May June 1921
Title page and index for vol 54

The Canada Lancet

THE OLDEST MEDICAL JOURNAL IN THE DOMINION

VOL LV STOUFFVILLE, CANADA, OCTOBER, 1921 NO 2

THE LANCET PUBLISHING COMPANY, 61 COLLEGE ST., TORONTO.

The Canada Lancet

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A Monthly Journal of Medical and Surgical Science, Criticism and News

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The Lancet Publishing Company

TORONTO, MONTREAL, NEW YORK, CHICAGO, LONDON, ENG.

ADDRESS ALL CORRESPONDENCE TO 61 COLLEGE ST., TORONTO.

The Publisher's Page.

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Pathology and Diagnosis of Pernicious Anemia

By Stuart Wilson, M. D.

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1. Definition of Pernicious Anemia

The diagnostic difficulties become less evident and less didactic, if we consider pernicious anemia a disease running a course of relapses and remissions, characterized by blood changes showing abnormal strain on the blood-forming function of the bone marrow and unusual red cell destruction; also accompanied by certain definite associated pathology of the digestive tract and central nervous system. In interpreting the blood pathology in pernicious anemia, we must remember that these changes represent a battle between abnormal blood cell regeneration and red blood cell destruction, shifting one way and another during the course of the disease.

2,— Discussion of Bone Marrow Function.

In normal health the bone marrow is constantly making new blood cells called blasts. These when properly developed find their way into the circulation and are called cytes. This is diagrammatically expressed as follows:

Hemoblasts
Hemoglobin containing cells
Megaloblast Normoblast Microblast.
Megolocyte Erpthrocyte Microcyte
Normocyte.

If there is a sudden demand upon the healthy bone marrow for a great increase in its product, showers of blasts or nucleated red cells are seen in the circulation. After a decided hemmorrhage nucleated reds are often seen. A pathological bone marrow delivers to the blood a variety of abnormal cells.

3,—Signs of Blood Cell Regeneration.

Cells, whose presence in the circulating blood indicate abnormal bone marrow function, are as follows; megaloblasts, microblasts, polychromatophilic cells, reticulated red cells microcytes and macrocytes, both round and oval. These cells may be called indicators of

unusual blood formation and are present in various combinations in many types of anemia. Reticulated red cells in the circulating blood show regeneration ability of the bone marrow. These are very young red cells which, when specially treated, can be visualized and numerically expressed. Polychromatophilia is an abnormal condition of the young cells in which the tintorial property is altered.

4— Signs of Blood Cell Degeneration.

Signs of blood destruction are lessened number of red cells, lowered hemoglobin content, small irregular types of red cells, increased fragility of the red cell increase of the urobilin and urobilinogen in the duodenal contents, feces and urine, increase of bilirubin in the plasma without blockage of the biliary tract and siderosis.

The evidence of blood cell destruction versus blood loss is determined mainly by indirect methods. The finding of blood derived pigments in increased amounts is that method: e.g., urobolin, urobilinogen and hemosiderin. The relationship between the degree of red blood cell destruction on the one hand and the ability of the bone marrow to functionate on the other, is the prognostic index for the moment in any given case.

5—Pathology of Nervous System.

In pernicious anemia certain associated pathological conditions are found.

Nervous system: Minnich in 1893 stated that 70 per cent of his cases of pernicious anemia showed cord lesions. Billings, in 1900, reports 40 of 41 cases showing clinical evidences of cord lesions. Woltmann reports 80 per cent. nervous system lesions. Autopsy findings shows a sclerosis involving the posterior and lateral columns of the cord and the same changes may be present in the brain.

Subjectively, Paraesthesia, numbness, tingling.

Obectively: Altered reflexes, patellars, tendon achilles, Babinski, two point test, pyschosis, ataxia, etc. The neurological signs may precede the blood picture by years, at times accompany it. The neurological symptoms do not bear a relationship with the remissions and relapses of the disease. When sclerosis is established it does not improve with blood improvement.

6,—Pathology of Digestive Tract

Hunter describes a glossitis occurring during the course of the disease in about 50 per cent of cases. This varies from a hot burning sensation on the interior half of the tongue to a real pain severe enough to hinder eating. The tongue varies in appearance from a thick-edged, reddened, slightly ulcerated tongue to a chronic atrophic glossitis with disappearance of the papillae. The acute raw tongue usually appears in cycles. An achylia or absence of hydrochloric acid is present in about 90 per cent of cases. It may be present with or without gastric symptoms. Also it may be present years before the blood changes make their appearance. The achlorhydria persists, independent of the course of the anemia.

7—Basal Metabolism

Basal metabolism often, and usually during the relapse, is diminished. It is possible that observa-

tions made at intervals would be of some prognostic value, indicating the approach of a remission or relapse. Non-protein nitrogen values are not appreciably varied.

8,—Pathology of Renal System

The kidney function as studied by the Mosenthal test shows the same variations as are present in chronic nephritis. These variations tend toward the normal when the anemia improves. Albumin and casts may be present, also edema. The spleen and liver are slightly palpable in 40 per cent of cases. At times acidosis occurs during the relapse.

9,—Pathology of Cardia-Vascular System

The circulation is often disturbed and myocardial changes are present, as evidenced by cardiac hypertrophy.

Murmurs are present at the base and various valve areas. The blood pressure is frequently low.

The gastric, neurological, kidney spleen, liver and cardiocirculatory pathology occasionally leads the clinician to a faulty diagnosis in the absence of the classical blood picture. Such diseases as gastric carcinoma, indigestion, constipation, neural syphilis, nephritis, chronic malaria, endocarditis etc., are credited as the entity until late in the disease when the full blood picture reveals itself.

In all cases the typical blood picture of pernicious anemia: i.e., high color index, presence of nucleated reds, large and small many large red cells oval shaped, myeclocytes, decreased platelets and degenerated reds, is present some time during the course of the disease.

10,—Diagnostic Scheme

Given a case of severe anemia without this typical blood picture, the diagnosis can be made by the following correlated pathological study:

$$\text{Red count, hemoglobin, color index} = \frac{\text{R.B.C.}}{5{,}000{,}000}\% \text{ Hemo.}$$

White and differential count.

Red cells—polychromasia, poiklocytosis, anacytosis.

Stools for parasites and blood.

Stomach analysis for absence of HCl.

Hunter's glossitis.

Neurological examination and history.

Metabolism.

Mosenthal kidney test.

Cardio-vascular signs.

A hemorrhage, or superimposed infection, may alter the blood picture greatly. In these cases a very careful and exhaustive history and examination will show the true disease in spite of the much altered blood picture.

Pathological evidence of bone marrow activity and red cell formation may be determined through study of the following:

1. Reticulated red cell count, 2% —20%
2. Blood platelets count, 200,000 —350,000.
3. Polychromatophilia.
4. Increase in red cells.
5. Nucleated red cells.

Pathological evidence of bone marrow aplasia:

1. Severe anemia being present with a near 1 index.

a. Normal reticulated red cell count.

b. Absence of polychromatophilia

c. Blood platelets below 100,000.

d. Presence of megacaryocytes fragments.
e. Increased fragility of red blood cells in salt solution.

Pathological evidences of red blood cell destruction:

1. Presence of small irregularly shaped red cells, poiklecytes
2. Fragments of megacaryocytes
3. Bilirubin in plasma increased without biliary blockage.
4. Urobilin and urobilnogen in the feces 10,000—30,000 units.
5. Siderosis.

These pathological studies are valuable as prognostic aids and also guides to treatment.

11—Pathological Study as a Basis For Prognosis

It must be evident that if the balance between red blood cell destruction and regeneration is greatly in excess on the destruction side the prognosis is grave, and if the signs of regeneration are practically absent, treatment in any form is hopeless. When reticulated cells are increased during a relapse, energetic treatment is much worth while, because the bone marrow is not aplastic.

Vital Matters Before Alberta Doctors.

Dr. Gilmer, Professor of Oral Surgery, Gives Impressive Address Respecting Care and Treatment of Teeth and Makes Important Suggestions — Big Programme of the Business Sessions.

Doctors from all over the province gathered at the opening session of the annual meeting of the Alberta Medical Association, held in the Board of Trade rooms. The opening morning was taken up with registration, a short business meeting and a paper by Dr. Thomas L. Gilmer, of Chicago, dean and professor of oral surgery, Northwestern University Dental school, on "Diseases of the Mouth and General Health." A discussion on this subject was carred on by Dr. J. W. Clay, and Dr. J. A. Millican, both of Calgary.

