

# THE CANADA LANCET

Vol. XXXV.

APRIL, 1902.

No. 8

## HOW TO LIVE, TO PROLONG LIFE \*

By SIR JAMES GRANT, M. D., K. C. M. G.,

President Tuberculosis Association of Canada, Consulting Physician to Their Excellencies the Governor General and The Countess of Minto.

**T**HE various problems I shall introduce to your notice, as most closely associated with life, are in the lines of Sanitary Science, Food, Alcohol, Education, and Tuberculosis, and more particularly how, by a want of knowledge on these subjects, a soil may be formed in the human system, in fact a hot bed, for the reception of the Consumptive Bacillus, so frequent in our atmosphere, and so fatal as to its results.

Health is a quality of body difficult to define. It is dealt out differently at different periods of life, and is best defined as exemption from disease. My present object is to point out how individual health may be secured, and how a reasonable measure of health may be attained, in the life of the most ordinary individual, inasmuch as the number of years, is not actually so important, as the physiological age of the person, if we may so express it. In all civilized countries, laws exist to protect public health. The past history of the world presents certain epochs in sanitation, each of which possessed its own distinctive character, and guiding influences. The *Hebraic Epoch* of personal sanitation, as defined by the Levitical laws and laws of Moses, for the guidance of daily life. As the practical result a nation was brought into existence, strong, powerful and vigorous, courageous in war, and exercising a remarkable influence in establishing peace. Second, the *Roman Epoch*, known as the period of municipal sanitation, during which the vast water works and aqueducts of Rome were constructed, remnants of which are to be seen at the present time. The extensive baths in the vicinity of that ancient city are evidence should such be wanting, of the habits and life-giving principles of a people notorious throughout the world as to the development of remarkable mental and physical power. Next in importance is the era of *International Sanitation*, of which we have undoubted evidence in the remarkable changes in the sanitary condition of Havana, the outcome of the united efforts of the military, medical and sanitary officers of the

---

\*Lecture Victoria College, Toronto. January 14th, 1902.

United States, changing that entire city, from a pest-stricken centre, to one now known as possessing health, comfort and happiness, with a death rate fully as low as in any advanced modern city, and redounding to the credit of the great neighboring Republic.

During the past quarter of a century, the progress and steady advancement in sanitary science is truly remarkable. Twenty-five years ago, the Council of the college of Physicians and Surgeons of Ontario passed a resolution recommending sanitary science as part of the medical curriculum in Ontario, and at present it is adopted by the various teaching bodies throughout our Dominion, greatly to the advantage of the public. To secure a still greater influence in health matters, the elements of public hygiene should be taught in our schools, which would in time reach our entire population. What an opportunity is thus afforded to advocate the gospel of preventive medicine, and save valuable lives! Much of what is called curative medicine, is swallowed up in preventive medicine, of which we have evidence in the stamping out of Small pox, Scurvy, Leprosy and Cholera, under the guidance and direction of sanitary authorities, and the medical profession are always ready and energetic, in this noble work, even at the expense of their own living. In this direction the department of Public Health, under Dr. Bryce, has accomplished most practical results. It is undoubted that Boards of Health, Vital Statistics and Public Hygiene are important factors in prolonging life. Woman's work in sanitation is an evidence also of the progressive spirit of the age. The woman's health protective association of New York, is a striking example of what can be accomplished in spreading the principles of health. In the sanitary betterment of Bakers' shops, and in the conduct of slaughter-houses, a remarkable change for the better has been wrought. Large play grounds and public parks for children have been secured, and school hygiene, as a whole, much improved. It has been well said, that the children of a nation constitute the physical capital of the future, and it is a national duty to safeguard our national capital. Societies of a like character have been formed in England and the continent, through which sanitation, with special reference to drainage, plumbing, ventilation, water supply and laundry, are subjects of most careful enquiry. Plumbers should be specially educated, and licensed, particularly as it is a well known fact, that defective sanitary arrangements in houses, and consequent escape of *sewer gas* causes the development of sore throat, diphtheria, scarlet fever, blood-poisoning, puerperal fever and even pneumonia. Sewage and general refuse matter, should be regularly and carefully removed. If consumed by fire, sawdust mixture, will supply the want. Pure air, sun light, and common earth,

are first class disinfectants, and prudent direction, as to house premises cannot be overestimated.

### FOOD

"The physiological principle of the preparation of food, is summed up in the postulate that it shall produce the highest efficiency in the individual and the 'race.'" (Thudichum).

Food supply is the controlling factor in all life, animal and vegetable alike. The quick transportation of food stuffs from various parts of the world has effected a remarkable change in food materials, and we no longer depend upon local production, keeping before us the important fact that the cost of food is no measure of its nutritive value. In the list of food materials, oatmeal is not surpassed as a producer of physical power. It makes more muscle, than beef-steak. The great Dr. Johnston was once informed, oatmeal was only fit for English horses and Scotchmen, and said he, "Where will you find such horses and such men." "Food is the only source of human power, to work or to think," and extends to the infant, the school child, the youth in college, the shanty-man, the military man, the aged; and the chief source of danger to the system is more in quality than quantity, and more people die from over-eating than from alcohol. A lack of knowledge as to the fundamental principles of the digestive system in many, is a source of common troubles, in that direction. The infant requires pure milk, sterilized and pasteurized, as in the drama of life, milk plays the most important part in the act of nutrition. The best and safest food for the infant is mother's milk, if free from disease. Society life contributes largely to the artificial method of rearing children, contrary to the plan of nature. The absence of teeth indicates the digestive power, and so in advanced age, even improved by the dentist, as the enthusiasm of youth abates, the quantity and quality of the food, must be carefully guarded. Here appetite frequently exceeds physiological need, hence it is necessary that the middle aged, as well as the advanced, should eat rather moderately, than too much. Frequent sudden deaths, in advanced life, are recorded, as the result of overloading the stomach. Such warnings of nature pass unheeded, and overwork bears the blame of sudden death at mealtime. Man frequently treats the stomach as if a machine, and not a part of the system, under the impression that *will power* is equal to any irregularity. Food is that which builds up the system, and constitutes the required force and energy, and no article, solid or liquid, should be taken, which will not supply *some part* of the *human structure*. Food for the child at school is only second in importance to that for the infant. *Scrap diet*, at this particular

time, is not suitable for mental or physical development, and so with the university student, he must have blood, rich enough in nutritive material, to supply the requirements of the system, so that after graduation day, he may be able to take his place in whatever line is chosen, for the duties and responsibilities of manhood. To the man whose brain is his capital, when enjoying his usual meal with *strength giving*, and not *strength sapping viands*, which make not one atom of the body, the mind should be directed to the meal and not the business of life. The brain digests more than the stomach, and unless direct normal nerve force is given to the digestive organ, the gastric juice supply is defective, and in time followed by serious results. The practice of drinking iced water at meals is injurious, causing a reduction of the normal temperature necessary for active digestion. Water should be taken in moderate quantity, at meal time, as an excess reduces the specific gravity of the gastric juice and retards digestion. According to Sir Borden Sanderson, M. D., of Oxford, a human body weighing 132 lbs. contains 111 pounds of water, the balance is made up by the various salts in the system,—hence its necessity, and the benefit of change in this liquid by the unsurpassed mineral springs of Canada, which wash and purify the various organs quietly and gradually, and thus exert a decidedly beneficial influence. *Strength of stomach is as necessary to a soldier as strength of muscle*, without which he is unequal to the trying duties of military life. *Instruction in camp cooking*, if made an element of *the annual drill*, would prove of great service to our troops, and add considerably to ordinary vitality. Food adulteration has assumed considerable proportions, particularly due to preservatives in food out of season and out of place, e.g., summer fruits in winter, and oysters 1000 miles inland. The ordinary preservatives are salicylic acid and boracic acid, which are harmful to the stomach. Alum is frequently used in baking powders, and bakeries, to whiten bread even from inferior flour. Thus alum poisoning is recorded. The cheap sweets of the present day are said to frequently contain an appreciable amount of free sulphuric acid, which dentists point out as a cause of a great degree of *dental caries*. Fortunately adulterated foods are now a subject of careful enquiry by Government Analysts, and thus the health of our people is guarded in keeping with the scientific progress of the age.

#### ALCOHOL.

At the present time, there are few influences of such wide and far-reaching effect, as arise in various ways, from the use and abuse of alcohol. Alcohol and crime, alcohol and poverty, alcohol and lunacy, have the strongest possible correlations. Intemperate agitation cannot, and

will not, accomplish much good. The remedy is not in "passionate declamation or coercive legislation." True, alcohol is one of the most active agents in the degeneracy of races. Alcoholic drinkers are by far the most subject to epidemic diseases, when such are prevalent, and with a lessened prospect of recovery. Arctic explorers, Rae, Kane and Nansen, required no alcohol for their crews, all of whom returned home enjoying the best of health and spirits. The brick and the mortar of the human frame are not held together by alcohol. It quietly and gradually undermines the vital forces, and establishes foundations of disease of an undoubted character. Alcohol at times, for therapeutical purposes, is advantageously prescribed by the physician, to which there can be no reasonable objection. Beer and porter are safe beverages when necessary in cases of debility of the system. The liver, the brain and kidneys are the chief organs which suffer from the use of alcohol, as they are said to receive the largest percentage, and from our public prints we note the frequent records of death from liver disease and Bright's kidney.

The general consensus of opinion at the present time is, that the use of alcohol as a beverage is gradually going out. In fact it is becoming more and more fashionable daily not to use stimulants, and it is remarkable what power there is in fashion.

"New Customs,

Though they be never so ridiculous,

Nay, let them be unmanly, yet are follow'd."

—H. VIII., 1, 3.

