. I also think a hypodermic of morphia has a good effect in quieting the patient and giving him a good sleep. If much pain in the chest is present apply mustard under the cotton wool jacket at intervals. A cathartic daily is advisable.

This treatment is limited in its application to the very beginning of the malady and to those persons who have a bounding circulation. It is absolutely contra-indicated in feeble subjects and after consolidation has taken place.

* Read before the Huron County Medical Association.

Babcock advises hygienic care of the room, disinfection of the excreta, mainly a liquid diet with the addition of HCL., which is usually deficient, and as much liquid as the patient can tolerate. Much medication is not desirable, and yet it may be well in some cases to stimulate the excretory organs by simple diuretics and diaphoretics, such as the bi-tartrate and citrate of potash, and when blood pressure is high sweet spirits of nitre. Nitro-glycerine or other nitrate preparations should never be used as a routine practice.

The effect of the pneumococcus poisoning on blood pressure seems to vary in different cases. Consequently the sphygomanometer should be used daily. Should cyanosis become unusually pronounced and indicate capillary paresis from the effect of the poison on the vaso-motor centre in the cord then vaso-dilators are distinctly contra-indicated, and adrenalin or cardiac stimulants such as digitalis should be used freely. This indication is especially urgent if Gibson's danger sign is present, namely, a pulse rate whose figures are higher than those of the blood pressure.

In the treatment of the fever unless it rises above 103 deg., does not require any special interference. When it does rise above 103 deg. it should be relieved by sponging. If the fever has a tendency to become excessive and if the heart's action be tumultuous an ice bag may be placed over the heart and this will be particularly useful if there is a tendency to pericarditis.

Tympanites is a symptom that at times proves a serious complication. When caused by the fermentation of food it can be relieved by diet, but sometimes it is a manifestation and result of the toxic paresis of the intestines, and is a formidable condition. In some instances it resists all attempts at its relief, but Babcock recommends as soon as this form of tympanites is suspected the use of an enema of asafœtida, 75 grs. in 3 ounces of yolk of eggs, and injected high up in the colon, which often acts as a powerful stimulus to contraction of the bowel.

Collapse is not of frequent occurrence in pneumonia, yet so alarming a condition that one should always be on the lookout for its early detection and should have suitable remedies at hand. Since a deceptive fall in peripheral temperature may usher in a collapse it should be the invariable rule to have the temperature recorded by the rectum. As soon, therefore, as coolness of the surface, increasing cyanosis and weakness of the pulse leads one to suspect approaching collapse prompt and energetic measures should be taken to ward it off. Stimulation is required and must be used freely and often. The asafœtida emulsion mentioned above is a powerful stimulant to the nerve centres and hence

to the circulation and respiration. In addition, heat to the surface, and a drink of hot coffee and a hypodermic of camphor are highly serviceable.

Nathan Raw (*Lancet*, March 9, 1912) has long been of the opinion that ordinary methods are insufficient in treating pneumonia. We require some weapon which will destroy the virulence of the pneumococci products and produce a rapid immunity against it. A vaccine, to be potent, ought to be prepared from the sputum or blood of a patient himself, but this is impossible as the disease is of so short duration that the patient would be either better or dead before a vaccine could be prepared. We are thus compelled to use a stock vaccine. In this we are at a great disadvantage because of the strains of pneumococci vary in their virulence so that we are not certain that we are using a vaccine prepared from the same infection as that with which we are dealing. In spite of this disadvantage the results of a stock vaccine are most valuable. Raw believes that the usual dosage recommended by some writers is too small, and to get the full effect it should be given in large doses and at the earliest possible moment after the onset. He considers the question of dosage the most important and the result of a large experience is convinced that the vaccine in itself is harmless and has never noticed anything but a good effect from its use. On the other hand in a great many cases an injection of a large dose is followed by a feeling of comfort and relief, associated by a rapid fall in temperature.

The diagnosis of a dilated and failing right heart can often be made by inspection. The face is congested and purplish, the jugulars are distended and the smaller veins swollen with blood. The dyspnoea is of an active type and very severe, the patient laboring for breath; both the ordinary and extraordinary muscles of respiration being in full play. On examination one finds the physical signs of a dilated right ventricle, the percussian dullness extending to the right of the sternum. The closure sound of the pulmonary valve is at first accentuated, later growing weak. The liver is enlarged and progressively enlarges and odema of the lungs is frequently present. The drug treatment requires the use of digitalin hypodermically in full doses; camphor, one to two syringe-fuls of 20 per cent. solution in olive oil. It is in such cases as these that venesection has given some brilliant results, and a recourse to blood-letting should always be considered. In later stages the blood pressure fails, the heart begins to contract at an increased rate and as the case progresses the pulse becomes arrhythmic, small and finally so rapid and thready that it is difficult to count. There is marked pallor of the face, with the general signs of collapse. The patient is delirious, often restless and finally stupor and coma supervene.

By way of prevention watch the pulse rate and especially the blood

pressure. If the pulse rate equals or exceeds the blood pressure, 2 to 5 grains of caffeine should be given every 4 to 6 hours, hypodermically. Indeed it is a good practice in all cases which from the outset are serious to give caffeine as a routine measure. If the evidences of a vaso-motor failure appear it is important to give in addition to the caffeine, adrenalin, 15 min. every 2 to 4 hours, intra-muscularly. Venous transfusion of normal salt solution is often a most useful measure and if used the adrenalin may be added to the salt solution. Camphor, hypodermically, is another good remedy, also placing a couple of ice bags on the distended abdomen often has the effect of slowing the pulse and lessening the tympanites.

The use of oxygen gas seems to give transitory relief and to diminish the cyanosis. It is harmless; its exhibition is very simple and the process need not be at all disturbing to the patient. The gas may be allowed to flow gently from the nozzle directly under the nostrils of the patient, or it may be administered every alternate 15 minutes through a mask.

I have not touched on the complications or the treatment of delayed resolution in pneumonia, which might well be considered in a paper by itself.

In conclusion I might say that with all our advances in medicine and surgery, very little progress has been made in the treatment of this disease, as witnessed by the appalling death rate, and until we can find a serum potent enough to destroy the virulence of the pneumococcus bacillus, so will it continue to be.

UNDERSTANDARD LIVES.

BY JOHN FERGUSON, M.A., M.D.

THE examination of applicants for life insurance has now become such an important subject of discussion in journals and at medical societies that the following brief suggestions may prove of value to those who are called upon to pass professional opinions upon those who seek the protection assuring companies offer.

In the first place, there are applicants who present a short-lived family history. The relatives that have died have fallen many years short of the expectancy. There is no special tendency to any disease, but there seems to be a lack of endurance. An estimate should be made of how far such family histories fall short of the expectancy of life, on some reliable recent table, such as that of the National Fraternal Congress. Suppose that the deaths of the applicant's relatives point to lowered expectancy to the extent of eight years. The applicant him-

self is in his thirty-third year, and by the National Fraternal Congress table should have an expectancy of 35.4 years. Now, if we reduce this by eight years, we have an expectancy of 27.4 years, and this corresponds to age 43. The applicant, if accepted at all, should be charged the assessment rate corresponding with age 43, and not that for 33, his actual age of entry. His actuarial age of entry is 43. The reduction of eight years in his expectancy has the effect of rating him up ten years.

Let us now turn to another group of applicants, namely, those who have had syphilis. According to Gowers, Fournier, Florschütz, Blashko and others, the percentage of males infected throughout Europe ranges from 10 to 20. The results of investigations into the mortality experience of insured syphilitics in America and Europe show that it is at least 188 per cent. of the expected. To admit one who has had this disease on the same rate as a healthy person who has not been infected is clearly unfair to the latter. It has been advocated that the age of syphilitics should be rated up 5 years, and a candidate of 35 years be called upon to pay as if he were 40. But this is clearly not enough to meet the extra death rate. When one considers all the dangers of the disease, such as gummata, paresis, tabes, arterial degeneration, and so on, I contend that the average expectation of life of syphilitics is reduced by at least ten years. Now, let us see how this would apply. An applicant seeks admission at the age of 40 who has had this disease. The expectation of life at 40 is 29.9 years. If this be lessened by 10 years the real expectancy becomes 19.9, and this corresponds to age 53. The candidate would have to be charged for this age, if admitted at all.

The next group of applicants that should receive special consideration are those who use alcoholic beverages or are engaged in the manufacture and sale of alcoholic stimulants. Outside of those who use alcoholic stimulants in the most moderate manner, this class yields a much higher mortality than the strictly temperate and abstaining members. As a class these applicants must be rated up from 10 to 20 years, according to the amount consumed, and the kind of occupation they follow in connection with the liquor trade. Thus a man of 40 who admits that he consumes alcohol in moderation should be rated up to 50 and pay as of this age. Those engaged as bartenders, employed in breweries and distilleries in the manufacture of liquors, and travellers engaged in the sale of alcoholic products, should be rated up 20 years. Those who lie between the moderate users and the bartenders, or such as imbibe to the extent of periodic drinking bouts, should have at least 15 years added to their ages, so that a man of 30 would be charged the rate for one of 45.