Dr. Thomas L. Gilmer is highly distinguished in his profession and is entitled to the following letters after his name:—

M.D., D.D.S., Sc.D., F.A.C.S., Dean Emeritus and Professor of Oral Surgery, Northwestern University Dental School, Chicago, Charter Member of the American College of Surgeons: Past Presi- of the Chicago Institute of Medicine.

Nomination Committee

In the brief time given to business the following nomination committee was appointed: Dr. L. S. MacKid, Calgary; Dr. George R. Johnson, Calgary; Dr. J. J. Ower, Edmonton; Dr. J. B. Snyder, Trochu; and Dr. W. H. Macdonald, Medicine Hat. The out-of-town doctors were entertained by the Rotary Club at their regular luncheon. At 2 o'clock the afternoon session opened with a clinic on nervous diseases, conducted by Dr. W. Merritt, Calgary. This was followed with a paper on "Ectopic

Pregnancy," by Dr. N. McPhatter, Calgary. The program also called for an address by Dr. C. Hunter, department of medicine. University of Manitoba, and a paper on "Chronic Intestinal Indigestion of Children," by Dr. D. B. Leitch, of Edmonton. On Tuesday evening the doctors gathered at the annual banquet of the Medical Association in the Hudson's Bay.

Executive Report

Under the heading of unfinished business in the report of the executive committee for 1920-21 came the following items.

Establishing proper fees for:

(a) Professional court evidence.

(b) Reporting vital statistics.

(c) Compensation board reports

(d) Examining for life assurance policies.

(e) Universal fees for medical men throughout Canada.

2 Arranging for Western Canada Provincial Medical conventions to follow in consecutive order so outstanding men from the east, across the line, or from the old country, can be brought to give the most advanced clinics.

3 Uniform contracts for contract practice.

4 Uniform fees for men acting as medical health officers.

5 Establishing a more satisfactory relationship between city and country men.

6 Meeting the needs of the unsupplied fields with the surplus men of the cities. This is largely a question of being sure of a living and the medical men, who by virtue of their knowledge and experience are the most capable, must not leave the solution of this problem to lay organization whose members have no means of knowing.

The Matter of Fees.

Under the heading of fees, the executive report says:

By an overwhelmning vote the profession endorsed the principle that the minimum fees to doctors acting as medical health officers should be as follows:

1 For rural municipalities or incorporated villages, $200.

2 For towns up to 1,000 population, $300.

3 For towns from 1,000 to 2,500 population, $500.

When existing contracts (where rates are lower than these) expire renewals should be based on the above schedule.

The convention in Edmonton established the following fees for private practice:

A visit, day, 8 a.m. to 6 p.m., $3.00.

A visit, evening, 6 to 10 p.m., $4.00.

A visit, night, 10 p.m. to 8 a.m. $5.00.

Maternity cases, $35 as a minimum.

Mileage, $1.50 per mile, except in extreme cases of difficulty, when $1.00 per mile, and cost of transportation will be charged.

Mileage on railroads to be on a basis of Workmen's Compensation Board arrangements, including detention time.

Fees have been gathered from other provinces, which have aided in determining rates for Alberta.

Government.

We have, chiefly through the associate secretary, been in frequent touch with the various officers of government in this province, such as the premier, minister of health, attorney-general, depu-

ty attorney-general, deputy minister of health, medical health officer, and believe we have succeeded in clearing up many misunderstandings and establishing a closer point of contact and co-operation between them and the profession.

We have also helped to effect a better and more satisfactory, understanding between the compensation board and our members by investigating complaints from both sides and getting matters adjusted.

U. F. A.

We have been in communication with the directors of the U.P.F.A. and U. F. W. A., both as an executive and as individuals and believe the results have been mutually beneficial. We have received from them numerous requests from outside points for doctors, and have endeavored to locate men where called for.

Labor

United Labor presented to the government the request that the Workmen's Compensation Act be enlarged to care for sickness in the workman and his family, in addition to accidents to the man himself, and suggested that failing to do this at once, the government appoint a commission of inquiry to investigate and report at the next session of this legislature. We asked the government if such a commission were appointed to permit our association to nominate a medical man to sit on the commission.

The Delegates

The following is a list of the doctors: registered

D.S. Macnab, Calgary; W. Hackney, Calgary; A.C. Rankin, Edmonton; J.V. Follett, Calgary; A. C. Munroe, Edmonton; J.J. Ower, Edmonton; J.E. Palmer, Calgary; J. B. Snyder, and wife, Trochu; James Waite, and wife, Cochrane; D. R. Dunlop, Calgary; T. J. Costello, Calgary; A. F. Anderson and wife, Edmonton; Wm. Egbert, Calgary; Cooper Johnston, Calgary; Henry George, Red Deer; J. M. Adams, Calgary; W. J. MacKenzie, Red Deer; R. O.'Callaghan, Calgary; M. C. Salman, Calgary; C. E. Anderson, Brooks; J.L. Allen Calgary; J. Masters, Calgary; J.H. Birch, Calgary; G. E. Learmonth, Calgary; J. S. McEacheren, Calgary; Irving Bell and wife, Edmonton; J. Ferguson, Calgary; W. H. MacDonald, Medicine Hat; Neil Macphatter, Calgary; Geo. R. Johnson, Calgary; A.H. MacLaren, Calgary; H. H. Johnson, Calgary; M. R. Boe, Athabasca; T. S. Mackid, Calgary; G. A. Bishop, Calgary; G. E. Butterwick, Calgary; J. Scovil Murray, Calgary; W. E. Saunders, Calgary; W. A. Lincoln, Calgary; N. A. Christie, Calgary; E. Leslie, Calgary; Thos. L. Gilmer, ealgary; J.A. Millican, Calgary; Franklin H. Martin and wife Chicago; Charles A. Coleman, Calgary; C. R. Learn, Banff; W. R. McFarlane, Calgary; J. W. Richardson, Calgary; R. C. Robinson, Calgary; E. J. Madden, Calgary; W. J. Shipley, Calgary; A. W. Park, Calgary, F.D. Wilson, Calgary, D. B. Leitch, Edmonton, A. S. Estey, Calgary; L. S. MacKid, Calgary.

Speaking at the opening meeting of the Alberta Medical Association convention in the Board of Trade rooms on Tuesday morning, Dr. Thomas L. Gilmer, dean and

professor of oral surgery, Northwestern University Dental School, Chicago, emphasised the fact that the physician today must take a greater interest in diseases of the mouth than at any time before.

"The physician's interest in diseases of the mouth," he said, "was increased when Billings, Hunter of England and others, showed the relation between tonsils and chronic oral infections of the teeth and jaws and diseases in other parts of the body. With few exceptions their statements have been accepted in full, or in modified form, but some members of the medical and dental professions have gone far beyond the claims of either Billings or Hunter, and attribute almost every conceivable bodily ill to the teeth and tonsils, when the symptoms do not definitely point elsewhere.

The two infections of the mouth which are instrumental in causing secondary disease are chronic alveolar abscess and pyorrhea alveolaris, the latter a disease only in the adult. Their prevalence is indicated by a study made by Dr. Arthur D. Black, of 6,000 radiographs of 600 adults' jaws, taken without reference to the condition of the teeth or health. He found 78 per cent had either chronic alveolar abscesses or pyorrhea, 55 per cent having alveolar abscesses and 53 per cent pyorrhea."

Removal of Teeth.

Speaking of the removal of teeth Dr. Gilmer said:

Indiscriminate removal of tonsils is reprehensible, but their loss so far as known is inconsequential as compared with the loss of teeth.

"It would be unfair to impugn the motives of some dentists who daily remove many teeth, or some rhinologists who remove many pairs of tonsils, but one naturally wonders if there is not danger of the practice becoming commercialized.

"There are two terms commonly used by some physicians and some dentists, which should be eliminated, since they give erroneous impressions. These are 'dead teeth' and 'nonvital teeth'. Usually dead or nonvital teeth are abhorrent to adjacent live tissues, and when present eliminating forces are at once set up for their removal. What really is meant by those who improperly use these terms is not that the teeth are wholly devoid of life, but that they are pulpless.