Our chief public gatherings are celebrated with the use of tea and coffee, and what can possibly be more in the line of common sense. The late Sir Benjamin Ward Richardson accomplished a great work in England by his efforts in educating the masses, through his writings, as to correct ideas on the subject of alcohol. What we require in Canada is the introduction in our schools of short lessons on hygiene and alcohol, to impress the youthful mind with the importance of these subjects, and in time, more will be accomplished by a reasonable and intellectual method rather than by the introduction of prohibitive measures into the Federal or local Parliaments of this country. As evidence of decrease in the use of alcohol, cases of delirium tremens, which came under observation almost monthly, thirty years ago, are not now seen in practice, once in two years.

An important movement is now in operation in England, fighting intemperance with alcohol, termed "The People's Refreshment House Association," with headquarters in London. Chief in this common sense idea, are eminent philanthropists and christian people, with the Bishop

of Chester as President. Tea, coffee and cocoa are obtainable at all hours, and kept in the front. Spirits and beer of every kind are in stock and served to all comers of proper age, not giving evidence of inebriety. This association only four years in operation, has already accomplished a good work. An association of more recent date is "The Public House Trust," operating chiefly in towns and counties. Chief in this movement are Earl Grey, Cardinal Vaughan, the Bishop of Rochester Earl Stanfords, Lord Goschen, and many other equally distinguished men. The ordinary public house they are opposed to, is run for private gain, when it should be in the interest of the public. What is aimed at, is respectable places of refreshment, giving a better chance to non-intoxicants, than to intoxicants, and associating drinking more generally with eating. As the result, many have been led to see the error of their ways. This form of education in the hands of many leading persons in England, cannot fail to be productive of excellent results. Prior to coercive legislation in Canada, it is reasonable that a progressive move in this direction, should merit careful consideration, which would in time guide our people "how to live in order to prolong life" .

#### EDUCATION.

As to education, the first requirement of a school is to preserve the children, scholars, in good health. A school cannot create health, but it can endeavor to preserve it. Imperfect ventilation, excessive studies, *too frequent cram examinations*, all contribute to overtax the mental and physical ability of the child, or even the adult. In child life, the home and the school are inter-dependent, and in strength of character as well as intellectual attainment there should be an even balance in the home and the school.

Within a few years only have the Boards of Health fully recognized these points. Medical inspection of schools was introduced in Boston in 1894, and in many of the American cities, is now an established principle; the good and practical results, disarming all opposition. School hygiene in the widest sense, is not merely for the avoidance of contagious or infectious diseases, but to ascertain any disease whatever of the system, and take immediate steps for the preservation of health and life. In the whole vegetable world no two blades of grass are precisely alike, and the same diversity is noted either as to facial expression, or mental capacity, and yet thousands of young people pass out of our schools and colleges on the same exact pattern. Thus in our active centres of trade and commerce, many are unable to obtain employment, not being equal to the occasion. Teachers, as far as possible, should endeavour to make out the natural bent of the scholar, and shape the course of study accordingly.

A compulsory uniform method of intellectual development is not likely to produce the greatest degree of usefulness in after life. Chicago has given evidence of a progressive spirit in educational policy. It is now required in their schools that candidates as teachers shall pass a physical examination, as well as an educational, before being licensed. The health of both teachers and pupils is guarded, thus securing better health, better temper and increased efficiency. This is an age of specialty, and when the inclination of the youth's mind is known, greater excellence will be attained in the future, by the direction of education to meet natural capacity.

As Gorst has well expressed it (*19th Century*, May, 1901) "the aim of education should be to get the best out of each individual and not to obtain an average of mediocrity, and that the enormous expenditure of public money upon the production of machine made human automata is sheer waste."

Fortunately a marked change for the better is now in progress in educational matters. Manual training, industrial training and technical education are coming to the front in Canada, due to the philanthropic efforts of Sir William Macdonald, and the able and lucid exposition of the subject by Professor Robertson. Such education tends towards the achievement of practical results to our Canadian youth so instructed as to be equal to any emergency in life with mental and physical development unimpaired.

#### TUBERCULOSIS.

Tuberculosis is to-day one of the most serious problems before our people. The world-wide interest in this subject has arisen from the discovery, that attention to a few simple rules of hygiene, has lessened to a remarkable degree, the death-rate from this disease. That tuberculosis is an infectious, and not an hereditary disease, is the general belief. The experience of the profession has shown that, in the majority of cases, prolonged exposure is necessary for infection from this disease, also that many cases will not produce infection, and that tuberculosis in general is conveyed, as in other infectious diseases, through food, meat, milk, butter, or the atmosphere laden with dry germs from the sputa of consumptives. As to the actually infectious character of this disease, it is prudent that the public should not be alarmed. The welfare of the public, as well as the tuberculous, should be carefully considered. This whole subject rests on the discovery of Dr. Koch, in 1882, of the specific "Bacillus Tuberculosis". According to the most recent statistics, every 6th or 7th death is due to tuberculosis, and the most common form is consumption. The Registrar General's returns (Toronto, January 21,) show that in a death rate of 25,736 in Ontario in 1901, the largest number of deaths in any class was 2,286 from tuberculosis, as compared with 2,300 in 1900. In 1898

there were over 3000 deaths from consumption in Ontario, more than the entire contingent sent to South Africa, who fought so nobly for the defence of "The Empire".

How can we check this disease? is a question frequently asked. In all places where people congregate, there should be properly placed cuspidors, well kept, and systematically cleaned. Carpeting in churches should be avoided to prevent saturation by impure expectoration carried from the side walks, and gradually as fine dusts, impregnating the air of the chamber, and particularly as human sputum is the main source of human tuberculosis. A handkerchief held before the mouth and nose of a consumptive while coughing, is a desirable precaution. In such cases all interviews should be brief.

Dr. Ferguson, Hartford, Connecticut, made the following statement, May 25th, 1899: "A house was vacated by a consumptive, and occupied by a family of whom *three* died shortly after of consumption". Such experience has been frequently recorded by the medical profession. In fact it is known that Tubercle Bacilli may remain active in a house for years. It is of the utmost importance that houses rented should be thoroughly purified and freed from such germs. A very consoling fact to the parents of consumptives is, that there is no danger of living with a consumptive patient, if proper precautions, such as simple measures of cleanliness, are observed. The Michigan State Board of Health, and the New York Board of Health, now require notification and registration of consumptives, and of tenement houses where such live. After death, official disinfection takes place, without which, it is illegal to re-let any room or house. Like action has been adopted by the City Council of St. Louis, and the Provincial Board of Ontario, Public Health Act, 1897, Section 101.

Fortunately, in keeping with the scientific progress of the time, such regulation against the spread of tuberculosis is becoming very general. The Council of "*The National Association for the prevention of consumption*", London, (Nov. 11th, 1901) passed the following resolution: "That, in the light of our present knowledge, the time has now come when the whole question of tuberculosis including the treatment of suitable cases, in Municipal Sanatoria, should be undertaken by municipal corporations, and county councils, throughout the country". The act recently passed by the Ontario Legislature is precisely in these lines, with proposals of financial assistance, of a most commendable character. Statistics from sanatoria for consumptives in all stages of the disease, state that fully 25 per cent. leave cured, and 40 to 50 per cent. leave much improved and able to earn a good living. Public encouragement should be given to such desiring work, particularly as it is neither wise nor prudent at this stage to exclude the tuberculous from work.

An important record as to treatment in the *early stages of this disease* is, that from 70 to 75 per cent have been cured; hence the importance of early diagnosis. The yearly death-rate in Canada is estimated at between 7,000 and 8,000. In the United States, the death-rate annually is placed at 150,000, and in Great Britain, from 60 to 70,000. How truly saddening are such records and what a degree of apathy exists in our very midst, and more particularly when the most advanced ideas have changed from heredity and incurability to communicability and curability! This undoubted mortality has aroused the public to action. Conferences have been held in Vienna, London, New York and Ottawa City in 1901, the latter under the patronage of Their Excellencies, the Governor General, and The Countess of Minto. Fully 300 delegates from the Atlantic to the Pacific assembled, and much valuable information was given to the public. Executive meetings are now held monthly, and literature on this subject, published systematically, in many of the leading papers of Canada.

At this stage, with the able assistance of Church and State, we hope for practical results in lessening the prevalence of this disease. Our sanatoria, Laurentian Mountains, St. Agathe, also at Gravenhurst and the Toronto Home of Playter, are doing excellent work with most practical results. The sanitarium in the Adirondacks under Dr. Trudeau, has contributed most valuable data on this subject, and thrown fresh light on obscure points in the pathology and treatment of consumption. The idea of a California Climate for treatment of tuberculosis is no longer considered a necessity in Canada. Fresh outside air, sun light, and hygienic precautions are the chief requisites, all of which we have within a reasonable distance of our homes and firesides. What we most require at present, are Sanatoria for the poor who cannot afford expensive institutions, and until such suitable buildings are erected, our hospitals should have one or more pavilions specially set apart for such cases. Verandahs and balconies are desirable additions for fresh air and outside life, in the event of a consumptive as an inmate, and in addition a hospital room in the house would prove a comfort alike to parent and patient. Would we had a second Sir Ernest Cassel who recently placed in charge of His Majesty King Edward the VII, the munificent gift of \$1,000,000 to be expended in the cause of consumption.

In conclusion, let me say I have referred briefly to sanitary science, food alcohol and education, inasmuch as in these lines of action the want of proper care and watchfulness may bring about in the human system a *soil, a fit resting place* for the "*Bacillus Tuberculosis*" and contrary to *the defined principles of health*, so necessary to our people having so bright a future in store, enabling each and every one *so to live as to prolong life*.

## SOME OF THE DIAGNOSTIC AND THERAPEUTIC USES OF THE ROENTGEN RAYS.

JAS. THIRD, M. D., Kingston.

THE Roentgen ray, as a diagnostic agent, is no longer an experiment. Its growth has been phenomenal. It came up through the stage of criticism with unprecedented rapidity, receiving few scars and for these it is therapeutically the richer. That too much has been claimed for the ray in certain quarters, seems tolerably certain, but it is equally true, that inexperience and inferior apparatus, have not infrequently discounted its true value. Its real enemies at the present moment are its rash inexperienced and selfseeking advocates.