Those who are overweight and underweight come in for consid-

eration. Let us deal with overweights first. An increase of 5 to 10 pounds over the average for the applicant's height and age will yield an increase of 3 per cent. over the expected standard, then the death rate will go up after mid-life at least 20 per cent. When the weight is 25 to 45 pounds greater than the average, the mortality for 43 years of age and upwards will be increased to the extent of 40 per cent. If the person carries from 50 to 80 pounds too much weight, the mortality for ages 40 and over will be increased about 60 per cent. Such applicants should be rated up so that the assessments they shall be called upon to pay will meet this extra mortality. In such cases they must be regarded as of such an age as will increase their assessments corresponding to their ages and by amounts ranging from 25 to 75 per cent.

With regard to underweights it may be remarked that they do not yield an extra mortality after mid-life. Prior to the age of 40 they yield a higher mortality than the expected. As a class they should be rated up so as to increase their contributions about 15 per cent. By underweight we mean from 20 to 45 pounds below the standard for age and height.

All applicants with a high blood pressure should be subjected to a very careful examination before admission. In the younger ages of 20 to 35 blood pressure is not of much importance, but after 35 it becomes increasingly more important year by year. The three fingers of a careful examiner will fairly well determine whether or not the pressure is too high. If there are any grounds for thinking that it is the real pressure should be taken by an instrument. At 30 the systolic blood pressure should be about 125mm., and gradually rise until at 45 it is 130mm. Numbers much in excess of these should make the examiner search with special care for chronic kidney disease, cardiac trouble, syphilis, apoplexies in the family, and commencing hardening of the arteries. A constant pressure of 150mm. points to some pathological process, even though it may not be discovered.

Fistula in Ano is a condition that must receive careful consideration. Many persons who have suffered from this malady have made a perfect recovery, and do not again experience any discomfort nor ill-health from it. But the fact remains as a matter of clinical and acturial observation that persons who have had a fistula will yield a death rate of about 30 per cent. greater than the expected. It is difficult to adjust a system of ratings up to suit such cases, and there remains little else to be done but decline these applicants. If, however, say five years have elapsed without recurrence and the health is good, the proposition might be

accepted if there be a freedom from tuberculosis in the family history, this disease being the danger in such applicants.

Chronic discharges from one or both ears is a subject that frequently comes before the medical officers of societies. While it must be admitted that there are a few examples of discharge from the mucous membrane of the ear to which but little fear need be attached, nevertheless, a chronic running is a very dangerous disease. If the perforation of the membrana tympani be marginal, the discharge purulent and offensive, and tenderness found over the bone behind the ear, disease of the mastoid bone may be assumed. This is a very serious condition, and carries with it many risks of intracranial disease. As it is very difficult to make a positive diagnosis between the almost harmless and rare condition of chronic mucous membrane disease and chronic disease of the bone, the only safe course is to refuse all such cases.

Glycosuria is a form of understand risk that must be dealt with firmly. There is an unquestionable tendency for this condition to be hereditary. It is of more importance if cases of it have appeared among the brothers and sisters of the applicant than in the case of the parents or grandparents. Much has been written upon the subject of temporary glycosuria. There is such a thing as glycosuria arising from the consumption of more sugar than the system can assimilate; but who is to tell that these cases are persons with a low assimilation limit, and in a short time may become examples of permanent diabetes. This being the case, there appears to be no other course but that of rejecting all such proposers. There are a few who might be safely accepted, but as we cannot for a certainty tell the safe ones from the unsafe, we must decline all. This course is all the more incumbent upon the medical departments if there is any tendency to the disease as revealed by other members of the family having suffered from it. Some will accept under the following conditions, namely, that sugar had been detected in the urine on some former occasion but is absent on several examinations now; or that it is present now, but disappears in a short time without special treatment or dieting. There is grave danger in going thus far. Of the many tests for glycosuria there is none better nor more easily used than Haine's.

The presence of casts and albumen have given rise to much discussion. A good deal has been said on physiological albuminaria. This term should not be used. When albumen appears in the urine there is cause for it. If in a young person, the cause may be quite temporary and insignificant, such as a slight fever, over-exertion, anxiety, errors in diet, or some infection in the system. A few subsequent tests may clear the case up and show that the person is free from organic disease. But

the presence of albumen in the urine is a very different affair when it is found on several tests accompanied by casts and evidences of ill-health. Or, if it appears about mid-life, as this is the period when the chronic forms of kidney disease tend to come on. These cases must have their urine tested several times for albumen, casts, blood corpuscles and specific gravity. If followed out in this careful manner, many of the so-called temporary cases will be found to be chronic and organic.

Casts in the urine have come in for much discussion. So eminent an authority as Osler has said that a few hyaline casts at mid-life are of no more importance than a few grey hairs. This must be taken with much hesitation, as an example will show. A party wished a large amount of insurance. On examination hyaline casts were found. The same on a second and third test. On a fourth test granular casts were found, and on a fifth some blood corpuscles, while the sixth gave a very low specific gravity. The rule must then be laid down somewhat thus: Casts or albumen where only one test can be secured call for rejection; albumen in a young person disappearing and on several tests no return may be accepted; while casts call for several tests, and if found on subsequent tests, with traces of albumen, a low specific gravity, or some blood corpuscles, the applicant must be declined.

The following is one of the most reliable tests for albumen: Picric acid, 5 parts; citric acid, 10 parts; sodium chloride, 100 parts; distilled water, 1000 parts. A small portion of this is placed in a test tube, and some of the filtered urine gently allowed to flow into the tube. A white zone soon forms if any trace of albumen is present.

Few diseases call for more careful consideration than a history of pleurisy in the applicant or his family history. It has now been established that at least 80 per cent. of all cases of pleurisy is of tubercular origin. The biological method of the injection of animals with the contents of the pleural cavity, the clinical observation of cases of pleurisy and their future history, and the postmortem findings all go to prove the foregoing statement. In order that a society may escape the 80 per cent. of bad risks, it must be specially careful about accepting any applicant who gives the history of attacks of pleurisy. One might lay down the rule of only one attack, three years ago without return, and not much effusion at the time of the attack, and certainly not requiring aspiration, need not bar his application.

Cardio-vascular diseases call for refusal in about all cases. Valvular disease, endocarditis, myocarditis, and hardening of the arteries all tend to become worse. They very materially shorten life, and may give rise to so many complications that there is no means of rating them

up so as to place them on an equality with select lives. The future of persons with such diseases is too uncertain to enable us to make any trustworthy calculations regarding it.

Inflammatory rheumatism is one of the diseases that causes much anxiety to all medical officers of societies and companies. It is not necessary to go into this subject at any great length. The disease is now known to be one of the infection maladies. With regard to the acceptance of these cases, it might be laid down as a rule that if the applicant has had only one attack, not more recently than two years, and that the condition of the heart is quite normal, he may be accepted. On the other hand, if the attack is more recent than two years, or if he has had two or more attacks, his application should be refused. Persons who have had more than one attack yield a death-rate of at least 25 per cent. above the expected. If accepted at all, they should be rated up about ten years.

From what has been said it will appear that several plans might be adouted. One of these is placing a lien against the certificate. This suits those cases where the extra risk is in the early years of membership, as applicants with tuberculous family histories. But societies cannot very conveniently adopt this method. A second plan is that of imposing an extra premium or assessment. This plan is best suited to those cases where the extra risk runs through the whole of life, as in some unhealthy occupations. The third plan is that of regarding the applicant as a certain number of years older than he really is. In other words, rate him up to such an age that his expectancy from the adjusted age will be correct for him. This plan specially suits such applicants as yield a higher death rate than normal in the later years of life.

THE OPERATIVE TREATMENT OF ACUTE GLAUCOMA.*

BY G. HERBERT BURNHAM, M.D., (Tor.); F.R.C.S. (Edin.), Etc.

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THIS patient's case, a woman aged 53 years, is brought to your notice, as it is a typical form of acute glaucoma. Being an old patient of mine, the previous condition of the eyes was known to me, and was normal, save hyperopia with astigmatism and presbyopia, which was corrected. Previous to this visit I had not seen her for three years or more.

* Read before the Section of Ophthalmology and Oto-Loripigology. Academy of Medicine, Toronto, Canada, December, 1914.

The attack of acute glaucoma of the left eye came on suddenly during the night with severe pain.

As I was out of town when she first came to consult me, she went to another oculist. He ordered Eserine and sent her back to me.