"The pulp of a tooth is the formative organ of the dentine and is transitory. If one lives to very old age it disappears; the tooth still lives since the cementum of the root receives its nutrition wholly from the peridental membrane. The death of the pulp affords opportunity for apical infection, but if the root canal of a pulpless tooth is made aseptic and is hermetically sealed, the root does not usually become infected and alveolar abscess does not follow. This refutes the statement that 'all pulpless teeth are a menace to health'. If the peridental membrane of a tooth is completely destroyed the tooth becomes necrosed, and then, and only then, does it become a 'nonvital' or 'dead tooth."

Children's Teeth

Of children's teeth, the speaker said:

"We must start with the child at birth and care for him until he reaches manhood, if we would save him from many of the ills of life, since it is at a comparatively early period that causes for oral sepsis begin.

"When a child is born the enamel of the temporary incisors and cuspids is nearly complete, and that of the deciduous molars is a little less than half finished, and is fully completed seven months after birth. Owing to this early development of the protective portion of the deciduous teeth, their structure is not influenced by diseases of childhood, and therefore are usually perfect in formation and rarely irregularly placed in the jaws. With the exception of the first molars, the deposition of lime salts forming the second set of teeth does not commence until about 12 months after birth. The first molar has usually begun at birth. About this time the incisal edge of the central incisors and the cusps of the occlusal surfaces of the first molars are laid down. The enamel of the incisors and first molars is completed between the fifth and sixth years, that of the cuspids, bicuspids and second molars between the eighth and ninth years, and the third molars about the twelfth year. It is during the period of enamel formation of the second set that disease and malnutrition injuriously affect the shape and quality of these teeth, causing defects in the enamel, which definitely correspond to the stage of development of the teeth at that period. The health of the first three years of life, so often modified by illness arising from faulty nutrition, contagious disease and other infections, frequently determines that the child whose heredity would entitle him to a perfect mouth, may have to go through life a sufferer from dental caries or deformed unsightly teeth.

"Observation leads me to believe that scarlet fever, measles and other eruptive febrile diseases of childhood produce more profound defects in the teeth than do other even more depressing diseases, such as rickets or congenital syphilis.

Dental Decay in Children

"Children rarely have dental decay until they are approaching their second birthday. This seems to indicate that the change from infant diet to a mixed diet is a factor in the production of decay in children's teeth. The studies of D. J. Davis Jackson, Moore and others have definitely proved that improper diet has a positive injurious influence on the gums and underlying bony structure. Scurvy which is supposed to be due to dietetic causes, profoundly affects the same tissues. With these facts in mind, we may suppose that improper feeding changes as well the secretions of the mouth, so that certain constituents which normally inhibit the growth of acid-forming fungi are lacking, or that others are supplied, which is combination with food remaining about the teeth, give the best possible medium for bacterial growth.

"If this is true, we may believe that since dental decay begins with the change of diet, that error in properly balancing the diet may have much to do with decay of teeth. May we not raise the question as to the probability of im-

proper diet being fundamental as a predisposing cause in other infections about the mouth, such as pyorrhea alveolar is a disease the etiology of which is obscure?"

Preventive Measures

"We hear much of preventive medicine, but preventive dentistry must be intimately associated with preventive medicine if we would eliminate some of the more common causes of disease. Preventive medicine has not generally included hygiene of the mouth in its work and so has missed one of the most promising avenues of attack on fundamental causes of disease. Many corporations, however, have grasped the idea that unclean, unhealthy mouths are detrimental to health. The Metropolitan Life Insurance Co. in its 'Daily Bulletin' of April 29, says, 'The services rendered by the dental division since its establishment in 1915, have been so curative of impaired health conditions and so permanently helpful to the employes who have taken advantage of the opportunities offered, that henceforth every home office will require its employes to undergo examination and cleansing of the teeth, in the home office, dental division, twice a year.'

The Boards of Health

"All boards of health should have one member who is a high grade dentist to superintend a corps of dentists and dental hygienists who care for the mouths of children in the grammar schools. Owing to the extension of time now demanded for the education of dentists and the requirements of one year of college as a requisite for entrance to dental schools, there will not be as many dentists in the United States two years hence as there were a year ago, since death and voluntary retirement from practice will more than offset the number graduating in this time. There are only 48,000 dentists in the whole U. S., a number wholly inadequate to dental needs, if all the people recognized the importance of oral health.

"We have been slow to recognize the importance of clean healthy mouths and consequently dentists have not been able to exert an influence as beneficial as they might otherwise have exerted. When we are all brought to realize fully that unhealthy mouths are a prolific cause of ill-health then, and only then, will a systematic effort be made which will bring about correction of present neglect. Dentists must play an ever increasing role through the care of the mouth in the prevention of disease."

New Hydro-Medical Institute Inspected By Calgary Convention

Wonders of Electrical Application in Medicine Developed During Great War Are Reflected in Introduction to Civilian Practice

Of the discoveries and advancement made in the practice of scientific medicine during the Great War, when men were brought back from the edge of the grave, when broken bodies were restored by science to a state almost approaching normal, none surpass in their achievement for humanity those by which man has taken that mysterious element, electricity, and applied it as an agent to mend and heal. Electricity was present in the greatest machines of destruction which were used in the war; and, far behind the lines, under the protection of the Red Cross, electricity played its part as the greatest healer and mender of broken and shattered bodies.

What Calgary Has

The application of electricity in the medical profession was one of the things which was emphasised by the leading men of the continent who attended the recent medical convention held in Calgary; and Father Moulinier, president of the Roman Catholic Hospital Association of the United States and Canada, in speaking before the Board of Trade, particularly expressed his delight that there were in Calgary the facilities for advanced electric treatment, which is one of his hobbies.

Mystery to the Layman

To the layman's mind the results obtained by this branch of scientific medicine are no less wonderful and mysterious than the instruments and apparatus by which they are effected. As Father Moulinier pointed out, the combination of electricity and water in the alleviation of human pain is a study both wonderful and mysterious. Under the light which has been shed on this subject by the modern discoveries of scientific medical men, everything is proved clearly and beyond all doubt; but to the lay mind the effect of electricity on the human body remains quite as mysterious as a great many other things about the profession. How deep internal massages are made with the help of this unseen power, how a harmonious agreement of mind and body is brought about by a series of apparently simple apparatus, all appeal to the layman as being almost within the boundaries of the supernatural.

Advance of Science

"Physiotherapy," says an authority, "is the profession's antidote and answer to the numerous isms, pathies and drugless healing cults that have sprung up like mushrooms. It combines the good points (and some of them do have a good point or two concealed about them) of all of them and places their use in hands skilled in therapy and—what is probably more important—hands that will not misuse them from ignorance of even the fundamentals of diagnosis. It is being adopted by the more progressive first-class medical col-

leges and used in rapidly increasing numbers of good hospitals. Until such a time as its use becomes general, it well behooves the cynic to ponder upon the fact that rapid as is progress in all fields of medicine and surgery everywhere, it is even more rapid in physiotherapy because the latter is just coming successfully through its first great general trial by fire—the treatment of thousands and hundreds of thousands of disabled and diseased war veterans—and so has come to the direct attention of and is being observed, studied and adopted by hundreds of physicians who otherwise would not have seen enough of it for years to come. In no department of science is it more true than in physiotherapy that "things move along so rapidly nowadays that the one who said it cannot be done is interrupted by someone doing it."

A Businesslike Room

The hydro-therapy room looks like a big shower room at an athletic club. At one end is a formidable looking marble table, which is called the "control table." From this central control is worked a shower whirlpool baths and other apparatus. The power, heat and intensity of the water application is completely controlled by the operator at the "control table". In the same room is the electric cabinet, which is an improvement on all devices of this sort ever produc ed. In it the patient is submitted to the heat and rays of numerous electric globes, reflected by a wall of mirrors. By the even radiation of heat and light, wonderful effects are obtained. The cabinet is ventilated. In a short time it can be heated to 200 degrees. Of course, no patient can stand much more than one hundred degrees. In this electric cabinet the patient is made to perspire within eight minutes and is then placed under the various showers, in scientific rotation, so that none of the effect of the cabinet treatment is lost. The last phase of this treatment is the salt glow rub. From here the patient goes to the massage room.

Wonderful Apparatus

In other departments the visitors inspected the machines, which it was explained to the laymen are used for deep internal massage; apparatus for decreasing the blood pressure, vibrator massage machines and apparatus for developing wasted muscles.

Dr. McGuffin, who has established the institute, was for five years with the Canadian forces overseas, leaving Calgary, with the first contingent. He was so impressed with the effects of this treatment in the army that he determined ot apply it to civilian practice.

Standardization in Hospitals of Great Benefit.