Some physicians would limit its use to the detection of foreign bodies and the recognition of certain fractures and dislocations but these are the limitations of its natal day; as well might we limit the use of the microscope to the recognition of the grosser tissue elements.

With a view to demonstrating its wider range of usefulness, I have collected from my notes covering a period of upwards of six years the necessary data for this paper.

*Foreign bodies.*—The following have been located in various parts of the body: bullets, shot, needles, coins, slate pencils, pieces of glass, iron and copper.

The following case of bullet-wound is interesting as showing the tolerance of certain portions of the brain:—

A. L. aged 35, admitted to the hospital Nov. 5th, 1898. Service of Dr. Garrett. Referred for examination by Dr. Emery, Gananoque.

The bullet, a .32, entered the external meatus of the right ear and lodged, as the x-rays showed, in the right frontal lobe two centimetres from the angle of junction of the horizontal and vertical portions of the frontal bone and directly over the centre of the right orbit. Dr. Emery dressed the external wound a few minutes after the accident. No symptoms followed. No attempt was made at removal. The patient is now, three and a half years after the accident, carrying on a successful business in a neighboring town.

*Fractures.*—The list comprises the following:—fractures of the zygoma, inferior maxilla, skull, radius, ulna, metacarpals, fingers, humerus, clavicle, coracoid, ribs, femur, patella, tibia, fibula and metatarsals.

From my limited observations the following conclusions are drawn, first, that fractures of the metacarpals and metatarsals and of the lower end of the radius and the ulna are the most frequently overlooked and, secondly, that no absolute rule can be laid down with regard to the line

of fracture, even when the causal factors are similar and seat of fracture the same.

P. S. J. aged 34, examined Oct. 7th, 1898, farm laborer. Three months previously, when harvesting grain, the load upset throwing him down an embankment a distance of 20 feet. *Diagnosis*—"severe sprain of instep". The foot is still swollen and passive movements of the toes are difficult and painful. Examination by the ray shows a fracture of the second metatarsal bone with incomplete adaptation and excessive callus formation. The significance of the popular expression "a bad sprain is worse than a break" is apparent.

With regard to the line of fracture, generally speaking, fractures of the long bones about the middle of the shaft were transverse, while those at either extremity were more or less oblique. The Colles' cases were exceptions. In all but four of these the line of fracture was transverse, in these it was transverse and longitudinal. The styloid process of the ulna was fractured in 28 per cent. of my Colles' cases.

*Dislocations.*—The list is somewhat limited and comprises only dislocations of the shoulder, elbow, thumb, patella and wrist. The only one of especial interest occurred in the practice of the late Dr. Christie of Seeley's Bay. The patient gave a history of having fallen from a high vehicle. When first examined, some hours after the accident, the wrist was greatly swollen and a provisional diagnosis of Colles' fracture was made and the patient asked to return in a few days. One week later the case was referred to me for x-ray examination, when the following condition was found:—fracture of the styloid process of the ulna, backward displacement of the ulna, the head of the bone resting on the pisiform, radius not fractured but displaced outwards, articulating only with the scaphoid.

*Diseases of bone.*—This series includes 312 cases divided as follows: Tuberculosis, 267; Subperiosteal abscess, 9; rickets, 10; bony ankylosis, 7; exostosis, 6; loose cartilages, 6; syphilitic dactylitis, 4; osteo-sarcoma, 1; chondro-sarcoma, 2. The order of frequency of tuberculous invasion of joints was as follows: knee, hip, wrist, elbow, calcaneo-astragaloid, ankle.

The hip joint, owing to the density of the muscular structures, offers considerable difficulty and a correct diagnosis can only be made by one experienced in interpreting the finer shadings of a negative. Except in advanced cases, I have not been able to diagnose the condition with the fluoroscope alone. In fact, in all diseases of bone, one or more skiagrams should be taken in order that the negative may be carefully studied. In doubtful cases stereoscopic skiagraphy as suggested by Prof.

Girdwood, Montreal, should be resorted to. The limb is skiagraphed from two points and the pictures carefully mounted and examined in the reflecting stereoscope. There is perhaps no better method of studying a fracture or of localizing a foreign body. Differences of opinion may exist regarding the utility of the ray in the diagnosis of tuberculous processes in the lung, but in tuberculosis of bone the ray so far outstrips all other diagnostic means at our disposal that its routine use cannot be too strongly urged. My joint cases have impressed upon me the importance to the patient of an early diagnosis. With appropriate treatment the results have been most gratifying.

The frequency with which the tuberculous process begins in the calcaneo-astragaloid articulation, extending subsequently to the ankle-joint, must be specially referred to. My series shows tuberculosis of this joint to have been more frequent than that of the ankle-joint, and my observations would lead me to believe that the tuberculous process in ankle-joint cases not infrequently finds its starting point in the calcaneo-astragaloid articulation.

T. M., aged 26, Dr. Northmore, Bath. Patient gave a history of a sprain of the ankle in alighting from a rig. Pain disappeared in a few days. Ankle remained weak, however. A mis-step would cause return of pain. About six weeks after the first "sprain" the pain and swelling about the ankle-joint were marked, the skin dark and shiny and he consulted his physician who suspected tuberculosis and referred him to me for x-ray examination.

A skiagram showed tuberculosis of the calcaneo-astragaloid articulation, both bones being affected but chiefly the astragalus. In three months under appropriate treatment, he was able to bear his weight on the foot and he has since (18 months) remained well.

Miss G., age 16, Oct., 1900, Dr. Emery, Gananoque. No history of injury. For past three months she has complained of pain in the instep worse in the evening and especially at the menstrual epochs. Foot and ankle much swollen and very tender. In this case the os calcis was not involved but the process had extended rather more than half way through the astragalus towards the ankle-joint. Dr. Emery began treatment at once, and reports (Apr. 28th, 1902) patient perfectly well.

*Sub-periosteal abscess.*—Frank K., age 11, admitted to hospital Oct. 2nd, 1897. Service of Dr. Anglin. History of injury, complained of pain in the lower part of the thigh, no swelling or discoloration; tenderness on deep pressure. Skiagram showed a large sub-periosteal abscess at the junction of the middle and lower third of the shaft of the femur.

*Rickets.*—The fluoroscope will at once show the deformity, but a

plate should be taken in order to accurately estimate the degree of lessened density of the bones. The following comparison of healthy and rachitic bones explains the diminished density\*:

	Normal bones.			Rachitic bones.	
	Tibia.	Ulna.	Femur.	Tibia.	Humerus.
Inorganic matter, . . . .	62.3	64	20.6	33.6	18.8
Organic matter. . . . .	34.68	35.9	79.4	66.3	81
Calcium phosphate . . . .	57	56	14.7	26.9	15.6
Magnesium . . . . .	1	1	.08	.08	
Calcium carbonate. . . .	6	6	3	4.8	2.66
Soluble salt. . . . .	.7	1.6	1.6	1	1
Osscin. . . . .	33	34.9	72	60	81
Fats. . . . .	.8	1	7	6	

*Loose Cartilages.*—These cast a shadow varying in density between that of bone and muscle. Should two negatives, taken at right angles, fail to locate the loose cartilage, the joint should be freely manipulated and again skiagraphed.

*Bony Ankylosis*—Osseous ankylosis can be readily diagnosed with the fluoroscope.

Mrs A., aged 35. Referred for examination by Dr. Carscallen, Enterprise. Pain in left tarsus began at age of 14 and has continued at intervals ever since. At times the foot was greatly swollen. This subsided under rest and treatment. The pain has always been worse at the menstrual periods. The skiagram showed bony ankylosis of the tarso-metatarsal articulation.

*Exostosis.*—The list comprises but six cases, three on the metatarsal bones, two on the metacarpals and one on the tibia. To these may be added seven firm tumors in which the bone was only indirectly affected, these were probably syphilitic. They disappeared under the prolonged use of the iodides.

*Calculi.*—The recognition of these in the kidney, ureter or bladder depends to a very great extent on the amount of inorganic salts contained in them. I have so far utterly failed to locate uric acid calculi. The

\* Hallburton's Physiology.

oxalates offer less difficulty. Calculi composed of uric acid and oxalates, or uric acid and phosphates, can be skiagraphed the density of the shadow being proportionate to the amount of inorganic matter in the calculi. The x-ray negative is much more satisfactory than the fluorescent screen in making examinations for calculi. Unless the stones are very large and composed of oxalate or phosphate of calcium the screen is valueless. Gall-stones are recognized with great difficulty especially in stout persons. Beck, at a meeting of the New York Academy of Medicine January 1901 showed several good skiagrams of gall-stones. As apparatus and technique improve we may hope for better results in this direction.

#### INTERNAL ORGANS.

*Heart.*—The outlines of the heart stand out prominently on the fluorescent screen. This is especially true of the left ventricle. The pulsations can be counted even by the most inexperienced. We have no other means of acquiring so accurate information of the size and location of the heart, as that given by the ray. Every physician has experienced, for example, the difficulty in distinguishing between dilatation of the heart and pericarditis with effusion. A diagnosis without the ray is notoriously uncertain, with it, the task is comparatively easy. In pericardial effusion the regular wavy outline of the left ventricle, with each systole, is no longer evident, its place having been usurped by a bulging mass, the appearance of which, is at once diagnostic. Among other displacements, readily recognized, those the result of pleuritic adhesions, pneumothorax, pulmonary fibrosis etc. may be mentioned. The degree of displacement of the heart, following pleuritic effusion, cannot be accurately determined by percussion, since the heart may be pushed into the body of an emphysematous lung and the dull area therefore much lessened.