The condition of the eye was brawny, swollen lids, conjunctiva a deep red, swollen and flesh-like, Tn, cornea steamy, very shallow A.C., p. three-quarters dilated though eservine was being used, just p.l. in the extreme outer field.

An operation was urgent.

It was a case in which to do an indectomy either with a keratome or a graefe knife would be very difficult, and one in which the trephine operation seemed to be the best procedure. This I arranged to do.

However, instead of making the opening by using the trephine after the manner of Col. Elliot, I felt it was a case in which the Bardsley sclerectome would be more satisfactory. I incised the conjunctiva and turned it down over the cornea and spilt the layers of the cornea—as is usually done.

The conjunctiva, though it did not bleed, as I used epinine and cocaine, remained red, swollen and stiff. This condition would have rendered the manipulation of the trephine after the Elliot method, troublesome.

I now passed the keratome of the instrument through the sclera. It came out into the A.C. in front of the iris and could be plainly seen. Then I pressed down the spring that operates the punch and made *instantaneously* the trephine opening at the sclero-corneal junction. The aqueous flowed out and swept the round piece, cut out by the trephine, on to the eyeball. The opening was sharply and clearly defined. Beneath was seen the iris-tissue, lying quite flat and showing no tendency to bulge. As in these cases an indectomy is advised to be done, I performed one, entering through the opening made by the *keratome*, not through the *trephine* opening. The indectomy was satisfactory, a good coloboma being made and the iris-tissue fell back into its proper place in the A.C. Then a stitch united the conjunctiva, as it was so swollen and stiff.

The result was excellent, the vision is 6/9 and 6/12 two letters of; Tn.; f.g.; normal A.C.; O.D. rather pale.

My own feeling is that the Bardsley sclerestome enables one easily and accurately to make the trephine opening. Also it reduces to a

minimum pressure upon the eyeball in making the trephine opening. This in various forms of glaucoma is a valuable consideration on account of the tendency to displacement of some of the structures of the eye. It also lessens the likelihood of infection later on.

It is generally advised to do an iridectomy, which in Elliot's operation has to be made through the trephine opening. It is also said that the ragged edges of the iris adhere more or less to the margins of the aperture, which is beneficial, as it aids in keeping the aperture permeable. This view is strongly condemned by Elliot, and is justly so, for it seems to be an improper surgical practice to have the iris-tissue thus kept close to the conjunctiva and hence liable to infection later on, if an abrasion or weakening of the conjunctiva occurs. Whereas the use of Bardsley's instrument enables the iridectomy to be made through the keratome incision and thus there is not the same tendency to the adhesion of the iris to the edges of the trephine opening as when made through the latter.

The trephine opening, being so clean cut, also lessens the danger of entanglement of the iris.

Hence the danger of subsequent infection is minimized, one may assuredly say. Mr. Bardsley's sclerectome seems to be a very ingeniously contrived instrument, and one that enables the trephine opening to be done quickly and satisfactorily; and also avoid the likelihood of the small, round piece that is excised getting into the A.C., an awkward complication.

Also it lessens the danger of interfering with the vitreous chamber.

Also the size of the trephine is 1.50mm., which for the following reasons, as given by Mr. E. Treacher Collins, is the best:

"I have found, experimentally," he says, "that the time of junction between clear cornea and opaque sclerotic is 1mm. interval to the position where Descemet's membrane commences to split up into the fibres of the ligamentum pectinatum. If therefore a 1.50mm. trephine is used and the centre of it is placed over the margin of the cornea on the surface of the globe, a complete disc of Descemet's membrane will be found on the posterior surface of the piece excised." "This," he goes on to say, "is important, for the first essential factor in the formation of a permanent filtration scar is to establish a permanent gap in the endothelium lining Descemet's membrane."

Adding to these the other advantages mentioned previously, I think the use of this instrument helps to place this very skilfully conceived and thought-out operation of Col. Elliot upon a more reliable basis, and weakens the force of many of the objections urged by some oculists. —*The Ophthalmic Record*, February, 1915.

CURRENT MEDICAL LITERATURE

ACIDOSIS AND DYSPNŒA IN RENAL AND CARDIAC DISEASES.

Dr. F. W. Peabody reports (in the *Archives of Internal Medicine*) on a clinical study of the causes of dyspnœa in cardiac and renal disease. Investigations have shown, he says, that the essential exciting stimulus to the respiratory centre is the hydrogen-ion concentration of the blood. The variations in the carbon dioxide content, and consequently of the alveolar air, are but the result of the attempt on the part of the organism to keep the hydrogen-ion concentration at a constant value. The carbon dioxide in the blood rises as the amount of non-volatile acid falls, and the carbon dioxide falls as the production of other acids rises. The writer concludes from his series of cases that the mild acidosis often associated with uncomplicated chronic nephritis is compensated for by the increased excretion of acids by the kidney. It is only in uremia that non-volatile acids accumulate in the blood in sufficient amount to cause depression of carbon dioxide tension in the alveolar air. The development of acidosis bears little relation to the accumulation of non-protein nitrogen in the blood or to the output of phenolsulphonephthalein. Acidosis is not the direct or sole cause of dyspnœa in cardiorenal disease. A high-grade of acidosis may exist without causing noticeable change in respiration, and in some cases the degree of acidosis is not sufficient to explain the dyspnœa on the basis of increased stimulus to respiration alone. Increased excitability of the respiratory centre is probably an important factor in the causation of cardiac dyspnœa. Such an increase in excitability may well be caused by a lowering of the oxygen tension and be dependent on an inadequate blood-flow.—*Boston Medical and Surgical Journal*.

MANAGEMENT OF THE PNEUMONIA PATIENT.

Dr. S. Baruch contends (*Medical Record*) that present teaching, to treat the patient, instead of the disease, is a great advance over the spoliative methods of the antiphlogistic period of medicine, and also over the happily brief antipyretic period. The author protests against overfeeding, especially in croupous pneumonia, where the attack is usually ushered in suddenly in a healthy individual and is limited in duration. He prescribes from two to four ounces of ice water (not above 40 deg. F.) every two hours; which results in diuresis. Pure

air is vital; that such can be procured only out in the open is fallacious. In his practice the sashes of one or more windows are removed, and blinds, which may be kept more or less open as required, substituted. The temperature of the room should not be above 60 deg. F., except when for any purpose the patient has to be exposed. As to purgatives, his preference is for calomel, from six to ten grains, dry in the mouth and washed down after rinsing; this destroys the pneumococci in the mouth and removes all fermenting or toxic material from the gastrointestinal tract. The dose is not repeated. While the coal-tar preparations are no longer dominant in pneumonia, he would not hesitate to order one dose of antipyrine (6 or 8 grains) in a case of insomnia with unyielding high temperature, to tide over the danger. For hyperpyrexia with nervous symptoms there is no procedure equal to a tub bath of 90 deg. F. lasting half an hour; the patient being afterwards wrapped in a linen sheet and allowed to dry in bed. For children a ten-minute friction bath at 95 deg. F., rapidly reduced to 80 deg., ordinarily answers all purposes. The only local application which he constantly uses is a wet compress at 60 deg. F., applied around the chest every hour, after it has become warm. This is made of two or three thicknesses of old linen cut to fit the thorax from the nucha and clavicle to the last rib, and, after having been wrung out of water at the temperature named, it is spread upon a piece of flannel cut in the same shape, but one inch larger. The employment of a compress of this character probably affects the pulmonary circulation directly, while in the toxic forms of pneumonia the hourly stimulation of the central nervous system thus produced is evidenced by a brightening of the countenance and the disappearance of dullness of intellect. Its pronounced action in promoting excretion by the kidneys, in conjunction with the ingestion of small quantities of ice water, is enhanced by its intermittence. The antithermic effect of the compress may be considerably augmented by permitting a larger quantity of water to remain in the linen, though not sufficient to interfere with the patient's comfort by dripping and chilling. Moreover, cold applications to large cutaneous surfaces increase phagocytic action. There is clinical proof, extending over many years, to show that the management of the pneumonia patient as described results in a remarkably small mortality.—*N. Y. Med. Journal.*

MELITURIA IN INFANTS SUFFERING FROM NUTRITIONAL DISORDERS.