The great need of standardization in the hospitals of Alberta and the good results which had been obtained through the work already accomplished along these lines were emphasized by numerous speakers at the general meeting of the Clinical Congress of the Alberta Section American College of Surgeons. Dr. Edgar W. Allin, of Edmonton, chairman of the Alberta section, was in the chair and among the speakers who briefly addressed the meeting were: Dr. Franklin Martin, of Chicago; Father C. B. Moulinier, of Milwaukee, president of the Roman Catholic Hospital Association of the United States and Canada; Dr. T. M. McEachern, general superintendent of the Vancouver hospital; Dr. L. S. Mackid of Calgary; Dr. W. A. Lincoln, of Calgary; Dr. John Osborne Polak, of Brooklyn; Father T. J. McMahon president of Campion College, Regina; Father Cameron, director of the Holy Cross hospital, Calgary; Lieut-Governor R. G. Brett and Dr. Andrew Croll, of Saskatoon.

Spending Much Money

Dr. Martin told of the work of the American College of Surgeons. He said that this year they would spend $130,000 in their campaign for the standardization of hospitals in the United States and Canada.

Father Moulinier took as his subject "The Soul of Hospital Standardization." He dealt with the subject briefly, saying that it divided itself into three parts: scientific, ethical and religious. "Hospitals today." he said, should have all the latest improvements to offer for the treatment of their patients. As the medical development takes place, the hospitals will keep pace. It is a movement which has religion at its heart and therefore the Roman Catholic Hospital Association is in it heart and soul."

"The hospital situation today," said Dr. McEachern, of Vancouver "is undergoing an evolution—not a revolution. I am glad to be able to say that Western Canada is leading the rest of the Dominion in improving the service rendered by these institutions. This has been brought about by the activity of the American College of Surgeons and the work of men like Dr. Martin, Dr. Bowman and Father Moulinier." He went on to give details of the work which has been accomplished in Canada in standardization.

Dr. L. S. Mackid said that the hospital existed for the patient, and all work should be done with that end in view. "To do justice to the patient," he said we want to get away from the private homes, which do not offer the facilities for treatment." He said that he believed that nurses in training should be developed along special lines, as are doctors.

The Result is Marked.

Dr. W. A. Lincoln in leading off the general discussion following the set programme said that two years ago the Calgary hospitals were not standardized. Now they were, and the results were remar-

ked. He was followed by Dr. Polak, of Brooklyn, N. Y., who dealt briefly with the subject of standardization. He said that there had been a marked transition in the last five years in the institutions with which he was familiar. He gave a striking example of case reports under the old system and under the new and more efficient one. In addition to this feature, the changes had developed a keen competition among the men of one institution against another. This was a healthy state of affairs. A man had to do his best because he was always under comparison.

The Influence of the Prostate on the Health of the Man Past Middle Life.

by H. G. Bugbee, M. D.

The health of the individual may be summed up as the result of proper intake, assimilation, and elimination. The last is the most vital, failure of elimination causing a storing up in the system of toxic products, with damaging effects upon all the body tissues, resulting in impaired function of the vital organs. Elimination is carried on by the skin, intestinal tract and kidneys. The process, as incorporated in the action of the bowels and kidneys must have a free channel for its excretion to the point of exit ,i.e. anus and meatus. No matter how perfectly the kidneys functionate, urine excreted must have free passage through the ureters to the bladder, and from the bladder to the external meatus.

At the outlet of the bladder the prostate holds a crucial position. When we realize that between thirty and forty per cent. of all normal men show hypertrophy before the age of sixty and that relatively forty per cent. of these present symptoms, the importance of the proposition is at once apparent Fully twenty-five per cent of patients presenting symptoms from prostatic obstruction come to us with carcinoma, thus adding to the severity of the problem. The changes which the prostate undergoes in men past middle life are degenative, rather than hypertrophic, being glandular, resulting in enlargement of the organ; fibrous, causing shrinkage and hardening, or carcinomatous. Symptoms resulting from these changes are due to encroachment upon the lumen of the vesical neck from enlargement of the prostate, or contraction of the neck, with fixation, and narrowing of the lumen. While prostatitis and prostatic abscess are encountered at this age, they are rare in the absence of hypertrophy.

Realizing, then, that prostatic degeneration in the form of hypertrophy, fibrosis, or carcinoma takes place before the age of sixty in forty per cent. of all men,let us see what symptoms are first encountered, and what bodily changes take place as a result of this prostatic retrogression.

Since the prostrate, by means of its lobes, surrounds the vesical neck, changes in its con-

tour, size and consistency easily interfere with bladder drainage by encroachment upon the lumen of the vesical outlet, or, by a hard ring, prevent the internal vesical sphincter from functioning properly. The first symptoms, therefore, will be those connected immediately with the primary function of the bladder, namely, the proper emptying of the reservoir.

Probably the first noticeable sign, which is often overlooked, is diminution in the size of the stream and a slightly increased voluntary effort on the part of the individual to expel the urine. This increased effort causes congestion of the vesical neck, which, in turn, gives rise to an increased desire to urinate. Disturbed function of the internal sphincter, allowing urine to leak into the prostatic urethra, causes more constant pressure on the external sphincter and further increases the desire to urinate. The patient begins to get up at night to void. There may be an interrupted stream. He notes that if he relaxes while the urine runs slowly, in time he completes the act. This is due to the ball valve action of the prostate which is often present early in the hypertrophy.

Change in the size and force of the stream, increased frequency, and intermittency, with dribbling at the end, are the first symptoms of prostatic change; and, while slight at first, in all probability will increase in severity with the progression of the pathological process.

As the obstruction of the vesical neck becomes more complete, actual inability to empty the bladder takes place and residual urine collects in varying quantities. The bladder increases its effort to empty itself, resulting in hypertrophy of the muscle bands and giving way of the weaker places in its wall, with the formation of pockets. Frequency of urination now becomes directly proportionate to the amount of residual urine The bladder fills more rapidly than usual, as it is never empty. This symptom is particularly distressing at night. I have known such a condition to progress until the patient, on first seeking advice was incontinent at night from the fact that the bladder was always full and overflowed when the individual was asleep.

In time the bladder, from its increased activity, becomes dilated and weakened, and its efforts become feeble and more frequent. The process does not end here. The back pressure extends up the ureters to the kidneys, resulting in ureteral dilatation, pelvic dilation, and interference with kidney function. Congestion of the kidneys leads to polyuria, thus increasing the frequency. Interference with kidney function means poor body elimination which, in turn, affects all body tissues and all organic functions, with constitutional and local symptoms referable to each. The foregoing is the order of changes which take place. Some cases seen early in the retrograde prostatic change progress slowly under medical supervision.

So far we have considered the sequence of pathology and symptomatology, with the maintenance of an uninfected urinary tract. The kidneys eliminate toxic products, rendering the urine irritating,

while bacteria in varying numbers are usually present in the urine. No harm results until the stasis takes place, with the presence of which inflammation often supervenes spontaneously, or with the first internal manipulation of the physician, or soon thereafter. With the onset of infection all symptoms increase to a distressing degree, and the health of the individual suffers proportionately from added septic absorption.

We have, therefore, a lesion which is progressive, leading to farreaching complications, and which, if left to itself, results in impaired comfort, efficiency and health, eventuating in invalidism in a considerable proportion of men past middle life. It is therefore a subject of great importance. How shall we cope with it? How can this prostatic degeneration be prevented?

Etiology

The etiology of the condition is uncertain. Dependence upon infection is doubtful, as the process is one of advancing years and well past the usual period of venereal infection. The urine in early cases often reveals no evidence of infection caused by other pyogenic organisms. The prostates of practically all men past middle life are shown, on microscopical study, to be subject to the same adenomatous change which, in its more complete development, is called prostatic hypertrophy.

All factors that lead to congestion of the prostate, as inflammation, sexual excess or irregularity, sedentary life, and poor elimination undoubtedly predispose to the degenerative change: and it is fair to say that the prostate shares in the general well being of the individual who maintains a physical and mental equilibrium through proper intake, elimation, exercise, and sexual life, without undue mental stress.

The periodical physical examination of males past middle life may make it possible for us to detect the first signs of prostatic change in a large proportion of men; and by studying more cases in this stage, to arrest its progress, to alleviate the symptoms by minor procedures, to radically cure the condition by removal of the gland before secondary changes have caused permanent damage, and to detect carcinoma at a time when it can be handled to better advantage.