*Displacement simulating dextrocardia.*—In the autumn of 1897 a negro masqueraded among the physicians of this section, bearing in his hand from a physician of a neighboring province, a diagnosis of dextrocardia. He talked glibly of stethoscopes, auscultation etc. and incidentally mentioned that a small fee of a half a dollar usually accompanied the privilege of examination. It was a rare chance and few physicians refused to contribute to his depleted treasury the amount named. The fluoroscope showed only a slightly enlarged heart, drawn somewhat to the right side, probably as a result of pleuritic adhesions.

*Chronic Endocarditis.*—A. B. aged 57, laborer, rheumatism at 19. Physical examination of the chest May 4th, 1897 revealed the presence of a mitral systolic murmur with increased area of cardiac dulness.

Examination of the heart, with the ray, showed a transverse diameter of 13.8 centimetres. (About 11.5 is the normal for an adult male). On July 16th, after two days of rather laborious work, the lower portions of both lungs showed considerable cloudiness. Rest in bed, no drugs, other than a purgative. On the evening of the 19th the lungs were clear and he resumed work the following morning. On August 14th the lungs were again examined with the ray and fully half the lung on either side showed cloudiness. As the patient was not complaining of shortness of breath etc. nothing was said to him, and he continued his work. At this time dulness could not be elicited on percussion. On the evening of Labor day, after considerable walking, the ankles were swollen and the shadows on the screen of the oedematous portions of the lungs were much denser. The condition gradually grew worse until on October 7th the limbs were swollen to the knees and the lungs, with the exception of their apices, were scarcely permeable to the rays. The movements of the diaphragm could not be made out. Rest in bed, purgatives, digitalis and an occasional hypodermic of morphia restored the balance.

Frequent examinations of this patient, extending over a period of two years, showed, first, that the volume of the heart in valvular disease varies much, and secondly, that the earliest evidences of a broken compensation were to be found in the lungs, especially in their most dependent portions.

*Thoracic Aneurism.* The shadows on the screen are very varied depending on the size and location of the aneurism. An accurate diagnosis of a small aneurism is always difficult and sometimes impossible, by our ordinary methods. A careful x-ray examination will show a well defined dark area above the heart, whose pulsations are synchronous with those of the heart itself. If the sac is filled with clot there may be no pulsation, clotted blood, however, casts a shadow much darker than normal blood. The aneurism if large will throw a shadow on both sides of the sternum, if small and on the descending arch on the left side, and if small on the ascending aorta on the right of the sternum.

*Lungs and Pleurae.* In some cases the x-ray may add nothing to the information obtained by our ordinary methods; but the ability to make the usual physical examination of the chest, and then, to look at the problem, by means of an x ray examination, and thus consider the question anew, confirming or disproving the first opinion, is a gain that no physician, who is familiar with diseases of the chest, or who has taken the trouble to acquaint himself with the possibilities of the ray, will for a moment question.

Pleuritic effusions, like pericardial effusions cast a dark shadow on

the screen or plate and therefore with the lung give us the necessary contrasts. This applies equally to the sero-fibrinous and purulent exudates. Movement of the patient shows a disturbance of the surface of the fluid except of course in encysted pleurisies.

In pneumonia the areas of consolidation can be accurately determined. The intensity of the shadow depends on the degree of consolidation. In some cases the absorption of rays is complete. The excursion of the diaphragm is limited on the affected side, owing either to hepatization or to pleuritic adhesions.

Central pneumonias, that offer so many obstacles to a correct diagnosis by our ordinary methods, are easily recognized by an x-ray examination. In 72 per cent of my pneumonias, the pneumonic process began, in that portion of the right lung, lying between the second and fourth ribs involving later the lower portion of the lung, rarely the upper.

*Stomach.* I have not found the ray of great value in the diagnosis of gastric affections. The size of the cavity can be estimated by using a metal-tipped stomach tube. Translumination of the body with the tube *in situ* will afford fairly accurate information of the presence or absence of dilatation. It is of much greater value than Einhorn's stomach-lamp in the diagnosis of gastropnoia. I have not used Turck's gyromele. Where there is decided objection to the passage of the tube, an ounce of pure subnitrate of bismuth, taken with a little bread and milk, answers very well. This salt is fairly opaque to the rays.

*Liver.*—The upper portion of the liver can be determined with certainty on the fluorescent screen, the lower border, however, except in children, requires a plate; enlargement, atrophy or displacement can be readily diagnosed.

*Spleen.*—In children and young adults, the spleen can be seen with the fluoroscope, ascending and descending with the diaphragm. With each respiration it has the appearance of turning a somersault owing to the greater degree of movement of its anterior border.

*Kidneys.*—Both kidneys can be skiagraphed, the left more easily than the right, owing to the relation of the liver to the latter. In the examination of the abdominal viscera, it is necessary for the patient to fast and for the bowels to be thoroughly moved.

#### PULMONARY TUBERCULOSIS.

The number of recoveries being about inversely as the duration of the disease, too much stress cannot be laid upon the importance of an early diagnosis. The outlook is decidedly more promising before there is either cough or definite physical signs. When tubercle bacilli are found

in an abundance of sputum the case is not one of early tuberculosis. To keep the patient under observation, until suspicion develops into apprehension and apprehension into certainty is a reproach on our diagnostic acumen. The earliest beginning of a tubercle in the lung can not be detected by any known method; the Roentgen rays, however, will pick out a tuberculous focus, in many cases, before either the stethoscope or microscope. To infer, however, that the rays can diagnose tubercle off-hand would be a mistake. As with the stethoscope, so with the ray, we must carefully consider each individual case. In our examination with the ray we look first to the diaphragm. Physiologists tell us this muscle becomes flatter with each inspiration. This is a mistake. It plunges up and down piston-like, the curve remaining practically unaltered. Even when the disease is confined to an apex, the movement of the diaphragm on the affected side is much less than on the non-affected. Lessened excursion of the diaphragm, together with a cloudy or flocculent shadow of an apex or other portion of lung on the screen, should excite our gravest suspicions. A careful consideration of the case, using all the other means at our disposal will usually clear up the diagnosis. One other point—the diagnosis of a cavity. That the x-ray can detect a cavity in the lung is a fact beyond question; that auscultation frequently diagnoses a cavity, which the rays show has no existence is also a fact. This I have verified in the *post mortem* room.

#### THERAPEUTIC USES.

Therapeutically, the x-rays are in the early stage of development. That certain skin lesions should be relieved by the rays without causing either pain or inconvenience to the patient, is surely marvellous but it is nevertheless true. Just how they act is not known. It was believed that the inflammatory process set up—the x-ray dermatitis—was sufficient to injure the life conditions of micro-organisms, and therefore their continuance, but this had to be modified, in view of the fact, that healing can take place without any evidence of preliminary dermatitis.

In 1898\* I called attention to the fact that certain garden seeds germinated in three days, under daily exposures of an hour to the rays, while those not exposed but otherwise similarly treated, germinated on the sixth day.

One of two theories, it seems to me, must be accepted, at least tentatively; either that the rays act directly as a bactericide under certain conditions, or that they act indirectly as such, by increasing the vitality of the tissues sufficiently to overcome the bacterial agency. Investiga-

---

\* Kingston Medical Quarterly.

tions along this line have shown that the rays have little bactericidal effect when applied to the culture in the tube, but we must not rely too implicitly on such evidence. The conditions differ. In the one case, we have the ray alone, in the other the ray plus the *vis medicatrix naturae*. Further investigations, however, are necessary.

Among the list of diseases said to be amenable to x-ray treatment, I can speak with some confidence regarding the following:—lupus vulgaris, rodent ulcer, cancer of the lip, psoriasis and cancer of the breast.

I have under treatment a case of secondary carcinoma of the breast, the primary growth having been removed some months ago and diagnosis verified. Before treatment was begun the tumor was about the size of a tangerine orange with an ulcerating surface covered easily by a ten cent piece. At present after twenty-one treatments, the pain is gone, the ulcer healed, and the tumor reduced one half in size. Many of the enlarged axillary glands are now not palpable. Will the tumor entirely disappear? It seems probable. Will it return? Time will tell.

*Cancer of the Lip*—A. S., age 36. Family history: mother died from cancer of the breast. Seven months ago a "cold-sore" appeared on the lower lip. Scales formed which loosened and fell off, or were picked off, every few weeks. During the past month the growth has increased more rapidly and he now complains of pain. The indurated mass is about the size of a plum, the raw surface 1.5 centimetres in diameter. Enlarged glands can be felt below, and a little to the left of the symphysis. Treatment was begun on Feb. 17th, and continued on alternate days until March 25th, when all induration had disappeared and except for a slight pallor that portion was as smooth and natural as the balance of the lip. Of the diagnosis there seems little doubt. Permission to remove a small section for microscopical examination could not be obtained.

*Rodent Ulcer*.—Mrs. R., age 67. History of injury to forehead in 1873. A few years afterwards the skin broke and the wound has been discharging and gradually extending its boundaries in a circular direction ever since. On January 10th the affected area extended from the glabella backwards in the median line 12.5 centimetres, the transverse diameter being 10.2 centimetres. The bone corresponding to this area is entirely gone with the exception of an exposed strip 1 centimetre in width and 5 centimetres in length, along the left border. The brain can be seen pulsating through the meninges and the longitudinal fissure can be made out. Treatment was begun Jan. 10th with a soft tube at a distance of eight inches, the body and the rest of the head being protected with sheet-lead. The offensive odor and the pain, except that due to the exposed bone, was entirely gone Jan. 20th. On March 29th the ulcer was entirely healed.

save a narrow strip along the edge of the protruding bone. The late Dr. Saunders injected Koch's tuberculin in 1891, but without effect. Patient is still under treatment.