Dr. Oscar M. Schloss, of New York, considered primarily the nature and significance of the reducing substance which commonly appeared

in the urine of infants affected with nutritional disorders. The sugar which was used in metabolism was carried by the general circulation, and obviously the sugar which appeared in the urine, was derived from the blood sugar. According to the results of recent work, the normal blood sugar in infants ranged from 0.07 to 0.11 per cent., figures which were practically identical with those obtained for adults. There was a tendency for the blood sugar to maintain a constant level, but striking changes might occur after the ingestion of carbohydrate food. There was often a definite increase in the blood sugar shortly after a meal, which reached its maximum in from one to one and one-half hours and then decreased. This increase might be effected by starch as well as sugar, though the increase was slower and of less degree. Owing to this fact the blood for examination was withdrawn about three and one-half hours after a meal. There was a direct relationship between increased blood sugar and melituria. As a rule a continued increase in blood sugar led to an excretion of sugar in the urine, although this effect might not be immediate. Often the melituria was preceded by the hyperglycemia for some time. A detailed consideration of the significance of increased blood sugar could be of little benefit since there were many essential factors still unknown or under discussion. It seemed safe, however, to assume that hyperglycemia meant a disturbance in the balance between mobilization and consumption of sugar, provided that the patient was afebrile and the diet normal. The detection of a reducing substance in the urine of infants affected with gastroenteric disorders was by no means a recent finding. Finkelstein and Meyer were led to attach great importance to the melituria in nutritional disorders. They divided the cases into two groups: 1. Those in which the appearance of lactose in the urine was considered to be indicative of an intestinal lesion through which lactose was absorbed before it was split by the inverting enzymes of the intestinal secretion. 2. Those cases in which galactose was found in the urine, and it was thought that the underlying cause was a diminished sugar tolerance, the liver probably being at fault.

Dr. Schloss's work consisted in the study of the blood and urine of 235 babies. The preliminary tests of the urine were made by the reagents of Benedict and Nylander, and if the reducing substance was present in sufficient quantity further tests were carried out to determine its nature. There were forty normal infants, whose blood sugar was normal and who were free from digestive disturbances, and none showed the presence of sugar in the urine. The remaining 195 cases represented nutritional disorders ranging from the milder disturbances to those of severe intoxication. For the sake of convenience the cases were

roughly divided into three groups, mild, moderate and severe. Doctor Schloss demonstrated by means of charts that there was an association between the increased blood sugar and the presence of sugar in the urine. As a rule the cases with melituria showed hyperglycemia. As to the nature of the sugar in the urine, in most instances the percentage ranged from 0.05 to 0.1 per cent. In such cases a determination of its nature with any degree of accuracy was impossible. In twenty-seven cases the urine at some time contained one per cent. or more of sugar, and tests made to determine its nature showed that it was usually galactose or dextrose. Lactose occurred, but not alone, being always associated with galactose.

The important facts brought out by this study were: Melituria was always accompanied by an increase in blood sugar and the sugar in the urine was not a monosaccharide. These results indicated that a gross lesion of the intestine was not a direct cause of the melituria, but that the direct cause was a lowered tolerance to sugar. Definitely to determine this tolerance, tests were made, the results of which showed conclusively that there was a lowered tolerance to sugar in the nutritional disorders.—*New York Medical Journal*.

PRACTICAL POINTS IN ABDOMINAL SURGERY.

Dr. T. Kennedy Dalziel (*Glasgow Medical Journal*) considers ulceration of the stomach a serious condition and fatal hemorrhage occasionally follows it. He is of opinion that operation is indicated in recurrent hemorrhage. Temporary hyperacidity of the stomach may follow indiscretions of diet and this condition is intensified by undue retention of the food in the stomach. Alkalies and modification of diet have helped some cases. Tumors of the stomach are for the most part malignant, sarcoma being rarely seen. The symptoms of carcinoma may be extremely vague. There may only be a slight loss of appetite with a gradual inability to take much at any time, accompanied by a gradual loss of weight and strength. The treatment is surgical and should be as radical as circumstances will permit. Chronic interstitial enteritis is characterized by violent colic, vomiting, occasionally escape of blood from the bowel, and constant presence of mucous in the stool. These symptoms recur at intervals and during the attacks of pain there may be a slight rise of temperature. The prognosis is bad and the condition demands surgical interference, resection of the part of the intestine chronically inflamed and thickened being performed. The cases somewhat resemble tuberculous enteritis, also Johne's disease, in which an acidfast bacillus similar to the tubercle bacillus has been found but

which does not cause tuberculosis when injected into guineapigs. The etiology of the condition is obscure. Intra-abdominal adhesions occur mostly at the four corners of the abdomen. They may be the cause of enteroptosis as the result of chronic constipation. At times, on account of the obstruction produced, blood and mucous appear in the stool and when on examination a mass is felt, the diagnosis of malignant growth may be made. The treatment is surgical.—*N. Y. Med Jour.*

BELGIAN WAR LOSSES.

According to Figaro of Paris the Belgian losses since the beginning of the war have been about 25,000 killed, 52,000 wounded, 35,000 captured, and 32,000 interned in Holland. It is interesting from the medical standpoint to note the popular error with regard to the direct mortality of warfare. The idea that a country can be depopulated by war on a large scale and under modern conditions is true to a small degree and, in a somewhat indirect way. Anyone who holds this idea and who studies the statistics finds the direct mortality almost disappointingly small, although for humanitarian reasons, he will hesitate to use such an expression. The full military strength of any average population is about a quarter of its total numeric strength; that is to say, half will be males and of these, half will be included between the ages of 20 and 55. With allowance for disabled men and those required as non-combatants, it is only under stress that the military strength will reach 25 per cent. of the total population. At 15 per 1,000 mortality per annum, the average deaths in four months for Belgium, whose population is about 7,500,000, would be nearly 37,500. The direct mortality from warfare is about twice the peace mortality for the entire male, adult population. This is, of course, a serious increment but probably not so important numerically as the increase of mortality among non-combatants, from exposure, fatigue, excitement, insufficient nourishment, etc. Belgium has been depopulated temporarily, to a much greater extent than by direct mortality of war, since it is estimated that about 2,000,000 have taken refuge in France and about 1,000,000 in Holland and England. Even if the war were now over, the mortality of non-combatants would continue at a high rate for a year or two more.—*Buffalo Medical Journal.*

CONTROL OF PROSTITUTION.

Dr. G. Shearman Peterkin, of Seattle, concludes a recent paper on Police Control of Prostitution as follows:

In other words, teach the prostitute:

(e) Why, according to the laws of nature, venereal diseases are dangerous to her, to her health, and to society.

(2) The clinical symptoms of venereal diseases, and the means of controlling them.

(3) The means of preventing venereal diseases, and of controlling infection when it is present in herself or she sees it present in her patrons.

(4) The worthlessness of a macroscopic examination and the value of a microscopic examination to herself—why no physician can state truthfully that disease is gonorrhoeal by simply looking at the sexual organs or discharge, but must examine the discharge with a microscope.

(5) The use of the speculum and tampon to the inmates of assignation houses, that tampons may be used and frequently changed, and thus infection prevented, especially when intercourse is indulged in during existence of a chronic infection or when menstrual period is present.

(6) That men should use glass urinals in the bedrooms instead of the usual vessels—thus the presence of shreds, etc., in the urine will indicate to the woman the possible presence of gonorrhoea, the necessity of taking extra precautions, etc.

Such hygiene instructions will illustrate the character of the means that are within the power of the law to prescribe and the police to enforce, because they aim to mitigate and prevent an evil without transgressing the rights of the individual as recognized by law. They see disease as it is, not as we would like to have it. But especially they do not attempt to abrogate the principles of an eternal law, the law of sex, whose mandates man must accept.—*Southern California Practitioner*.

RADIUM IN THE TREATMENT OF CANCER.

The Columbia University has recently issued the first annual report of the George Crocker Special Research Fund for the investigation of the nature and cure of cancer. It indicates the general lines on which research has been conducted under the director, Professor Francis C. Wood, since the laboratory was opened in December, 1913. The working staff consists of a director with five assistants. From a summary of the report published in the *New York Medical Record* of December 5th, we gather that a special study has been made of the action of radium and X-rays on tumor and normal tissues growing in culture media. The results show such discrepancies that the director insists on the necessity of great caution in drawing any conclusions, and deprecates

hasty generalizations as to the sensitiveness or lack of sensitiveness of tissues to the action of these agents. A large series of experiments has been made with the object of testing the action of radium on primary tumors in mice, which are said to correspond very closely with tumors in man. The results have not shown that radium has any great therapeutic effect on such growths. Radium has also been used on a considerable scale on patients in hospitals, and it is hoped in this way to collect data on which an accurate judgment as to its therapeutic value may be based. Investigations with certain colloidal silver preparations, highly vaunted in Germany as well as in the United States as of great value in the treatment of malignant disease, have shown, according to Professor Wood, that these substances have no effect on cancer either in man or in animals.—*British Med. Journal.*

ACUTE LOBAR PNEUMONIA.