As a basis for what I shall have to say regarding the handling of cases presenting disturbances of urination sent to me as prostatic cases, I wish to briefly summarize 204 male patients of this type seen in private practice during the past year. Hospital cases have not been included in this group, as it is difficult in this class of patient to adopt the regime most satisfactory and to follow them carefully.

Of these cases fifty-two presented a clearcut adenomatous enlargement or socalled hypertrophy Of these fifty-two, thirty-six were operated upon, the prostate being removed. Seven others are under observation, the condition not being extensive enough to make operation imperative at the present time, although it was advised in four of these seven. Seven others presented complications without severe symptoms, the symptoms being relieved by the elimination of the complications. Two, given suprapubic drainage, have not yet

come to prostatectomy. Two of these patients were under fifty years of age; four between fifty and sixty; twenty-one between sixty and seventy; eighteen between seventy and eighty; two between eighty and ninety.

Four patients presented a small fibrous prostate. In one the prostate was removed, and in the others the hard ring was released by the removal of pieces with the intraurethral punch. The ages in this group were sixty-seven to seventy-four.

The largest group of cases comprised those presenting urinary symptoms in which a true hypertrophy could not be demonstrated, but in which a slight enlargement or hardening in whole or part of the prostate was present, often due to congestion, sometimes a beginning hypertrophy, in others a slight infection accompanied by a seminal vesiculitis. In none of these was the prostate removed. They form a type that requires observation—some a punch operation, others a destruction of tissue about the vesical neck by fulguration, others massage and the institution of measures tending to reduce congestion. Sexual excess, irregularities and continence played an important role in these cases.

Two of the patients of this group were under forty years of age, forty-five between forty and fifty, twelve between fifty and sixty, five between sixty and seventy, and one over seventy.

Carcinoma of the prostate was found in twenty-one cases a strikingly large number even for private cases, patients who are expected to seek advice earlier than hospital cases.

Seventeen of these patients were treated by suprapubic drainage or radium or both. Their ages were: under sixty, two; sixty to seventy, six; seventy to eighty, eight; eighty to ninety, one.

There were five cases of bladder calculus, two of prostatic calculi, eight of stone in the ureter giving urinary symptoms only, two of renal calculi, four of pyelonephritis or pyonephrosis, nine of stricture of the urethra, ten of cancer of the bladder, thirteen of central nerve lesion with bladder symptoms, four of prostatic abscess, and eight of bladder papilloma.

This brief summary of cases presenting urinary symptoms characteristic of prostatic change shows that but fifty-two presented a true hypertrophy, four fibrosis, twenty one carcinoma, and sixty-five were in a class that may advance to hypertrophy or carcinoma. The others were not true prostatic cases. This study of cases under close observation shows first of all the necessity of investigating the earliest urinary symptoms, the establishment of an accurate diagnosis by all our means at hand and the institution of proper means of treatment.

TREATMENT

When complete urological examination proves a case to be one of true prostatic hypertrophy, prostatectomy is the operation of choice, and can be carried out in nearly all instances.

The keynote of the situation is the relief of the most distressing symptoms as soon as is consistent with the circumstances. This means drainage of the bladder.

Bladder drainage relieves congestion of the prostate, back pres-

sure upon the kidneys, toexmia resulting from interference with kidney function, and sepsis when infection has taken place. Such a sudden change is not always advisable or safe at once. The slow emptying of the bladder by catheterization, if this is possible, or even an indwelling catheter for a period of time, may be wise. The patient suffering from prostatic, obstruction and the back pressure resulting from it, has developed a certain balance which cannot safely be broken at once. A sudden relief of this pressure may result in suppression of urine from acute congestion of the kidneys.

I would like to cite the case of a man seventy-one years of age first seen with a bladder which extended well above the umbilicus, and which. by estimate, probably contained sixty ounces of urine. A catheter was passed and retained in position. The bladder was not completely emptied for twelve days, at the end of which time it was emptied every few hours. Even lasted a week before the symptoms—dry tongue, stupor, loss of appetite, abdominal distention, hiccough, and suppression—disappeared. He was then drained by a suprapubic tube. There was less reaction following this procedure, and after the prostatectomy, ten days later, there was no reaction, the patient was out of bed the following day, the wound was closed a week later, and he left the hospital two weeks after prostatectomy.

The first step in the relief of the prostatic obstruction is suprapubic drainage (under local or gas oxy gen anesthesia). There is always a reaction following this step, from the cause mentioned above.

The difference between the reaction after suprapubic drainage and that after catheterization shows that the catheter drainage is not complete. Functional tests by the estimation of blood urea nitrogen content and phenolsulphonephthalein output are extremely valuable during the period of drainage, to give us the accurate kidney balance. This period of drainage should continue until the patient has struck a new kidney balance at a certain level, which is maintained.

I would like to cite two recent cases. The first was a man seventy three years of age, who came to me with sixty-two ounces of urine in the bladder, infection of the urinary tract, sepsis, high temperature (105o F.), kidneys that were palpable and tender, poor heart action—in fact, a picture of extremis. After catheter drainage for two weeks he was given a suprapubic drainage. This was followed by temporary suppression, but this in turn, by improvement in his general condition, which was continuous. The kidney tests at this time showed blood urea nitrogen sixty-four mils. to the c. c. and the phthalein output was too low to estimate. After three months of drainage, there was marked improvement in his general condition, the blood urea nitro gen reached a level of thirty mils., and the phthalein for two hours, fourteen per cent. He now went through the prostatectomy with no reaction, the wound was closed in ten days, and he is now in excellent condition, although the kidneys are largely destroyed.

Another patient, eighty-nine

years of age, went through the same clinical course, his suprapubic drainage lasting three months, the prostatectomy at the end of this time resulting in no reaction, the wound closing in one week.

While these were extreme cases many others in which I would have hesitated formerly to do a prostatectomy, went through with almost no reaction. Only one patient an operative case, of this group died, death occurring from pulmonary embolus twelve days after operation, with the wound healed.

The essential features of the operation are:

1. Suprapubic drainage of the bladder as soon as is justifiable.

2. Maintenance of suprapubic drainage until the patient has reached a new kidney balance, as evidenced by the patient's condition and by special tests. Such drainage relieves congestion of the bladder neck, with shrinkage of the prostate and lessened liability of hemorrhage at prostatectomy. It allows the wound to become a walled off sinus, lined with healthy granulations, and the bladder infection to clear.

3. Prostatectomy — performed through the dilated suprapubic sinus—by intraurethral enucleation, control of hemorrhage by a Pilcher bag.

4. Removal of the bag in twenty-four hours, allowing the suprapubic wound to heal by granulation, which takes place rapidly owing to the healthy condition of the wound and aided by an indwelling catheter in the urethra.

Prostatectomy performed in this manner in cases of true hypertrophy, by its safety and excellent functional results, has changed the aspect of this dreaded condition, with its farreaching complications. It is an operation to be considered before serious complications have become manifest and in cases that were formerly thought of as impossible surgical risks.

Too much emphasis cannot be laid upon the necessity of a careful study of cases presenting urinary symptoms, as evidenced by the fact that but fifty-two of 204 cases showed true hypertrophy, and of the proper observation of all cases, bearing in mind the large proportion of cases of carcinoma and our limited means of coping with malignancy in this location.

40 East Forty-First Street..

The Importance of Correct Stationery to the Professional Man.

If there is one department of the average professional man's practice that is neglected it is his professional stationery. Such details as office furnishings, equipment, his own personal appearance —even the name plate on the door he is most careful to see are correct and above reproach. These items are so apparent a part of his success in life that neglecting any one of them would seem like professional suicide.

But does the average doctor, practitioner or specialist, ever stop to consider just what an important part his professional stationery, be it letters, envelopes or statements, play in his work for recognition and prominence?

"Public Confidence' and 'Prestige"

Of the many things that go toward determining the success of the professional man perhaps no two are more essential than "Public confidence" and "prestige."

How Stationery Can Help Build Confidence and Prestige.

Suppose a patient were to visit the office of a specialist. His first impression of the office—its fixtures, furnishings and equipment all impressed him with the importance and success of that Doctor. Suppose at the end of a month's time after his recollection of the office had dimmed, he were to receive his statement of account on a cheap statement form mailed in a poor quality of envelope. His first impression is scattered and in its place is left a thought of mediocrity and incongruity.

Suppose on the other hand he had received the same statement on a beautiful, heavy bond paper that fairly cracked with quality in his fingers, mailed in an envelope that matched the paper perfectly in both quality and appearance. Would not his first impression of importance and success be strengthened and the prestige of that specialist increased in the patient's mind? Undoubtedly.