#### CAUTION!

One word of caution in conclusion. As a therapeutic agent the outlook is hopeful, but let us "make haste slowly." As a diagnostic agent the great value of the ray cannot be questioned, but we must not lose sight of the fact that it is a powerful weapon, a double-edged sword. For the present, at least, let us consider it a valuable adjunct to other means of diagnosis rather than a keen competitor for supremacy. We must not abandon the old method of drawing conclusions by a process of inductive reasoning after a thorough and searching examination. To do so would make us mere automatons.

There are three things that should never be placed in the hands of the patient: the hypodermic syringe, the thermometer and the x-ray photograph. The abuse of the first is so general that it must ere long engage the attention of the profession, while every physician has witnessed the miserable wrecks made of certain neurotic patients as a result of the ignorant interpretations attached to slight daily variations in temperature. The same may be said of the x-ray photograph. The interpretation of many plates is difficult and long experience is necessary to guarantee safe conclusions. There are many pitfalls into which the unwary may drop. Much discomfort may be caused the patient, and annoyance the surgeon, from the realization, by the patient, that the union of his fractured bone is not a piece of cabinet work, notwithstanding the fact that that union is sound and function perfect. The conclusion naturally follows that the Roentgen rays must be in the hands of physicians and surgeons, not laymen, and that they must learn to interpret their results just as they have learned auscultation and percussion; and, finally, it is only from those whose experience and careful study of the subject warrant their speaking with authority that an x-ray diagnosis should be accepted. In this way only, will the public be benefited and the profession protected.

---

## INFECTION AND CONTAGION.

By E. B. SHUTTLEWORTH, PHAR. D., F. C. S.,  
Bacteriologist to the Board of Health, Toronto.

THE words *infection* and *contagion*, with related terms, have been and are used in a very loose and indefinite manner by lay writers as well as those of the medical profession. The original verb *infectio*—which by the way is not classical—signifies to dip or immerse into, to dye, stain or taint, without reference to the mode by which the taint is communicated; while *contagion*, from its obvious derivation, implies absolute touch. When viewed in this light an infective disease would be one capable of transmission in any way, and all communicable diseases would be included, while those of the contagious class would be limited to such as pass from individual to individual, by contact.

This is in harmony with the view of most of the older lexicographers, but others, and not a few early writers, regarded infection and contagion as synonymous. This may be remarked in the use in which Shakespeare and his contemporaries sometimes employed the word. Lord Bacon was evidently of this number, as may be judged by his saying that infection and contagion are communicated "from body to body, as the plague." However this may be it is a fact that some authorities of the present day hold the words to be synonyms, while the bulk of the public, and many of the profession, employ them indiscriminately. It has been stated, with some degree of probability, that this interchange is due to the fact that the word *contagion* is destitute of any verbal form, while the phrases, to infect, or to be infected, are the only convenient forms of expression.

On this side of the Atlantic there has developed, in general literature, and ordinary conversation, a shade of meaning which seems to be pretty widely accepted, even by the profession. Infection is thus held to indicate a taint, of a more or less subtle and not necessarily material character, perhaps of the nature of an emanation or effluvium, transmitted in an obscure way, or through an aerial medium. The corresponding idea of contagion seems to occasionally carry with it a suggestion of something more material, but differing in that it may only be communicated by touch or direct intercourse. Thus, syphilis and sorrow (closely related) are said to be contagious, and malaria and music infectious. While these nice distinctions are recognized by some persons, they will at the same time speak of clothing, instruments, etc., being infected—a mode of expression entirely inconsistent with the more material character of the taint, as well as its mode of communication.

Enough has been said to show that, at least for medical purposes, it

is necessary to remedy, as far as possible, this uncertain and even contradictory etymological condition by remodelling these definitions that they may get abreast, or keep in advance of the rapid strides that have been made in the etiology of disease. A few years ago one might have safely claimed that malarial fever was the very type of an infective disease, born of marshy emanations, possibly vaporous in character, transmitted through the air, and not contagious. Laveran has shown us that the infection is not only of a material character, but is a living organism which, dwelling successively in insect and man, completes the cycle of its existence, and which can only pass to the intermediary host by that peculiarly close contact, amounting to actual inoculation, that is characteristic of the attention of females of the genus *Anopheles*, and of mosquitos in general. Yellow fever was and usually is classed pre-emminently as a contagious disease, communicable directly, from person to person, or by contact with fomites. The recent researches of the U. S. Army Commission in Cuba seem to show that such is not the case, but that the chief and perhaps only means of transfer is again through the instrumentality of a mosquito—*Stegomyia taniata*—which carries a yet undetermined infection from person to person. It has been demonstrated, with some degree of certainty, that non-immunes run no risk by contact with yellow fever patients, or by manipulations in post-mortems, nor, directly, by contact with fomites. In the last experiments, made in the Havana hospitals, the beds of non-immunes, carefully protected by gauze, were placed side by side with those of severe cases of scarlet fever, and the occupants of the former suffered no injury. This apparently showed that old ideas of the nature of the contagion of this fever, and of its mode of transmission, must be entirely revised. Even in the case of the dread plague itself—“the pestilence that walketh in darkness”—our conceptions of the mysterious character of the infection have been brought down to the demonstration of a simple microscopic plant, the *Bacillus pestis*, which as often as not is transplanted by the very commonplace agencies of rats and fleas.

To classify a disease as infective, in the most restricted acceptation of the term, is almost equivalent to admitting that its mode of transmission is unknown. The number of such diseases is rapidly decreasing and that they will thus exist at all, as a separate class, is only a question of time. In order to pave the way for this result, and also to clear up for the present a very tangled subject, it appears necessary to accept or formulate definitions sufficiently elastic to admit of their application to varying conditions, and yet exact enough to bring their meaning within well understood limitations.

The suggestions of Kanthack, in Allbutt's work, leave little to be de-

sired as far as comprehensiveness is concerned. Under infective diseases he would include only those which are caused by living pathogenetic germs, which enter the tissues from without, and are capable of multiplying therein. If interpreted rigidly this would exclude such diseases as variola, rubeola, scarlatina, pertussis, parotitis, syphilis, dengue, and others, which so far have not been clearly traced to a definite microbic source. It is however evident from the way in which Kanthack uses the term that he assumes that the inclusion of these diseases is at least likely. If they are allowed to hold this tentative position it seems probable that they will ultimately fall into line, and meanwhile the assumption of a germic origin constitutes, as has been said, "a good enough working hypothesis."

If this be admitted the noun infection would indicate the material concerned in the transmission of such diseases, whether by absolute contact, fomites, or through the air, and would of course include contagion, in its general as well as its most restricted sense. It seems reasonable and convenient to adopt this comprehensive meaning, but still drawing a line between infection and intoxication, the latter being confined to the operation of unorganized substances, as chemical gases, poisonous drugs, bacterial toxins, or other non-living matter.

It is difficult to define the term contagious without previously deciding what is meant by contact. Ordinarily and strictly it expresses the state of two bodies touching each other, and, so understood, would illustrate the word contagious as applied to diseases like syphilis, gonorrhœa, or scabies, which are commonly transmitted in this direct way. It is however possible that these usually obligatory parasitic diseases can be communicated by contact with an ectanthropic body which has been touched by an infected individual; that is to say that A may infect B by direct contact, or indirectly by fomites, as through C. This represents the exceptional and indirect channels for the diseases named, but which are not uncommon for variola, diphtheria, and some of the exanthemata. Again, the mode of transmission may be through the medium of the air, which actually implies contact, first with the infected article, and then with the object receiving infection. This would be a very unlikely and almost impossible mode of carrying the *materies morbi* of the diseases included in the first class, but is common enough in regard to the second, while it is perhaps the only way by which yellow fever, relapsing fever, and malaria are transmitted.

It is evident that the meaning of the word contact must be extended to meet these various conditions. Kanthack says that for want of a better term he employs it not only to mere touch, but to denote any form

of infection or inoculation "whether through the broken or unbroken cuticle, the respiratory or alimentary tracts, or in any other possible way." According to this the words infectious and contagious would be strictly synonymous, and there would no longer exist any difference between these classes of diseases. The resources of the language would, moreover, be inadequate to characterize conditions which are exceedingly common, and are recognized by all classes, lay and professional. For example, some two years since, a woman, impelled by curiosity, partly opened the door of the waiting room at a station a little east of Toronto, and glanced momentarily at a smallpox patient confined therein. After the usual incubative period of twelve days she was attacked by the disease. Surely there should be some word to distinguish an affection of this character from one like gonorrhœa, and there thus appears to be a field for the neologist.

The difficulty may be to some extent met by adopting, in part, the old distinction in regard to direct, indirect, or mediate contagion. The former would provide for infection from individual to individual, and either of the latter would cover the indirect ways, of course including that through the air. It would however be much better to accept aerial contagion as a subdivision of the indirect class, and so separately designate it. These divisions are of course far from scientific, but are temporarily convenient. The whole subject must some day be remodelled on a basis provided by a thorough knowledge of etiological conditions.

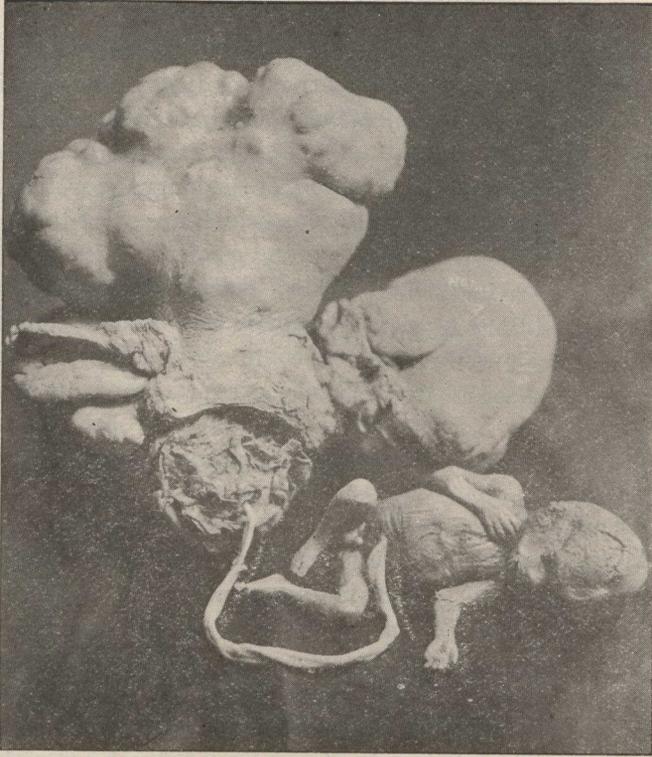
The main points may be summarized as follows :—

*Infectious diseases* include those that are contagious, and are such as are caused, or appear to be caused, by living germs.