It is convenient to describe four stages, those, namely, of (1) hyperemia or engorgement, (2) red hepatization, (3) gray repatization, and (4) resolution. *First stage of splenization.*—The lung is injected, dark red, and heavy, and pits under the finger; on pressure, there exudes a frothy serum tinged with blood and slightly aerated. The lung still floats in water. *Second stage or red hepatization.*—The part involved is solid and friable, presents a granular or red granite appearance, and sinke in water. The elveoli are filled with a coagulated exudation, which shows under the microscope fibrin, leucocytes, red corpuscles, proliferated alveolar epithelium, and pneumococci. *Third stage or gray hepatization.*—The lobe has now the appearance of gray granite, the lung substance is softer and more friable; no pressure, a dirty purulent fluid exudes. The gray appearance is due to four factors: (1) Decolorization of the red blood corpuscles; (2) obliteration of the alveolar blood vessels from pressure; (3) fatty degeneration of the coagulated material; (4) great infiltration of leucocytes. A more advanced stage, in which the lung tissue is bathed in purulent fluid, is known as purulent infiltration. It is probably inconsistent with life. *Fourth stage or resolution.*—Resolution of the inflammatory exudation is brought about principally by absorption (autolysis), but partly by liquefaction and expectoration. Pneumonia may affect a lobe, or the whole of a lung, or it may attack both lungs. Double pneumonia occurs in about 10 per cent. of cases. Different parts of the same lung may at the same time show different stages. There is always some degree of pleural inflammation over the affected area. Modern enlargement of the spleen is very common.—Wheeler and Jack's *Handbook of Medicine.*

PERSONAL AND NEWS ITEMS

Ontario.

Dr. G. Sterling Ryerson, Canadian Red Cross Commissioner, has been in Britain for some time, and recently crossed to France to inspect the work of the Red Cross in that country. He is also visiting the Canadian hospitals on the continent.

All will be deeply grieved to learn of the death of Lieut.-Col. G. C. Ryerson, killed at Langemarck. He was a son of Dr. G. Sterling Ryerson, of Toronto. A second son was wounded in the same engagement.

Dr. and Mrs. J. T. Gilmour were the recipients of an illuminated address and a Pathephone, one of the newest styles of phonographs, recently on the occasion of Dr. Gilmour's removal to Guelph. The presentation was made by members of the Parkdale Methodist Church, of which Dr. Gilmour was a most prominent member.

Sixty-five Queen's medical students and graduates have already volunteered and been accepted for No. 5 Stationary Hospital, which Queen's is supplying for overseas service. Prof. W. T. Connell, Queen's bacteriologist, may accompany the stationary hospital as sanitary officer. Dean Connell, of Queen's Medical College, has already received about half a dozen applications from doctors who express a desire to join the R.A.M.C. and serve in hospitals abroad.

It was announced that Western University, of London, has decided to equip a full hospital unit for service overseas with the Canadian troops and offer it to the Dominion Government, as has been done by the University of Toronto, Queen's University and other educational institutions. Those behind the scheme are confident of success in the raising of the unit. Scores of physicians, nurses and surgeons throughout western Ontario have offered their services in this regard.

Captain R. J. Gardiner, Kingston, will succeed Lieut.-Col. H. R. Duff as Director of Medical Services of No. 6 Divisional Area, the latter going overseas with the 21st Battalion.

Captain Dr. Amyot, Provincial Bacteriologist, and Drs. Palmer, Frazer and Hodge, of the 2nd Division, paid a visit to Belleville to investigate the cases of spinal meningitis in the 39th Battalion. There had been two deaths and a number were ill. Dr. Amyot thought there was no need for alarm.

Dr. J. W. S. McCullough, Provincial Officer of Health, has been appointed assistant sanitary expert of the International Joint Commission on Waterways. As executive head of the Provincial Health De-

partment, Dr. McCullough during the past two years has been in close touch with the work of the commission in investigating the pollution of boundary waters.

Hon. Dr. Pyne has recovered from a rather severe attack of la grippe, which he contracted while on a visit to Ottawa.

Ontario Health Officers' Association, fourth annual conference, at Peterboro, May 25th and 26th, 1915.

The late Dr. William Britton left an estate valued at \$40,950. His wife has applied for probate of the will.

The Hamilton Health Association held its annual meeting recently. The report of the year's work at the Mountain Sanitorium was submitted. The capital expenditure was \$29,569. There was an overdraft of \$8,000, which it was thought the Government grant was to meet. The association has assets amounting to \$119,031.

Nine physicians and one dentist, of Peterboro, who have the qualifications for the Army Medical Corps, are willing to serve in any hospital of the Allies, including Serbia. Fifteen nurses have volunteered to go. The Government has accepted the offer and will equip the hospital. The citizens of Peterboro have undertaken the expence of maintenance. The doctors remaining at home, and the lawyers, have agreed to furnish \$100 a month. Other organizations will assist.

Lieut.-Cols. G. S. Maunsell, W. Hallick and H. M. Jackes have been appointed to look into the securing of suitable and ample accommodation for Canadian soldiers that may be invalided home on account of wounds or sickness.

Quebec.

Prof. J. George Adami, M.A., M.D., LL.D., F.R.S., F.R.S.S., McGill University, has been granted the temporary rank of lieutenant-colonel while employed as medical historical recorder of the Canadian expeditionary forces.

Notre Dame Hospital, of Montreal, cared for 2,474 patients during the year 1914.

Dr. Reni Herbert, superintendent of St. Paul's Hospital, Montreal, has resigned after seven years' service.

Dr. Ferand Perras, of Montreal, has been selected for service in Serbia. The Serbian Government will select a few more. There is a waiting list of 100.

A few days ago H.R.H the Duke of Connaught inspected the McGill University Base Hospital, which is under the charge of Col. H. S. Birkett. Degrees were conferred on 19 who are going with the hospital.

From Abroad.

Capt. J. C. Calhoun, M.D., of Toronto, is now attached to a Boulogne military hospital, and rendering excellent service.

Wounded of the Canadian expeditionary forces are to be taken to the Duchess of Connaught Canadian Red Cross Hospital at Clevedon, Taplow, England, when possible, according to word reaching the military authorities. Comforts and supplies should be sent through the Canadian Red Cross Commissioners, 12 Cockspur Street, London, S.W.

A complete field hospital formerly belonging to the U. S. army, was shipped recently to the American Ambulance Hospital in Paris. The complete unit with its tents, operating tables, cots, medicines, disinfectants, instruments, food supplies, stoves and filters, weighs 16,000 pounds, can be transported on three motor trucks and can care for 108 wounded men at once. Fifteen American automobiles and American doctors and nurses have been detailed to operate it.

A testimonial banquet was tendered Dr. A. Jacobi by his friends and admirers under the auspices of the Bronx Hospital and Dispensary on the occasion of the eighty-fifth anniversary of his birthday, on May 6, at the Hotel Astor.

The Samuel D. Gross prize of \$1,500 has been awarded by the Philadelphia Academy of Surgery to Dr. John Lawrence Yates, of Milwaukee, for an essay on Surgery in the Treatment of Hodgkin's Disease.

Over three million dollars have been disbursed for the relief of our profession in Belgium, but the need is still great. Do not forget the Medicine Fund.

British life insurance companies have paid war claims of almost \$10,000,000 to relatives of soldiers and officers killed during the first seven months of the war. One company alone has had to meet eight thousand claims.

Dr. Ewing, of St. Louis, has raised a vigorous protest against the too frequent removal of the tonsils. He contends that they are protective organs and are nestling places for phagocytes. It is a serious matter to remove the tonsils from young persons.

In a discussion at the Royal Society of Medicine, London, much emphasis was laid upon the value of the bath in the treatment of sick and wounded soldiers. It was pointed out that in many cases convalescence was greatly hastened by the aid of baths.

Miss Muriel Thompson, of the First Aid Nursing Yeomanry Corps, has been personally decorated by King Albert with the Order of Leopold II. for bravery in the field in rescuing wounded from trenches under heavy shell fire.

William Potter, president of Jefferson Medical Corps, Philadelphia, visited American Ambassador Page concerning a project to place a unit of thirty surgeons and physicians in a hospital in France to care for 1,000 wounded men. Dr. Potter had been in conference with Dr. William Osler in the same connection.

Over twenty so-called medical offices in New York were closed and fifty-four "medical heads" and their employees were arrested in raids that were executed in various parts of the city recently.

Surgeon-General Jones has returned to London from a visit to the trenches in France, and finds the health of the Canadians excellent. So far there has not been a single case of enteric. Dr. Nasmith, Toronto, is enjoying his work as analyst, and winning great praise for his efficiency. The General finds the hospital accommodation in France splendid, and with the opening of the Convalescent Home at Bromley, Kent, Canada will soon have 7,000 beds in France and England.

OBITUARY

JAMES SPENCE, M.D.