Quality of Paper.

One of the first items the professional man should consider in ordering his stationery is the kind of paper. It is essential that the paper should be of good quality—not necessarily the finest paper made but a good, heavy, clear white sheet of the better bond papers is best. In this respect it is well for the professional men to take a printer competent to handle high grade work into his confidence. He should remember, too, that a little extra money invested in a really good paper will repay him many times over in the good impression it makes on the recipients of his letters or statements. And he should not make the mistake of assuming that the average person does not know good paper when he sees it. He does.

The Production

There are three processes from which to choose. First embossing, second lithographing and third printing. Embossing gives the effect of a "raised" letter and is very effective on a heavy grade of paper.

Lithographing is done from an engraving on stone or copper and lends itself particularly to "script" styles of type or special designs.

Printing is done from type and while very fine stationery may be produced by this process it does not give the effect of either embossing or lithographing.

In choosing between these three processes it is again advisable to consult a competent printer. As to style of type; a plain dignified letter is correct form for the professional man. A plain, clean-cut letter expresses solidity, dignity and good taste.

The design of the letterhead or statement form should be as simple and refined as possible. This matter of designing a letterhead or statement is an art in itself and is one reason why its execution should be left in the hands of a thoroughly experienced and high grade printing establishment. It is well however for the professional man to know the "effect" he wishes to secure before ordering his stationery. Simplicity is coming more and more to rule in letterhead and statement designs—proper size and quality of sheet and envelope, proper choice and arrangement of type, the correct use of color—all these details are important and should not be neglected.

To neglect any or all of these points leads to a confused effect that is one of the earmarks of the "little fellow". The letterhead or statement form that will "do" will suffice for him but the professional man who considers detail and appreciates the wide influence of his stationery demands a design conspicuously good in which are expressed the dignity of his profession and the prestige and importance of his work.

BOOK REVIEWS.

Transactions of the American Urological Association. 1920—Volume 12.

We are in receipt of the above work which represents the work of the association during the year just closed. It contains a fund of valuable information and data which will be exceedingly interesting to students of this branch of the profession.

There are twenty-five leading papers each followed by valuable discussions. The work is available through the publishers, Messrs Williams and Wilkins Company, Baltimore, who have produced the volume for the Association.

A Primer for Diabetic Patients.

A brief outline of the principles of Diabetic Treatment, sample Menus, recipes and Food Tables. By, Russell M. Wilder, Ph. D.M. D. Mary A. Foley, Dietitian. Daisy Ellithorpe Dietitian, Published by W. B. Saunders, Company, Canadian agents The J. F. Hartz Company, Ltd., Toronto.

A very brief outline of the principles underlying the dietary treat ment of Diabetis. There is a distinct field for handbooks of the efficient high character of this very excellent little volume.

Review of Happenings in the Medical World.

Cassandra Stops at Sea.

A major operation which necessitated the stopping of the liner for an hour off the Newfoundland banks was performed on board the Anchor-Donaldson Liner Cassandra. The patient was a young woman in the steerage coming to Canada as a domestic servant under the auspices of the Salvation Army.

The passenger developed a sudden cases of appendicitis on Friday and was in a serious condition when the operation was decided upon. Dr. Stenhouse, the well-known Toronto surgeon, who was travelling as a passenger, performed it.

Major Fred J. Munn, Dies in 40th Year.

Major Frederic J. Munn, one of the best known of the younger medical men of Toronto, died at the Wellesley Hospital, where he was taken suffering from typhoid fever.

Major Munn, was in his 40th year, and since the outbreak of the war did fine work for soldiers, giving a lot of time to the care of the returned men. For a long time he served with Col. Marlow, and became widely known.

He was also well known in connection with work in the schools for the Department of Health.

He held University of Toronto degrees of B. A. and M. B.

Fraternally he was a member of University Masonic Lodge.

Carry "X-Ray" in Hand

A Western University biologist, Frederick W. Classens, claims to have invented and perfected an X-ray machine which is efficient enough for general medical purposes but which is small enough to be carried about in the hand and can be manufactured for $100 each

Says Concealed Cases Cause of Epidemics

Ottawa, —Delivering an address on "Disinfection" at the session of the annual convention of the Canadian Sanitary Association in the Council chamber of the City Hall, Dr. T. A. Lomer, Medical Health Officer of Ottawa, said the time had arrived for the adoption of new methods for disinfecting houses after disease. "We have given up trying to disinfect a city by making a smoke in the street," he said, "and it is time we gave up trying to disinfect a house by making a smoke with sulphur in a room. It is time that we gave up deluding ourselves that a smell of formalin or an odor of carbolic means disinfection. More and more our disinfectors are becoming detectives on the lookout for concealed cases," he said. "mild cases which have never been seen by a physician, cases not even suspected by the family. These are the spreaders of contagion, the origin of epidemics; not the house or the clothing of the diseased person."

Well-Known X-Ray Man Leaves Toronto City Hospital.

Mr. B. J. Fenner has resigned from the staff of the General Hospital X-ray department, of which he has been a prominent member for the past ten years. For four years previous to that time he was doing similar work at the Hospital for Sick Children. Mr. Fenner is exceedingly well known to the medical men and has been associated very notably with the development of X-ray work in this city.

People of Thirty Centuries Ago Just as Healthy as To-day.

Paris,—With all the world's scientific progress, health conditions to-day are neither better nor worse than they were 3,000 years ago, according to Dr. Robt. Jaures, who, has just published the results of an examination of numerous Egyptian mumumies that were buried along the Nile.

Not only were there then existent diseases that are now attributed to microbes, but also there were malformations, Potts disease rickets and flat feet, as well as corns and bunions.

In some of the bodies Dr. Jaures found distinct evidence of tubercular lesions in lungs, while microscopic examinations of hardened tissues revealed cirrhosis of the liver, abscesses and gallstones.

Not the least interesting discovery by Dr. Jaures was the fact that the ancient Egyptians were more sure-footed than the people of to-day, as was indicated by the fact that out of a thousand mummies examined, not a single case of fracture of the foot or leg was found.

Garlic As A Medicine

A report by French doctors to the Biological Society declares that garlic supplies a valuable remedy for arterial tension. The root can be either chewed, eaten with salads or steeped in spirits. If used with the spirits, it is allowed to steep for three weeks and then injected intravenously at the rate of 30 drops daily.

Many experiments have shown that a week's treatment reduces the blood pressure to practically normal.

Supply of Radium for City Hospital

There has recently been delivered to the Toronto General Hospital through the Bank of Toronto, a shipment of radium from the Radium Chemical Company of Pittsburg. The radium is contained in tubes and in needles. The latter are hollow, and when used are buried in the growth which is being treated. In order that none of the precious element be lost, the needles are sealed up after the measured quality of radium is introduced into each. In this way none can be lost unless the whole needle is lost, but as each of them is worth $1,200 they are very carefully guarded, and no chances are taken of losing them. The tubes are of two sizes, the large one containing over $6,000 worth of radium. Each of the small tubes contains about $2,500 worth. These can be used separately or together, and in some cases the entire quantity is used in the same case, but this is not often required.

New Rockwood Doctors

Kingston, Ont.,—Two new appointments have been made to the medical staff of Rockwood Hospital. Both of the doctors are recent graduates of Queen's, and who for some time have been on clinics at this Ontario Hospital. They are Dr. Kenneth Maitland, Brighton, and Dr. Homer McQuaig, Cornwall.

Ontario Medical Assn. Representatives At Soo.

Sault Ste Marie,—Seven doctors, representatives of the Ontario Medical Association, were in the city attending the meeting of the Sault Ste Marie Medical Association, going on to Port Arthur and Fort William, where they will be guests of the Twin City Medical Societies.

This occasion was an important event in the history of the Medical Society of Sault Ste Marie, when for the first time it enjoyed a visit from representatives of the Ontario Association, including members of the Executive in the persons of Dr. F. . Farley of Trenton, President; Dr. T. C. Routley, of Toronto, Secretary, and Dr. E. Brandon of North Bay, the district representative. With them came also the following members of the association, in connection with courses of post-graduate lectures being given by the Ontario Medical Association as a result of the generosity of the Canadian Red Cross Society, Dr. F. W. Marlow, Toronto; Dr. E. R. Secord, Brantford; Dr. George Young, Toronto; Dr. R. M. McCombe, Toronto.