Diseases which are *directly contagious* are communicated by contact, from person to person.

In *indirectly contagious diseases* the infection is through some intermediate agency, which may be the air.

Diseases which are *aerially contagious* are due to air-borne infection, whether through the medium of insects, floating particles, or other material substances.



Multiple Uterine Fibroids.—First view.

## MULTIPLE UTERINE FIBROIDS COMPLICATED BY A THREE MONTHS' FOETUS.

By JOHN M. MACDONALD M.D.  
Acton, Ont.

**P**ATIENT about 40 years of age. Previous to the 10th of October, last the patient had noticed herself stouter than usual but until about that date was not at all uneasy about it.

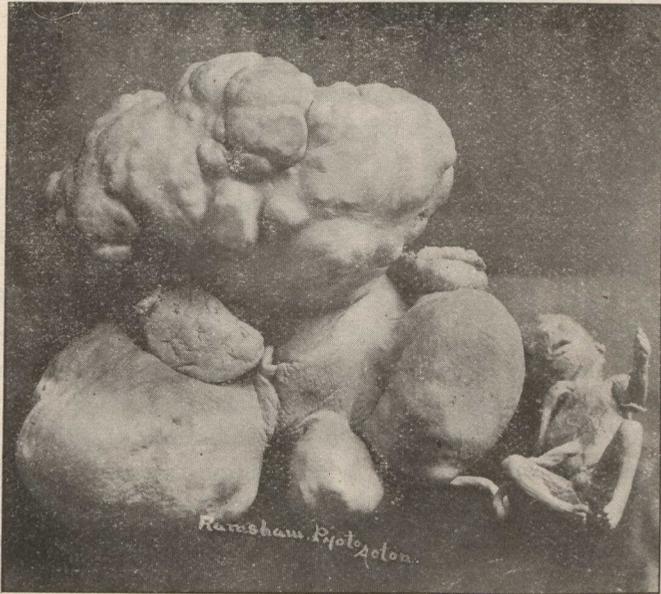
For some time previous she had a pain in her back when in bed and was troubled with frequent micturition.

Having indulged in a three days' drive which made her ill, she came to me on October 13th.

Examination showed a large cystic mass on the left side and far removed from the median line. There were hard nodular masses on the right side and above the umbilicus. Bimanual examination discovered other masses located more deeply. She had been married six weeks.

I operated on October 17th; Dr. Thos. Bradley, of Georgetown, gave the anaesthetic and Dr. Thomas Grey, of Acton, assisted me. The median incision was made from left side of the umbilicus to the pubes.

On opening the peritonæal cavity a considerable quantity of clear fluid escaped. The cystic portion was now brought to view and I was altogether ignorant of its nature till I punctured it, when some dark placental blood escaping I recognized the cyst as uterus diverted far from the median lines by masses of fibroids. So stopping the blood, I drew the cyst (or rather uterus) through the wound. Very few adhesions appeared so the fibroids were very easily drawn out through the wound. The ovarian and uterine vessels were tied and cut through between double ligatures. In like manner all the broad ligament was dealt with.



Multiple Uterine Fibroids.—Second view.

The uterine peritonæum was cut through all the way around in such a manner that the plane of circle thus described in cutting was parallel to the plane of the long axis of body and at right angles to long axis of uterus. This enabled me to raise the masses higher up out of the abdominal cavity. Now raising the masses gradually as high as possible out of wound, (Patient in Trendelenburg posture), and as much at right angles to long axis of body as possible, so that the ureters would be out of the way, I now removed the whole mass from the stump always cutting between two ligatures. The lips of the V shaped stump was now brought together and the peritonæum was stitched over the stump and over site of the broad ligaments etc. The wound was closed in the usual manner. Operation lasted two and one half hours.

When the operation was over I cut open the uterus and out came the foetus, whose picture appears above.

The photos will illustrate better than words the true state of affairs.

Patient was in bed three weeks in all and four weeks from day of operation came to my office to see me.

Patient used to weigh 140 lbs. Two years ago last Christmas she weighed 133 pounds. The first time I saw her she was reduced to 115 pounds. The day before Christmas, two months after operation, she weighed 125 pounds, and was able to do her work provided she had no lifting to do. To-day she is quite well and strong.

### A CASE OF JACKSONIAN EPILEPSY.

By FRANK W. HALL, Victoria, B. C.

**L**ILLIE B. Age 10 years, a healthy, well developed child; two years ago first developed true Jacksonian, or cortical epilepsy; the contractions beginning in muscles of the left hand, thence to muscles of entire body. The epileptic seizures coming on about every two months, and gradually increasing until the child was brought to my office: she was having from one to five attacks a day, and the mother stated the attacks were becoming more severe. The family physician first treated the child for worms, and giving, in addition, large doses of bromides and iodides, but to no purpose. In my examination of the child I noticed a small scar on the forehead, close to the hair, and a little to right of frontal sinus. Four years ago, when coming from school, a little boy struck her with the corner of a slate, the wound requiring but one stitch. I informed the mother that, in my opinion, the child had a fracture of the inner table of the skull, and that it was pressing on the brain, and producing the epilepsy. On assuring her there was little or no danger from the operation, the child was sent to the Jubilee Hospital; and in May 15th, 1901, was operated on by me. The entire head was shaved, and rendered as aseptic as possible. A large elliptical incision was made over seat of injury, and a button of bone, the size of a twenty-five cent piece, removed, and placed in hot saline solution. I then discovered the inner table was depressed, and pressing on the brain. I also removed considerable more bone by the Rongeur forceps, replaced my button of bone, and closed up the wound. The child was kept in bed for three weeks, and then allowed home. The wound healed nicely by first intention. Ten days after the operation, the child had a very mild epileptic attack, but since that time, she has remained perfectly free from epileptic attacks, and enjoyed the best of health; and her mother also informed me the child is much brighter, and is getting along much faster with her studies.



Wet Beri Beri—Tung Wah Hospital.

### NOTES ON BERI BERI.

By COLIN A. CAMPBELL, M.D., Surgeon R.M.S. Empress of India. Late of Resident Staff T.G.H.

**T**HE detection of beri beri amongst certain Asiatic steerage passengers coming from Canada, and the failure to recognize it by men of unquestioned ability in the profession, has suggested the publication of the following notes on this at once interesting and most fatal disease.

Beri beri may be defined as a toxæmia, manifesting itself as a peripheral neuritis, and showing a marked tendency to paralysis of the vital centres.

It rages every year among the Chinese coolies, in the neighborhood of Singapore. At Christmas Island last year so many were laid up with it that ships lay waiting for cargo for weeks for lack of laborers to load them ; and that company alone is paying one-third of the cost of an Imperial Commission to investigate the disease. In Hong Kong it appears to be increasing and at the Tung Wah hospital there are special wards for these cases. It is endemic in Japan where it is known as Kahke, and very prevalent in Java. It has broken out on occasion in Brazil, in India,

and in the Dublin Lunatic Asylum. Chinese native doctors have recognized the disease for 1000 years, and at least three medical books, in which it is well described, are in print. Its true nature as a specific peripheral neuritis was first shown by Profs. Sheube and Bauz of Tokyo. Dr. McEwen of Vancouver City hospital tells me that 20 cases were admitted last year. Three years ago there was an epidemic among the Japanese fishermen on the Fraser River. Its etiology is still uncertain, although the mass of observers undoubtedly regard it as due to a germ. It has been ascribed to food, especially to rice, and nitrogen starvation; and probability was lent to this view by its marked diminution in the Japanese navy under mixed diet. Other reforms were however introduced at the same time and moreover the disease is very rare in many rice-eating communities. Dr. J. M. Swan of Canton hospital, tells me that he sees few cases. Again its epidemic occurrence amongst the residents of certain houses suggests a local cause. In the old days, in Shanghai municipal jail, there were so many fatal cases, that, if an inmate showed any swelling of the legs, he was promptly set free. It is said that the wily Chinaman used to tie a cord tightly around his legs overnight, and many thus escaped until the fraud was discovered. Dampness undoubtedly predisposes to it, and its presence in certain parts of buildings, especially the ground floor, and in ships has been thus explained. I have never had a case among our Chinese stokers, although their quarters are constantly warm and damp. It has been attributed to mould on rice and more recently I heard the managers of Christmas Island attribute it to some such impurity as smut or a species of ergot in cheap rice. The disease is certainly most prevalent where the poorest rice is eaten, among coolies and contract labor. Manson's theory is that the germ is a saprophyte living in the soil, a toxin emanating therefrom infecting those near by. Certainly patients improve most rapidly when removed to another locality.

Adult males are the greatest sufferers but no age or sex is exempt. Children born of affected mothers have been healthy in the two cases observed at the Nethersole hospital in Hong Kong. Of 50 girls in the Po Leung, Hong Kong, 10 took beri beri within a month. A previous attack predisposes to a second, as does any lowering disease, such as malaria, syphilis or dysentery.

Manson classifies the cases into (1) wet or dropsical, (2) dry or atrophic, (3) mixed. The following cases which have occurred in the ship may be taken as extreme types of the first two forms.