Dr. James Spence died at Wellesley Hospital 19th April after a short illness. He was a very well-known practitioner in Toronto and was a charter member of the Toronto Western Hospital. Born in Wellington county in 1854, Dr. Spence graduated in medicine in the University of Toronto in 1884 and started to practise in the city two years later. In his graduating year he married Miss Hambly. He was a member of the Board of Education from 1895 to 1904, being elected as chairman for one year. In 1898 he contested a Toronto riding in the Liberal interests for the Federal House. Dr. Spence was an elder of Chalmers Presbyterian Church and is survived by a widow, one son and one daughter. He had been ailing for some time and about three weeks before his death returned from the South, where he had been on a trip for his health.

GEORGE FORD, M.D.

The death occurred in the General Hospital, Stratford, on 19th April, of Dr. George Ford, who for the past few years has been a practitioner of that city. He formerly practised in Shakespeare for 8 years. Dr.

Ford graduated from the Toronto University as a silver medalist in 1906, following which he spent two years of study in England and Scotland. He is survived by his wife, who was a daughter of Mr. Warner Brodrecht, of New Hamburg, and his little son Jack. A special train was chartered by the Masons of Stratford to attend the funeral, which took place in Listowel, his former home.

VINCENT C. CORNWALL, M.D.

Dr. Cornwall, of Omemee, died on 12th March, at his home, at the age of 84. He was a graduate of Victoria University, and had practised in Omemee for over 40 years.

GEORGE WILLIAMS, M.D.

Dr. George Williams died in the Toronto General Hospital on 2nd March. He graduated from Queen's University in 1913. He was the youngest son of the late Dr. Williams, of Allenford.

W. J. PASSMORE, M.D.

Dr. Passmore died at Toronto a short time ago. He formerly resided in Toronto. His remains were interred at Rockwood.

A. A. DAME, M.D.

Dr. Alexander A. Dame, of Toronto, died very suddenly a few weeks ago while on his way to attend the funeral of a friend. He was a general practitioner for many years, but some years ago took up a special practice on diseases of the eye, ear, nose and throat. He was in his 68th year.

BOOK REVIEWS

PRINCIPLES OF HYGIENE. THE NEW (5th) EDITION.

Principles of Hygiene: For Students, Physicians and Health Officers. By D. H. Bergey, M.D., First Assistant, Laboratory of Hygiene, and Assistant Professor of Bacteriology, University of Pennsylvania. Fifth edition, thoroughly revised. Octavo of 531 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915. Cloth, \$3.00 net. Sole Canadian agents, The J. F. Hartz Co., Ltd., Toronto.

This very excellent work on hygiene has now reached the fifth edition, and is now well known to a large number of readers. The book

needs no introduction. The volume covers the various subjects discussed in such works. The author has a good style and we can very cordially recommend this book to anyone who wishes to make himself familiar with the essentials of hygiene. The volume is not too large and is, therefore, one peculiarly well suited to the needs of the student. This book should find a place on the shelf of everyone who has to do with public health matters.

CLINICAL DIAGNOSIS.

A Manual of Laboratory Methods. By James Campbell Todd, M.D., Professor of Pathology, University of Colorado. Third edition, revised and enlarged. 12mo. of 585 pages, with 176 text-illustrations and 13 colored plates. Philadelphia and London: W. B. Saunders Company, 1914. Cloth, \$2.50 net. Sole Canadian agents, The J. F. Hartz Co., Ltd., Toronto.

This edition has been very materially improved by the addition of 35 new illustrations. There has also been added a section of serodiagnosis. The section of cerebro-spinal fluid has been rewritten in the light of recent advances. The book contains 580 pages, is got up in very neat and attractive style. The paper is good and the type first-class. For those who wish to make use of the laboratory method in making diagnosis this is a most excellent manual.

PROGRESSIVE MEDICINE.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by H. A. Hare, M.D., and L. F. Appleman, M.D. March, 1915. Philadelphia and London: Lea & Febiger. Price, \$6.00 a year.

This number contains articles on Surgery of Head and Neck, by Charles H. Frazier; Surgery of the Thorax, by George F. Müller; Infectious Diseases, by John Ruhräh; Diseases of Children, by F. M. Crandall; Rhinology, by George B. Wood, and Otology, by Truman L. Saunders. From quarter to quarter these volumes appear. The publishers have paid great attention to this series and have made it one of the best publications of the day. The editor has secured the very best available contributors. This number is fully up to the high standard of all that have preceded it.

SURGICAL AFTER-TREATMENT.

A Practical Handbook of Surgical After-Treatment. By Alan H. Todd, B.Sc., M.S., F.R.C.S., Surgical Registrar and Tutor, Guy's Hospital. London: Edward Arnold, 1915. Price, 4s. 6d.

This is a new book on a very important subject. The author has given close study to its preparation and gives in its pages excellent

advice. The range of topics discussed are numerous, and this is made possible in a small work by the judicious condensation of the matter by the author. We have here a very useful guide on bandaging, shock, the dressing and care of wounds, many minor operations, etc. The advice laid down is sound and embodies the best methods of to-day, as detailed by a surgeon of experience. This is a very useful book for the hospital interne, the senior student, and the general practitioner.

LECTURES ON THE HEART.

Comprising the Herter Lectures (Baltimore), and an Address to the Faculty of Medicine at McGill University (Montreal). By Thomas Lewis, M.D., F.R.C.P., D.Sc., Physician, City of London Hospital; Assistant Physician and Lecturer in Cardiac Pathology, University College Hospital, London. New York: Paul B. Hoeber, 1915. Price, \$2.00 net.

Dr. Lewis's name is so well known in connection with heart diseases that it needs no introduction. He has made a great reputation for himself by his writings in this field of medical investigation. This small volume deals with "The Excitation of the Heart Wave," "The Electrocardiograph," "The Auricular Systole and Heart Sounds," "Dyspnoea in Relation to Acidosis," and "Cardiac Syncope." The book is a very handsome one. The matter it contains cannot be mentioned too favorably. Such work as this is rewriting the whole subject of cardiac investigation and should be read by all.

THE CLINICS OF JOHN B. MURPHY, M.D.: VOL. IV., NO. 1, (FEBRUARY, 1915).

The Clinics of John B. Murphy, M.D., at Mercy Hospital, Chicago. Volume IV., Number 1. (February, 1915). Octavo of 185 pages, 41 illustrations. Philadelphia and London: W. B. Saunders Co., 1915. Published bi-monthly. Price per year: Paper, \$8.00, cloth, \$12.00. Sole Canadian agents, The J. F. Hartz Co., Ltd., Toronto.

It would be somewhat presumptuous on the part of reviewers to enter upon any criticism of the surgical work of Dr. John B. Murphy. Dr. Murphy has made a place for himself second to none. He is in the first class, and far to the front in his class. He is a brilliant operator, a fluent lecturer, and a clear writer. Behind all this lies a thorough knowledge of the principles, practice and science of surgery. Some can recall the splendid fasciculi that were issued on surgery from time to time by the late Sir Jonathan Hutchinson. The surgical clinic by Dr. Murphy is of a similar high order. The illustrations are original and worthy of all praise.

MISCELLANEOUS

SURGICAL SECTION, TORONTO ACADEMY OF MEDICINE.

The Surgical Section of the Academy of Medicine held its March meeting on Tuesday, the 16th. Dr. S. M. Hay occupied the chair until the arrival of the chairman, when Dr. C. L. Starr took charge of the meeting.

After the reading of the minutes by the secretary, Dr. M. H. V. Cameron, Dr. Hendrick gave a paper on pyelolithotomy in an unusual case of renal calculi.

Dr. Howitt, of Guelph, then read a paper on the subcutaneous injection of oxygen as a treatment for tetanus, published in *Canadian Practitioner*.

Discussion. Dr. H. B. Anderson complimented the writer on the excellence of his paper. It seemed that the oxygen's chief effect was in delaying the symptoms rather than bringing about a cure. On the battlefield the results depend largely on the time the treatment is commenced. He asked Dr. Howitt how long the effect of the oxygen lasted?

Dr. Copeland thought there might be a difference in result between hydrogen peroxide and pure oxygen, owing to some impurity in the former.

Dr. McKeown was interested in the experiments. He was surprised to learn that the incubation period was so short, as in all the cases observed by him the patients did well for about a week and then showed signs of the disease. He wondered how much the mechanical result had to do with it inasmuch as the oxygen would press on lymphatics.

Dr. W. H. B. Aikins said that the Academy was much indebted to Dr. Howitt. He thought there should be further investigation in the laboratories.

Dr. Hay thought the oxygen preventive rather than curative. He cited the case of a man one week after injury developing local spasm in same leg. Amputation later was performed, but patient died of tetanus.

Dr. C. L. Starr referred to the recently recorded cases of malignant oedema treated by oxygen injections, with in many instances excellent results. He thought it would be well to give many injections.