Would Retain Name of Teraulay Street

Strong protest was received from the academy of medicine Toronto, protesting against the proposal to change the name of Teraulay street to Bay as the present name recalls the service of Dr. James Teraulay, physician to Governor Simcoe, and the first president of the upper Canada medical board and his family.

Remarkable Work Done By Surgeon.

New York, —By a seeming miracle of surgery John H. Reid, who was virtually given up for dead after he had been riddled by bullets fired by Don Collins, wire-tapper, last May, has been restored to health. This, it was learned today, has been accomplished through a series of extremely delicate operations performed by Dr. Alexander Nicoll, chief of the surgical staff of Fordham Hospital.

At his residence, 17 West 73rd Street, Dr. Nicoll said it had been necessary in treating a wound in Reid's neck to take out the jugular vein, tie the ends and drain the neck. This operation, he said, was resorted to because the vein had been grazed by the bullet.

Another part of his work, he said, consisted of resetting the fifth cervical vertebrae, which was out of alignment, removal of fragments and wiring the vertebrae.

Dr. Nicoll said Dr. William R. Lutz, surgeon dentist of Forest Hills, performed some very difficult work on Reid's fractured jaw, which knit imperfectly and had to be re-fractured.

Laboratory For Lindsay

Dr. McCullough, Chief Officer of Health, Toronto has informed the Lindsay Council that the matter of a laboratory for Lindsay would be brought to the minister's attention when the estimates for next year are under consideration.

$12,000 Consignment of Radium Reaches Ottawa

Ottawa,—Carefully sealed in five strong lead containers 100 milligrams of radium, valued at $12,000, was brought from Pittsburg to Ottawa by special messenger recently and delivered to Dr. F. W. McKinnon, 171 Metcalfe St., who will use it for the treatment of cancer and other malignant diseases. This is the largest consignment of this precious metal that has ever arrived in Ottawa.

Corner Stone of St. Joseph's Hospital

With all the appropriate ceremony with which the church invests occasions of this sort, the corner-stone of the addition to St. Joseph's hospital was laid at the north-western angle of the new building by His Lordship, Rt. Rev. M. J. O'Brien, D. D. Bishop of Peterborough, assisted by Rt. Rev. Monsignor McColl, and clergymen from the district, including Rev. Father Cantillon, Rev. P. Costello, and Rev. Jas. Guiry of the Cathedral staff; Rev. J. V. Power and Rev. P. McGuire of East City; Rev H. J. McHenry of the Sacred Heart church, Rev. J. McAuley of Ennismore, and Rev. J. R. O'Brien, C. S. S. R., of Toronto.

Says Full Time Surgical Service is Best System

Dr. C. L. Starr, head of the surgical department of the University of Toronto, and chief of staff of Toronto General Hospital, has just returned from a visit to five medical schools of the United States, where he sought information concerning what is known as the full time surgical service." a system recently adopted to a certain extent at the University of Toronto.

A full time surgical service" is the complete occupation of an instructor's time in teaching duties. Heretofore, in practically all schools the instructor received a pittance from the college and was forced to support himself by means of his private practice.

The most feasible plan seems to be to have a chief staff who is sufficiently paid to devote the greater part, or all of his time to his school work and a number of full time junior men, preferably younger men who will not demand the high compensation that their elders will. One of the universities which I visited had a chief of staff and four juniors fully paid, but even they admitted that they were making sacrifices and would teach only for a time. Around this nucleus of full time teachers may be built up a staff of men who are at the head of their profession and who will be able to do much valuable, if intermittent work as teachers.

Dr. MacDonald Mentioned As Queen's Medical Officer.

Kingston, Ont.,—In connection with the new regulations to go into effect at Queen's at the opening of the session at the end of the month regarding medical attendance and hospital privileges for the students, there is a proposal to appoint Dr. J. O. Macdonald, Sydenham Hospital, of the D. S. C. R. University medical officer, which position has been created by the new scheme.

Medical Men Hold Meeting

The Peterborough Medical Society intend putting on a course of lectures during the coming months. The first one was given in their room in the Public Library on Thursday evening, Sept. 8th. The subject was 'Chronic Intestinal Disorders" and the speaker Dr. Rolph, of Toronto.

The medical meeting for this district was held here on Sept. 21, at which a number of prominent speakers were present.

Only Best Among Applicants Admitted to Medical School At University of Toronto.

Notwithstanding the claim of public health officials that sickness and disease are being reduced to a minimum, the Faculty of Medicine of the University of Toronto has more students on its hands than it can efficiently provide for.

Applications for admission this fall numbered 220, but in view of a decision reached by the Faculty Council last year the number admitted has been reduced to 110. These, with the students who are repeating the year on probation, comprise the first year in medicine.

In reducing the number to be admitted the original intention was to raise the standard of honor matriculation as at present, but it was considered that a year's notice was only fair.

Selection of the successful candidates was made on the basis that preference should be given, first, to returned soldiers with full standing; second, to students who had obtained standing of a higher grade than junior matriculation, and, third, to students with junior matriculation who were 19 years of age or over. The work of selection was somewhat simplified by the exclusion of applicants from outside Ontario.

The decision to limit the registration in medicine was forced upon the authorities. The number of embryo doctors rose rapidly from 656 in 1918 to 1,284 in 1920, and last year's figures showed that there were 1,106 on the list. Although first-year classes of more than 400 could be handled in the lecture room, the practical work of an intricate nature was sure to suffer through the overcrowding. The available laboratory and hospital accommodation was also totally inadequate.

Comparing Toronto University's registration of 1,106 in medicine with that of other colleges on the continent one finds that the Rush Medical College in Chicago, the largest in the United States, has only 703 enrolled, and the McGill Medical College has but 708. A small enrolment is generally favored throughout the country.

Great Success Attends Work of Eye Surgeon.

Col. Henry Smith, the marvel eye surgeon from India, amazed Toronto medical men here six weeks ago by the rapidity and success with which he removed cataracts from the eyes of several scores of blind and vision-impaired patients.

The Lancet is informed by a Toronto specialist that out of 41 operations performed at Grace Hospital, 12 at the Toronto General Hospital and four private cases only one case has not shown improvement. In this single case out of a total of 57 cases, every one of them more than ordinarily delicate the patient quickly developed a hemorrhage and it is feared little hope may be entertained for improvement. In the 56 other cases, however, considering the comparatively brief period since the operations were performed, the improvement has been general and quite marked. In the case presented to Col. Smith where both eyes were afflicted only one was operated upon.

With the exception of a few children all the operations were performed upon elderly persons ranging in age from 60 years and up. The latter were given only a local anaesthetic and, both during the operation and after, suffered no pain. The children operated upon were all given general anaesthetic.

An Exceptional Blood-Coagulant

A rather ingenious improvement in the composition of blood-coagulants is to be found in Hemostatic Serum. This serum contains not only prothrombin and thrombokinase, two ferments essential to normal clotting, but also a third substance, antiantithrombin, which neutralizes the antithrombin of the blood.

Antiantithrombin is derived from the blood of animals by a process similar to that of producing antitoxin by the injection of toxin. The rationale of the inclusion of this substance in the formula of Hemastatic Serum is that coagulation may result from an actual or relative excess of antithrombin as well as from a deficiency in prothrombin or thrombokinase.

Hemostatic Serum seems to provide for all the etiologic factors that may be at the bottom of slow coagulation. In actual practice it performs the promise that its formula implies. The dose is 2 cc, subcutaneously or intravenously, repeated every six hours if necessary. In cases of hemophilia, the manufacturers advise larger doses —5 cc intravenously. In cases in which the bleeding point is accessible, Hemostatic Serum may be applied topically with gratifying results.

In the Comedy Relief section of the May issue of "The Bloodless Phlebotomist" a delightful satire entitled "Too Late Now" by James Montague, gives a mirthful view of gland transplantation vs euthanasia at sixty. This is only one of several worth while features of this publication. J. Petrie Hoyle, M.D., the first American physician to serve in Flanders during the World War contributes a very interesting article on "Treatment of Inflammation of the Fallopian Tubes," by Dr. J. Sidney Eason, Coldwater, is well worth reading.

If you have not received this little journal a request to the Denver Chemical Mfg. Co., New York City, will bring, without expense to you, the May number as well as future issues.