Case No. 1 was acute dropsical beri beri in a Chinese steerage passenger, about 40 years of age, returning to China. After we had been at

sea a week I was called and found him suffering acutely with dyspnoea. He was sitting up gasping, his face pallid, and bloated with œdema. Pulse 120, small, irregular, and of low tension. Temp. normal. His legs were œdematous and pitted, but not deeply, on pressure. There was little œdema of the scrotum and no ascites. The lungs were resonant throughout, but full of crackling râles. The heart sounds showed equal spacing, a systolic bruit, accentuated pulmonary second sound, and occasional intermissions. The area of dullness was increased. He had noticed œdema for three days and had had shortness of breath for 24 hours. His calf muscles were not tender. Hypodermics of strychnia and digitalis were administered and his removal to hospital ordered. He died on the stretcher.

Post-mortem: The heart especially the right side, was distended with dark fluid blood, but the valves were smooth and the muscles looked healthy. The lungs were enlarged and there was fluid in excess in pleuræ and pericardium. The kidneys appeared normal. The urine was free from albumen. The brain and cord were unfortunately not examined.

Case No. II. The following case of typical dry or atrophic beri beri occurred in a Japanese fisherman, aged 19, from Vancouver, who was carried on board on the back of one of his friends. He looked pale and emaciated, his calf muscles, especially, being wasted, and so tender that he cried out if they were pinched, or the leg flexed forcibly. Over the shins and dorsa of the feet the skin was anæsthetic. His appetite was good, his tongue clean, his bowels moved only somewhat sluggishly, and he slept well. His temperature, while normal in the morning, rose to 101° F. in the afternoon; but the pulse rate was 110, soft, and fairly regular, and very rapid on slight exertion. There were hæmic murmurs, wavy impulse and signs of dilatation of the right chambers. The lungs gave evidence of no lesion. The knee jerk was absent and his grasp was very weak.

He was put on full diet and cod liver oil and a mixture containing digitalis and strychnia administered. At the end of four days his temperature rose to 102° and pulse to 120, becoming quite intermittent. The dose of digitalis was doubled and improvement followed. He left after 12 days, with a regular pulse at 100, and brighter, but still paraplegic.

Variations of the above two cases to a bewildering extent are met with. Very common are the cases with more or less swelling of the limbs, numbness over the shins, tenderness of calf muscles, loss of knee jerk, and more or less ankle or wrist drop. The heart's action is disturbed, but digestion, assimilation and excretion are normal. Such are mixed types.

I have seen a man brought in comatose, and with complete ankle

and wrist drop. Such are rare and always die. Dropsical cases are more seldom seen as the œdema may soon pass off and leave the atrophic form. Dr. R. M. Gibson gives fever as a constant early symptom, but Dr. Ho tells me that he often finds the malarial parasite in the blood of such patients. The knee jerk may remain for some time in wet cases, and re-appear as the patient improves.

The mortality Gibson estimates at 15 per cent., but epidemics vary. Of the 10 girls from the Po Leung, 7 were discharged cured within a month and none died. On the other hand, of 138 cases admitted to the Tung Wah in three months last summer, 68 died. Sudden death from syncope is a common and frequently most unlooked for termination. Vomiting is an ominous sign, as in my first experience with the disease; when, with little else evident but vomiting and weakness, a man died with signs of acute dyspnoea in three hours. A history of syphilis is bad. Again, there are patients in the Tung Wah who have been there for one or two years.

By way of treatment: good hygienic surroundings are of first importance. Most cases if early removed from the infected district recover quickly. A diet rich in nitrogen is of undoubted value. Beans form the basis in Asiatic hospitals, given with pork and as liberal a diet as can be assimilated. It is well to avoid rice. Early mild cases do well with a simple tonic containing iron and quinine. Should I get another case with alarming dyspnoea I shall follow Dr. Manson's advice and bleed the patient. Oedema, if extreme, usually yields within ten days to full doses of digitalis, m.xv., t.i.d., combined, perhaps, with Spts. Ætheris Nitrosi. It seldom recurs. For the succeeding paralysis and wasting, strychnia internally and massage and faradism locally are indicated.

References—Manson, *Tropical Diseases*; R. M. Gibson, *Journal of Tropical Medicine*, Mar, 1901.

Dec. 6, 1901.

---

## THE CARDIAC COMPLICATIONS OF GONORRHOEA.\*

By H. B. ANDERSON, M.D., M.R.C.S., L.R.C.P.,

Professor of Pathology, Trinity Medical College (Toronto); Physician to St. Michael's Hospital; Outdoor Department Hospital for Sick Children, Muskoka Cottage Sanatorium.

**T**HAT there has been in the past a tendency to underestimate the seriousness of gonorrhoeal infections, there can be no doubt. To the ordinary man-about-town an attack of gonorrhoea is considered of no more account than a cold in the head, merely causing temporary discomfort or inconvenience. A fuller knowledge of the subject however is strongly opposed to this view, for when we consider the frequency of gonorrhoea, and the multiplicity of serious manifestations liable to occur during its course or follow in its wake, we are certainly



Valvular Condition in Cardiac Complication.

warranted in asserting that it is one of the most formidable and far-reaching diseases that can affect the human subject. It is important that there should be full appreciation of its gravity by the physician not only that he may not give an unguarded prognosis, but also that through him, the laity may be more fully acquainted with its dangers, and thus take such prophylactic measures as their fears are much more likely to prompt than moral considerations. The intense local inflammatory reaction and its frequent extension *per continuum* to the prostate, epididymis, testicle, vesiculae seminales, bladder, kidneys, etc., or to the uterus, tubes, and even the peritoneal cavity, are possibilities commonly

\* Paper read and specimens presented before the Toronto Pathological, Dec. 1901.

borne in mind. The same may be said of suppurating bubo, periurethral abscess, stricture, etc., with their consequences. Gonorrhoeal rheumatism, also, as its name implies, has long been appreciated as one of the unfortunate complications of the disease and since the discovery of the gonococcus by Neisser, this organism has repeatedly been isolated from the affected joints, fasciae and tendon-sheaths so that its direct etiological relationship to the disease is now generally accepted. One may mention also gonorrhoeal ophthalmia as one of the dangers which is always kept in view. But while serious and far-reaching in their consequence, none of these complications or sequellae are *immediately* fatal, so that if death does result, the time elapsing between the infection and the fatal issue is so long, and the pathological conditions leading up to it so indirectly connected with the primary disease, that the latter often escapes the blame that should be attributed to it. It is therefore probably seldom that the physician thinks of the possibility of a fatal issue in giving a prognosis in an ordinary case of gonorrhoea. Such an unfortunate result, however, is by no means the rarity that it is often considered. The occurrence of *general systemic infection* has attracted much attention during the past few years, so that now cases of true gonorrhoeal septicaemia, with remote local effects in the pleurae, heart, kidneys, spleen, meninges of the brain and cord, eye, nerves, skin, etc., are well recognized as possible complications of the disease. It is especially with the cardiac affections which may result from gonorrhoeal infections that I wish to deal briefly in this paper, giving a synopsis of the literature and reporting a case which recently came under my own observation. Clinicians have known for a long time that heart affections are liable to occur during the course of gonorrhoea, especially in those cases associated with gonorrhoeal arthritis. Thus in 116 cases of gonorrhoeal rheumatism collected by Nolen cardiac complications occurred 16 times. Trousseau (1854) however, denied the possibility of gonorrhoeal endocarditis, though Traube frequently asserts the possibility.

Some four years ago, I reported before the Toronto Clinical Society a case of endocarditis complicating gonorrhoea, in a robust young man, ending in complete recovery. This patient had a high temperature, chills, and developed a distinct mitral systolic murmur during the course of the disease. While quite a number of such cases have been recorded both before and since that time, the exact relation of the gonorrhoea to the cardiac complication was necessarily a matter of doubt until the organism producing the condition could be isolated during life. These complications might be variously explained as co-incidences, intercurrent affections, secondary infections by the pro-genic organisms gaining admission

through the already damaged urethral mucosa, mixed infections of the gonococcus and the other pyogenic organism, or as due to the gonococcus itself carried through the blood stream to the affected part. Thus, while suspected for some time clinically, it is only during the last ten years or less that accurate information based on clinical observation and *post mortem* and bacteriological examinations, has been forthcoming to definitely prove the association of the gonococcus with these cardiac complications. It is especially since Councilman's paper on Gonorrhoeal Myocarditis, read before the Association of American Physicians in 1893 that the matter has been placed upon a satisfactory basis. In the case reported by him, arthritis developed 10 days after the appearance of the urethral discharge. Indistinct cardiac symptoms appeared in five weeks, and three days later the patient died suddenly. *Post mortem* pericarditis and purulent myocarditis were found, with cloudy swelling of the liver, kidneys, etc. Though no cultures were made the organisms found in the pericardial exudate and myocardial collections of pus, bore all the characteristic features of gonococci, so that the author felt justified in concluding that the gonococcus, carried from the urethra, was directly responsible for the condition in the heart.

In 1895, Thayer and Blumer reported a case of gonorrhoeal septicaemia and malignant endocarditis, in which they isolated the gonococcus from the blood stream by cultures, during life, and also found it *post mortem* in the cardiac vegetations. This is the first case recorded where the gonococcus was obtained from the blood-stream during life, thus definitely settling the possibility of a *true gonorrhoeal septicaemia*. These authors collected some six cases from the literature up to that time wherein the cardiac complications might be fairly attributed to the gonococcus. In 1896, Stengel reported another case of gonorrhoeal endocarditis, and gave tabulated descriptions of 15 well substantiated cases from medical literature. In 1899, Thayer and Lazear reported a second case of gonorrhoeal septicaemia and malignant endocarditis in which they cultivated the gonococcus from the blood stream during life. These authors made an exhaustive critical review of the literature up to that time. Excluding all cases which were open to reasonable doubt, they collected 32 fatal cases of cardiac disease complicating gonorrhoea.