Dr. Howitt in closing said that the tetanus bacilli remain local. He thought the different incubation periods were possibly due to the oxygen in wounds keeping the bacilli from growing. He admitted that the re-

sults were possibly vitiated in that he had not used washed tetanus bacilli, but the amount of toxin injected was very small. As far as the anti-tetanic serum was concerned it was merely preventive in effect. In reply to Dr. McKeown he did not think the mechanical effect was of any importance. As the oxygen is slowly absorbed it was not necessary to repeat the injection..

Dr. Primrose then read a paper on the Surgery of the Stomach and Duodenum in the Presence of Ulcer and Malignant Disease, an abstract of which follows:

The paper is based on 52 cases which have come under the author's observation. There were 12 cases of gastric ulcer, 15 of duodenal ulcer, 24 cases of gastric carcinoma, and 1 of the cardiac end of the œsophagus. The gastric cases presented the usual symptoms of pain, hæmatemesis and vomiting. Free hydrochloric acid is usually increased when the ulcer is near the pyloric end of the stomach, while it generally diminished when the cardiac end is affected. Some of the patients presented no signs till perforations occurred, one woman, aged 27, dying after an operation performed for such an occurrence eighteen hours previously. The relationship of carcinoma to ulcer of the stomach is discussed and reference is made to the results obtained at the Mayo clinic, where the majority of cancers of the stomach are believed to be engrafted on an ulcer. The author cited the case of a man aged 40, who had acute perforation, but owing to inability to close the opening because of the thickened wall, he resected the diseased portion, which turned out to be malignant. For this reason he favors the removal of the ulcer in all cases where it can be done safely.

Duodenal ulceration is nearly always of the chronic variety. The usual symptoms are pain, vomiting and blood by mouth or rectum. The pain comes two to four hours after food and is relieved by taking food. The attacks of pain and vomiting usually show a marked periodicity, with intervals of freedom from symptoms. As to operative treatment the ideal is a posterior gastro-enterostomy. He had been able to follow several of his cases over a period of years, and there can be no question of the permanent relief obtained in the large majority, if not all cases.

In arriving at a diagnosis of gastric carcinoma, valuable information, besides the absence of free HCL, and the presence of lactic acid or the Oppler-Boas bacillus may be obtained by the Barium or Bismuth X-ray plates. The supra-clavicular glands, according to Osler and McCrae, are enlarged in 15 per cent. of the cases. Unlike gastric cancer, duodenal ulcer seldom results in malignant disease, but the author cites a case where such actually occurred, the growth being removed suc-

cessfully two years after the first operation. His youngest patient was 31, his oldest 70 years old. The treatment consisted in partial gastrectomy, with removal of the associated lymph glands. This was done in five cases, followed by end to end suture or closure, and gastroenterostomy. Four of these recovered. Gastrostomy was performed in three cases.

Reference is also made to the importance of examining the ileo-caecal region when sufficient cause cannot be found for the duodeno-gastric distress, as in many such an adherent appendix or a kinked piece of ilium will be found.

Discussion. Dr. C. L. Starr thought that acute ulceration of the duodenum, following burns, was largely imaginary, as he had not seen one at the Sick Children's Hospital.

Dr. Anderson referred to a man with duodenal ulcer following burns, at the old Toronto General Hospital. He thought that when the ulcer fails to heal under medical treatment the case should be handed to the surgeon. He thought gastric and appendix diseases were frequently associated. One of his patients had gall bladder and appendix, both operated on at different times, but without benefit. The late J. F. Ross operated on him for ulcer, which Dr. Anderson had diagnosed, and patient made an excellent recovery. He thought the Mayo results as to cancer or ulcer very much over-estimated. He was of opinion that the very worst place to get statistics was from such a clinic, as they were dealing with selected cases.

Dr. Primrose agreed with Dr. Anderson that the cases were selected and in that way could not be taken to apply generally, but they were most valuable in that they all passed through the same sort of men.

GEO. EWART WILSON.

CANADIAN HOSPITALS IN FRANCE.

Two more Canadian military hospitals have been established in France, and a third will shortly be ready, making four all-Canadian hospitals on the continent. There is one general, one stationary and one casualty clearing station, commanded respectively by Lieut.-Col. Bridges, Major McKee and Lieut.-Col. Ford. Tents and huts are to be used for all three. In addition, arrangements are being made for the Toronto and McGill University and other units, besides the hospitals Gen. Carlton Jones is establishing at the convalescent camps at Shorncliffe. There will be sports and other amusements conducted by the Y.M.C.A., Canadian division. Training work is going on, but otherwise there is little

to report. The health of the men is remarkably good. Col. Hamilton, of Toronto, is doing good preventive work by means of an automobile laboratory.

Many wounded Canadians have reached England. Col. Hodgetts, the Red Cross Commissioner, has returned to London from France, where he found all satisfactory.

One Canadian unit which has done much strenuous work during the past few months is the Canadian military police. While the general behavior of the Canadians is said to be good, the police detachments keep a vigilant patrol in the regions of the hotels, and is on the alert at all hours.

VITAL STATISTICS OF TORONTO.

Death gathered in a heavier harvest than usual in Toronto during the month of March. For the same month a year ago deaths were 115 fewer, and the births, while under the mark for the past month, were more than double the deaths. The births for the month just ended do not double the number of dead. Cupid was loafing during last month, for there were 40 fewer marriages than in February.

There was a marked increase in deaths from spinal meningitis and tuberculosis. The figures are:

	Mar. '15	Mar. '14	Feb. '15
Births	1,239	1,211	1,043
Marriages	320	321	360
Deaths	686	571	533
Deaths from contagious diseases—			
Scarlet fever	3	6	0
Diphtheria	1	7	3
Measles	0	3	1
Whooping cough	3	4	1
Typhoid fever	0	3	1
Tuberculosis	41	27	21
Spinal meningitis	10	0	3

RELIEF FUND FOR BELGIAN MEDICAL AND PHARMACEUTICAL PROFESSORS.

Amounts not previously acknowledged: Dr. Paul Scott, \$25; Manitoba Executive Committee, 4th remittance, \$372.50; Dr. J. E. Elliott, \$11; Dr. Large, \$5; Dr. Grant, \$3; Dr. J. S. Burris, \$10; Dr. H. L. Burris, \$5; Dr. T. Kearney, \$2; Dr. J. H. Clements, \$3; Dr. Macklin,

\$10; Dr. Ford, \$10; Dr. Rutherford, \$10; Dr. Deacon, \$10; Dr. Quinlin, \$10; Dr. Smith, \$10; Dr. Montieth, \$10; Dr. Fraser, \$10; Dr. Gemmel, \$10; Drs. Rankin and Cannon, \$10; Drs. J. A. and L. Robertson, \$10; Dr. Forester, \$10; Dr. Maynard, \$5; Dr. Gregory, \$2; Dr. Nasmyth, \$2; Dr. Allen, \$2; Dr. Fasson, \$2; Dr. McKenzie, \$10; Dr. Armstrong, \$10; Dr. Hodge, \$10; Dr. Burley, \$10; Mr. Muir, \$2; Dr. Smith, \$10; Dr. Hurlburt, \$5; Dr. Smith, \$10; Dr. Fraleigh, \$10; Dr. Stanley, \$10; Dr. Brown, \$10; Dr. Knox, \$10; Dr. Tye, \$10; Dr. Campbell, \$10; Dr. King Smith, \$6; Mr. J. B. Dimmick, \$10; Mrs. J. B. Dimmick, \$10; Dr. Galloway, \$3; Dr. C. L. Starr, \$10; Dr. J. Livingstone, \$1; Dr. E. Boyd, \$5; Dr. W. E. Gallie, \$5; Dr. Alan Brown, \$5; Dr. G. A. Campbell, \$5; Dr. Roy Smith, \$1; Dr. Allan Baines, \$10; Dr. D. McGillivray, \$5; Dr. Alan Canfield, \$5; Dr. A. C. Bennett, \$2; Dr. B. Hannah, \$5; Dr. Joe Graham, \$5; Medical men of Guelph, \$60; Vancouver doctors and druggists, \$360; Dr. Hubbard, \$10; Dr. W. F. Clarke, \$5; Dr. F. N. G. Starr, \$25; Dr. E. A. Robertson, \$2; Dr. J. T. Gilmour, \$15; Dr. C. H. Gilmour, \$10; Dr. Deacon, \$1; Dr. W. J. Harrington, \$5; Dr. R. G. Cuthbertson, \$5; Dr. W. Rogers, \$5; Dr. Bottomley, \$5; Dr. Wright, \$5; Dr. Heaslip, \$2; Dr. Robson, \$2; College of Physicians and Surgeons, Manitoba, \$1,000; College of Physicians and Surgeons, Victoria, B.C., \$263; from Nova Scotia, per Dr. Lindsay, \$487; Dr. Park, \$10; Dr. Hall, \$10.