Noted Surgeon Talks of India

How he ran a hospital in India for $4,000 a year, six hundred surgical beds being filled for four months in the year, was described by Lieut.-Col. Henry Smith, C.I.E., I.M.S., the eminent surgeon, in an address before a large audience of members of the medical profession at the Mines Building of the University. The walls of this hospital building were of bricks and mud, the interior walls being plastered with mud and cow manure. Col. Smith explained the difficulties of running such an institution on his small allowance, saying that the modern paraphernalia of sterilized sheets and dressings he had never gone in for, because he had never been able to afford it.

Dealing with the question of staff, Col. Smith said his experience was that a hospital establishment should be up to exactly what was required and not one maid more—that every one of them should have an honest day's work to do. "If one of them has only half-a-day's work to do." said the speaker," the lady bossing the show will have a lot more trouble than if each one had an honest day's work. I had quarrels to settle every day of the week. My way of settling the differences was to decrease the staff, and the quarrels ceased." (Laughter.) Col. Smith thought that ladies having charge of such institutions might find that his observations applied on this continent as well as in India.

"My cases," he proceeded, "never did better than in the old hospital plastered with mud and cow manure. The point I wish to press is that the increase of ritual does not imply increase in efficiency in the treatment of disease."

Col. Smith's address was of a technical nature throughout, dealing with many of the remarkable surgical cases which he handled during his long experience in India.

The meeting, which was presided over by Dr. R. T. Noble, was held under the auspices of the Academy of Medicine. A vote of thanks was accorded to the lecturer on the motion of Dr. Fotheringham, seconded by Dr. Rudolf. The latter, who has also spent some years in India, pointed out in refer ence to the lecturer's remarks on the cost of the hospital, that India was at the time referred to as a very cheap country. "When Col. Smith went there," Dr. Rudolf said, "things cost almost nothing. In our house we had 25 servants, and they cost less, than one ill-trained maid in Toronto."

Dr. Routley Not an Editor of the Canada Lancet

We regret that owing to a misunderstanding of our instructions to the printing department of the Canada Lancet, the name of Dr. Routley has been listed as a member of the Editorial Board of this journal.

Dr. Routley we regret to state has no connection with the Canada Lancet.

We are making this announcement in the hope that there may remain no hint of the false position in which this unfortunate error has placed Doctor Routley.

D. E. MacVannell,
Business Manager.

Research in "Rabies" Engages Dr. Glover.

According to information received by The Canada Lancet, Dr. T. J. Glover, whose serum treatment for cancer caused considerable discussion throughout America, but which a special committee of the Academy of Medicine, of Toronto, was not able to endorse, has been making researches into rabies.

It was stated that this work has been conducted under the observance of an American scientific hospital and a report to the effect that Dr. Glover has been able to isolate the organism of rabies will shortly be submitted to medical bodies.

According to the claim of The Lancet's informant Dr. Glover. in his research work, on rabies has shown and proven that he has discovered, can isolate and culture the specific cause of rabies, also that he can produce the disease in animals by inoculating them with cultures of the same specific organism which previously had been passed through a number of generations and afterwards recover the specific organism on pure culture. To show additional proof of the specificity of the organism it is claimed Dr. Glover produced an immunity in animals against rabies, using cultures of the specific organism against fixed virus and street rabies.

Dr. J. A. R. Glancy, Dr. Glover's assistant at his Jarvis street laboratory, said that he had been notified that the work was verified by leading scientific authorities in the States and that detailed publication would be given shortly to the medical profession,

Doctor A. Groves Honored With a Banquet

The medical profession tendered Dr. A. Groves, of Fergus, a banquet, recently, in recognition of his long service to the public after completing fifty years of practice in Fergus and vicinity. About fifty doctors were present; besides those from the surrounding towns and villages, there were several from Toronto and from across the American line. The attorney-general of the province, Mr. Raney, and Mr. H. H. Dewart, leader of the Ontario Liberal party, were also among the guests. Dr. Jamieson, of Durham, former speaker of the local Legislature, was the toastmaster. Some very fine addresses were given, all recognizing the fact that Dr. Groves was the pioneer surgeon of the province. He saved lives by surgery years before it was recognized as a feature of professional practice and during the fifty years has performed thousands of operations, having removed over six thousand appendices alone. The members of the banquet presented him with a very appreciative address—illuminated, accompanied by a beautiful club bag. The doctor, in reply to a remark that it was hoped he would not retire on account of having practiced fifty years, said that it was his intention to cease practice but he had not yet made up his mind at the end of which fifty he would stop, which evoked hearty applause. Notwithstanding forty years of continual serivce in his profession, he is still going strong with little visibility of the end.

Dr. Graham Chambers Lost in Antikokan Bush

Fort William, Ont.—A special despatch to the Fort William Morning Bulletin from Antikokan says that Dr. Graham Chambers, of Toronto, has been missing since September 29 in the woods surrounding Clearwater. Two Fort Frances men, E. W. Cullen and W. F. Cullen, with a party of 12 Indians, are conducting a search.

The country surrounding the lake is covered with bush, small lakes and streams. There are also a number of old mining shafts, some of them very deep, and it is feared that Dr. Chambers may have fallen down one of these.

Dr. Graham Chambers is a prominent Toronto doctor with his home and office at 26 Gerrard St. East. He is associate professor of clinical medicine at the University of Toronto and served overseas with the University base hospital at Saloniki and later at the Ontario hospital at Orpington, with the rank of lieut.-colonel.

On resuming his practice in Toronto following the war the result of his war work showed its effect in a nervous breakdown.

In the interests of his health he went to Atikokan with a party from Toronto.

Atikokan is a small station on the National railways beyond Port Arthur.

Effects of Gas on Lungs

It is the emphatic opinion of Dr. Jno. B. Hawes, Boston, that there are very definite and sometimes malignant after-effects of gas poisoning, received by soldiers in Hun gas attacks. Addressing the Canadian Association for the Prevention of Tuberculosis, he urged doctors to be certain of consumption in gas cases before reporting it.

"This condition for which so many ex-service men are seeking relief and compensation resembles in some respects the after effects of influenza," he said. "These cases are often wrongly diagnosed, and I am often called on to undo the harm occasioned by these incorrect diagnoses."

"The pathology in the lungs of these men who were gassed consists of a diffuse fibrosis found in any region of the lungs. The symptoms usually found are: (1) Cough, often paroxysmal, and especially marked at night and on any exertion; (2) sputum, often bloody; (3) hemorrhage, often in considerable amounts; (4) pain or a sense of constriction in the chest. On examining the lungs there is often very little to be found. Among the constitutional symptoms the most characteristic are: (1) Loss of strength and ease of fatigue; (2) shortness of breath; (3) signs and symptoms of marked psycho-neurosis, such as a tendency to dilate upon and exaggerate symptoms in every way, along with increased reflexes. These men often give a history of sudden acute febrile attacks. These are accompanied by high fever. Leaving suddenly, they leave a feeling of intense lassitude.

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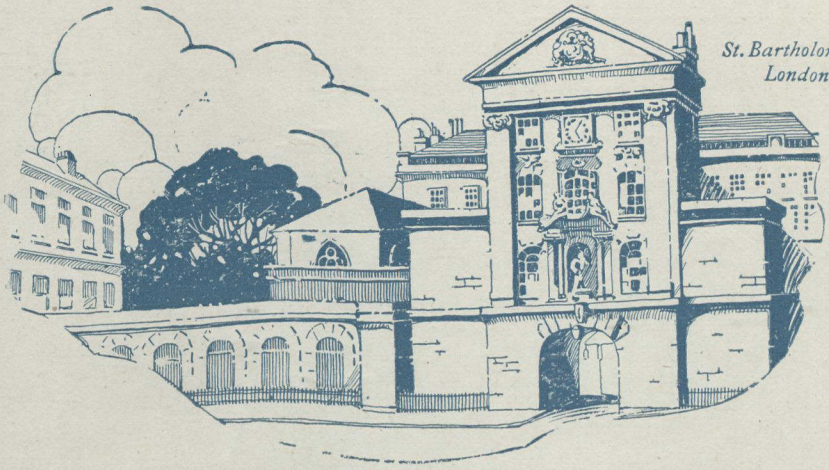

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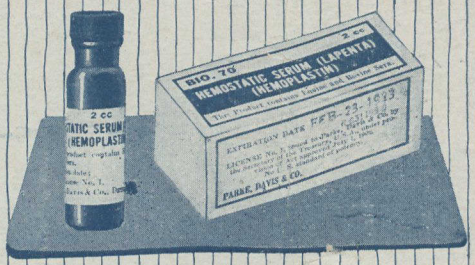

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