CANADIAN MEDICAL ASSOCIATION.

Vancouver, B.C., April 14th, 1915.

The Canada Lancet, Toronto, Ont.,

Gentlemen,—I am instructed by the Committee of Arrangements to inform you that the annual meeting of the Canadian Medical Association, which it was expected would be held in Vancouver, July 6, 7, 8 and 9, has been postponed until after the termination of the war.

The number of Canadian practitioners either in or contemplating active service abroad has made this step imperative, and after receiving innumerable letters from all over Canada, suggesting this action, it was finally decided upon.

It is expected that the next meeting will be held in Vancouver, as soon as practicable after the declaration of peace, the definite dates of which will be announced later.

We would be grateful if you would give this publicity in your journal. Thanking you in anticipation, I remain,

Yours truly,

FREDERIC BRODIE,

Local Secretary.

ONTARIO MEDICAL ASSOCIATION, PETERBORO, MAY 25th,
26th and 27th.

Below will be found the provisional programme:

Tuesday, May 25—Registration.

Wednesday, May 26—Morning—Registration.

Afternoon—General Session. Business Meeting.

Evening—General Session. President's Address. Address in Medicine.

Thursday, May 27—Morning—Sectional Meetings.

Afternoon—General Session. Business Meeting. Address in Surgery.

Evening—General Session. Symposium on Heart.

Friday, May 28—Morning—Sectional Meetings.

Afternoon—General Session. Business Meeting.

The following contributions have been promised:

- I. Address in Medicine, by E. C. Rosenow, Chicago—"Variations in Streptococci and their Elective Localizations in Man and Animals."
- II. Symposium on Heart:
 1. "Recent Physiological Findings in Heart Disease." T. G. Brodie.
 2. "Syphilis of the Heart and Aorta." A. McPhedran.
 3. "Auricular Fibrillation." A. R. Gordon.
 4. "Treatment of a Fever Heart." H. B. Anderson.
- III. Address by Adam H. Wright, Toronto—"Medical Education, with reference to the Specialties and Fee-Splitting."

Sectional Meetings:

I. Section in Medicine:

1. "The Relation of the Mental Hospital to the General Practitioner's Work." Harvey Clare, Toronto.
2. "Pyloric Stenosis—Diagnosis and Treatment." Alan Brown, Toronto.
3. "The Relation of School Children to the Tuberculosis Campaign." J. H. Holbrook, Hamilton.
4. "Serum Therapy." W. Goldie, Toronto.
5. "The Use of Radium and Trichloroacetic Acid in Dermatology." W. H. B. Aikins, Toronto.
6. "Observations on Blood Pressure." Dr. Emmerson, Goderich.
7. "Exophthalmic Goitre." Dr. D. Smith, Stratford.
8. "Clinical Manifestations of Cerebro-Spinal Syphilis." T. G. Phillips, Cleveland, O.

Papers have also been promised by Drs. Lyman, Ottawa; W. L. Bray, Raybrook Sanitarium, and J. W. Campbell, Kingston.

II. Section in Surgery :

1. "Some Observations on the Direct Transfusion of Blood." A. Primrose, Toronto.
 2. "Tendon Fixation in Infantile Paralysis." W. E. Gallie, Toronto.
 3. "Local and Spinal Anæsthesia." J. R. Parry, Hamilton.
 4. "The Saccular Theory of Hernia." Dr. Etherington, Kingston.
 5. "Simple Goitre and its Treatment." F. N. G. Starr, Toronto.
 6. "The Treatment of Pott's Fracture." George Wilson, Toronto.
 7. "Renal Tuberculosis—Its Diagnosis and Treatment." Robin Pearse, Toronto.
 8. "The Treatment of Arthritis." Dr. Seaborn, London.
 9. "The Principle of the Surgical Treatment of Exophthalmic Goitre." W. J. McDonald, St. Catharines.
 10. "Empyema." W. A. Brown, Chesterville.
 11. "Surgical Aspects of Neurasthenia." Dr. Fredericks, Peterboro.
- III. Section in Obstetrics and Gynæcology :

1. "Scopolamine-Morphine Narcosis in Obstetrics." J. G. Gallie, Toronto.
 2. "Serious Vomiting in Early Pregnancy." K. McIlwraith.
- Papers have been promised by Drs. E. K. Cullen, Detroit; J. R. Goodall, Montreal, and Geo. S. Cameron, Peterboro.
- IV. Section in Eye, Ear, Nose and Throat :

1. "The Treatment of Tuberculosis of the Larynx." Dr. Morton, Hamilton.
2. "The Use of the Electro-Magnet in Ophthalmic Practice." R. A. Reeve, Toronto.
3. "The Use of the Broncho-Tracheoscope and Oesophagoscope in Treatment." George Biggs, Toronto.
4. "Case Reports." F. C. Trebilcock, Toronto.
5. "Ocular Manifestations of Disseminated Sclerosis, with Case Report." Colin Campbell, Toronto.
6. "Demonstration of Accessory Sinuses Diseases." Angus Campbell, Toronto.

MEDICAL PREPARATIONS

A NEW PROTEID-SILVER COMPOUND.

An agent for the treatment of acute inflammations of mucous membranes is being announced by Parke, Davis & Co., and promises to meet a real need in medical practice. It is a soluble silver-proteid—an active germicide, astringent and sedative—and is offered under the name of Silvol. The product contains about 20 per cent. of silver. It occurs in scale form, has a dark metallic appearance, and is readily soluble in water. Silvol solutions are not precipitated by proteids or alkalies or any of the reagents that commonly affect other silver compounds in solution. They do not coagulate albumin or precipitate the chlorides when applied to living tissue.

The use of Silvol is suggested in the treatment of acute gonorrhoea and inflammatory affections of the eye, ear, nose, throat, vagina, etc. The product is supplied in bottles containing one ounce and in 6-grain capsules (bottles of 50). It is non-irritating and non-toxic in proper solutions.

“THE REASON WHY.”

A most attractive brochure has just been issued by the New York Pharmaceutical Company, under the above title.

This booklet presents the therapeutic uses of that well-known product, Hayden's Viburnum Compound, as well as some authoritative statements of its value in the treatment of dysmenorrhoea and other gynaecological conditions by doctors of renown.

A particularly comprehensive and clinching argument as to the therapeutic value of Hayden's Viburnum Compound is the authoritative text book references given therein, as to the medicinal value of the principal ingredients used in compounding Hayden's Viburnum Compound.

Upon request to the New York Pharmaceutical Company, Bedford Springs, Bedford, Mass., a copy of the booklet “The Reason Why,” will be sent you. Write them for it. It is well worth having on your desk for reference.

THE NEURASTHENIC INVALID.

Like the poor, the neurasthenic is "always with us," and while the stress and strain of modern life and living continue, the physician will be called upon to treat the more or less chronic invalid who exhibits all sorts of bizzare symptoms, in endless and kaleidoscopic variety. It is, of course, an easy matter to advise the physician to search out and remedy the operative cause of the disorder, but it is not always as easy to do this, especially when no organic changes are discoverable. While purely symptomatic treatment may be unscientific, it is usually essential, in order to gain and retain the confidence of the patient. There is, however, one pathologic finding in a large majority of cases, and that is anemia of greater or lesser degree. In some instances this may be found to be the essential cause of the neurotic symptoms. In any event, this condition should be corrected, and for such purpose there is no better remedy than Pepto-Mangan (Gude). When a hematinic is indicated for a nervous, cranky man, or a finicky, more or less hysterical woman, Pepto-Mangan is peculiarly serviceable, as the patient cannot consistently object to the taste, which is agreeable to everyone. The digestion is not interfered with in the least, constipation is not induced, and the blood-constructing effect of the remedy is prompt and certain. It is always worthy of trial not only in the anemia of the neurasthenic invalid, but also in all conditions of blood and tissue devitalization.

GLYCO-THYMOLINE FOR COLON FLUSHING.

Inactivity of the colon with its retention of fecal matter and consequent distention and interference with the work of the rectum is a prime factor in the causation of hemorrhoids, constipation, and, in the event of septic matter in the feces, auto-infection.

The rapid elimination of all septic matter, and the promotion of an aseptic condition of the intestinal canal is within the province of Glyco-Thymoline. One pint of a ten per cent. solution at a temperature of 100 deg. introduced well up into the colon will produce a quick evacuation without pain or discomfort. This, followed by three or four ounces of a twenty-five per cent. solution at the same temperature, retained, will speedily restore to normal conditions by inducing exosmosis, relieving pain by its anæsthetic property and promoting a general aseptic condition by its power of cleansing.