Since that time Harris and Dabney (*Johns Hopkins Bulletin*, March, 1901) have reported a case of gonorrhoeal endocarditis in a patient dying in the puerperium and refer to two other recent suspected cases which have come under their observation.

For the clinical notes of the case which I am about to describe and permission to report it, I am indebted to Dr. J. L. Davison. The history

was taken by Dr. Davison's clinical clerk, Mr. Brefney O'Reilly.

H. Y., male, aged 24, Canadian, entered the Toronto General Hospital, Sept. 27th, 1901, under the care of Dr. Davison. Previous history, unimportant; had always been a robust, healthy man. He was 5 feet 10 in. in height, and weighed 176 pounds when well. Had had the usual diseases of childhood but fully recovered. Family history, unimportant.

On Aug. 30th, 1901, he developed an attack (his first) of gonorrhoea, which ran a mild course, the discharge disappearing (?) in 10 days without treatment. In the latter part of September he complained of pains in the back of the neck, chest, and joints. He felt generally unwell and about the same time chills and fever, followed by profuse sweating, set in. On Sept. 24th, in addition to the symptoms already mentioned, he had a severe attack of vomiting, immediately after which he showed signs of paralysis on the right side of the face, right arm and tongue. On protruding the tongue it pointed to the right. The patient spoke with difficulty. At the time of his entrance to the hospital, Sept. 26th, his temperature and respirations were normal. The pulse rate varied from 80 to 100. On the same evening the temperature rose to 101°. Evidence of the paralysis before mentioned still remained. There was also fornication and tingling in the parts but little loss of power. Pupils were equal. Examination of the heart revealed nothing abnormal. The apex-beat was in its proper place and nothing was discovered on auscultation. The temperature ranged from 101° in the evening to 99° in the morning; pulse from 80 to 108; respirations 19 to 24. On Oct. 2nd the temperature rose to 104°, falling again to 98°. Small petechial haemorrhages appeared beneath the skin of the right arm. Chills, followed by profuse sweating, occurred from time to time. No urethral discharge was present at the time he entered the hospital.

Oct. 11th, examination of the blood showed 3,800,000 red corpuscles, 20,000 whites, haemoglobin 70%.

Cultures from the blood were made by the house physicians, Drs. Martin and Sproat. The arm was carefully prepared and the full of a sterilized hypodermic syringe of blood was withdrawn from one of the veins in front of the elbow. This was inoculated into blood serum (Loeffler's), and on nutrient agar and kept in the incubator, but no growth occurred.

Cultures similarly made on a subsequent occasion also gave negative results.

The patient's general condition continued to improve until about Oct. 23rd, when he felt so well that he wanted to get up. He had been treated with pot. iod., quinine and strychn. Dr. Davison left the city

about Nov. 1st. Up until this time no cardiac murmur had been detected though the patient had been examined frequently. Dr. Fotheringham was left in charge. On Nov. 3rd, on stethoscopic examination he heard a soft mitral systolic murmur. On Nov. 11th the temperature rose to 105°. From Nov. 14th to Nov. 18th, the temperature was subnormal. On Nov. 14th hiccoughing developed, which continued at intervals until the time of his death. The mitral murmur became louder and harsher, and on Nov. 18th a distinct musical note was present. This gradually changed to a whistling character, which was attributed to perforation of a valve, and this was confirmed at the post mortem examination. The patient now began to become jaundiced. The jaundice rapidly increased until it became general and intense. Slight delirium also developed.

Urine showed a sp. gr. of 1015, acid, albumen present in fair amount, bile stained, and contained bile-stained granular casts, red blood corpuscles, polymorphonuclear leucocytes, degenerated epithelium, debris, and amorphous urates.

Red blood cells 3,500,000, whites 22,800, apparently mostly polymorphonuclear, haemaglobin 50%. Free blood pigment was also found on examination of fresh blood specimens. Patient began to vomit large quantities of blood, had frequent epistaxis, chills and profuse sweats.

Death occurred from gradual exhaustion on Nov. 21st, 83 days after the appearance of the gonorrhoea, and 61 days after the first definite general symptoms.

Autopsy Nov. 21st two hours *post mortem*. Only a partial examination was permitted and we were not allowed to retain the organs removed. The skin and mucous membranes were deeply jaundiced. Remains of small petechial haemorrhages into the skin were noted.

The general nutrition was good.

The pleural cavities contained a large quantity of bile stained serous fluid. Numerous small subpleural haemorrhages were noted on both sides. Lungs showed hypostatic congestion otherwise normal. The pericardial cavity was filled with bile stained serous fluid. The epicardium presented a roughened granular surface with numerous subpericardial haemorrhages—an intense acute pericarditis. The heart muscle was soft and bile stained the right side of the heart contained excess of dark colored blood but otherwise was normal.

The mitral valve showed a vegetative and ulcerative endocarditis with perforation of the aortic segment, the vegetations on the valve were large firm and polypoid. They extended down onto the *chordae tendinae*, and the wall of the left auricle presented numerous small excrescences upon its surface. The spleen weighed 24 ounces—subacute splenic tumor.

The consistence was fairly firm. Three large anæmic infarctions were present in this organ. Kidneys each weighed  $6\frac{1}{2}$  ounces. The capsule was non-adherent, the surface of the organ smooth, cortex thickened vessels congested; organs bile stained. Both kidneys presented a number of infarctions. Some of these were pale and the surface over them depressed below the general contour of the kidneys.

The liver was large, soft, friable and bile stained. No gross evidence of obstruction in the bile passages that would explain the intense jaundice could be made out.

Cultures on blood serum, agar, and into bouillion were made from the pleural and pericardial fluids blood of right ventricle and vegetations on the mitral valve. These cultures were kept at incubation temperature and repeatedly examined but no growth developed upon any of them. Smears from the blood of left ventricle and from the vegetations on the valves were also made at the time of the autopsy.

Both showed the presence of diplococci. The smear from the mitral valve showing myriads of them, both free and within the cells. These diplococci decolorized when treated by Gram's method and presented the morphological characteristics of the gonococcus.

While the objection may be made that the gonococcus was not obtained from the urethral discharge (as I did not see the patient when the discharge was present) and that the organism was not cultivated, yet the fact that the patient's illness with the cardiac symptoms and signs of septicaemia, followed a typical acute attack of what was recognized clinically as gonorrhoea, that no growth of the organism was obtained on ordinary media either before or after death, and that innumerable organisms corresponding in morphology, distribution and staining reactions to the gonococcus were found in smears from the vegetations and blood of the left ventricle, leaves no reasonable doubt that the patient's death was the result of a systemic infection with ulcerative endocarditis and pericarditis of urethral origin and due to the gonococcus.

The marked jaundice was a peculiar feature of this case and I have not seen it mentioned elsewhere. No biliary obstruction could be made out so that it was probably due to disintegration of the blood, resulting from the septicaemic process. This would be suggested also by the presence of subcutaneous haemorrhages and the vomiting of blood. Unfortunately, owing to the vigorous objections of friends, the liver and other organs had to be replaced in the body so that a proper histological examination of the tissues was impossible.

While auscultatory evidence of the cardiac trouble could not be

obtained before Nov. 3rd, the endocarditis probably was present before the occurrence of the paralysis on Sept. 24th and furnished the source of embolism producing that condition. The depressed anaemic infarctions found (*post mortem*) in the spleen and kidneys strengthen this probability.

Gonorrhœal endocarditis can no longer be considered a pathological curiosity to be recognized only in the post mortem room. In placing the condition upon a firm scientific footing the most rigid tests, based on unassailable clinical, bacteriological and pathological evidence, have very properly been exacted before admitting a case to be proven due to this cause. This very rigidity of proof, obviously obtainable only in cases coming to autopsy, has quite probably led to an over estimation of the seriousness of the prognosis in these infections. Naturally milder cases, going on to recovery, were excluded from among the properly authenticated cases and this tended to the general conclusion that all cases of gonorrhœal endocarditis are fatal. If such clinical evidence considered sufficient for the diagnosis of other diseases were accepted with regard to this it could readily be shown that not infrequently endocarditis, with symptoms of general infection, develops during an attack of gonorrhœa and that the patient subsequently recovers. Gonorrhœal infections of joints, fascial and tendon-sheaths, in which the organisms have been found, are familiar examples of involvement of distant parts through the circulation, wherein recovery takes place. Of course positive proof will be forthcoming when the gonococcus has been isolated from the general circulation and the patient afterwards gets better. It is important clinically therefore to bear in mind the possibility of cardiac affections, with symptoms of general systemic infection occurring during the course of gonorrhœa. The condition is most likely due to infection by the gonococcus itself, though in a given case, without having been able to cultivate the organism from the blood stream, it will be impossible to say definitely that it may not be due to some other of the pyogenic germs.

## MILITARY MEDICAL TOPICS AND NEWS.

Conducted by Lt.-Col. Nattress, P.M.O. M.D. No. 2.

### DEPARTMENTAL MEDICAL SERVICE.

ONE of the most marked advances in the Canadian Militia during the last few years has been the organization of a Departmental Army



Col. J. L. H. NEILSON,  
Director General of Medical Services.

Medical Service. The scheme as originally contemplated comprises the establishment as required of about thirty units. Already fifteen of these units have been organized, recruited and equipped, viz., 8 Bearer Companies and 7 Field Hospitals. Naturally the first to be authorized were located in the chief military and strategical centres. For instance, 3 of these units are in Toronto, 2 in Montreal, 2 in Quebec City, and 1 in each of the following cities: Halifax, Ottawa, Kingston, Hamilton, London, Sarnia, St. John, N.B., and Charlottetown, P.E.I. The above does not include No. 10 Field Hospital which is now serving in South Africa.

Much credit is due to Col. J. L. H. Neilson, Director General of Medical Services, for the rapid springing into active existence of these fifteen units. The officers have been judiciously selected and the companies are already well organized and on the whole fairly well

trained and equipped.

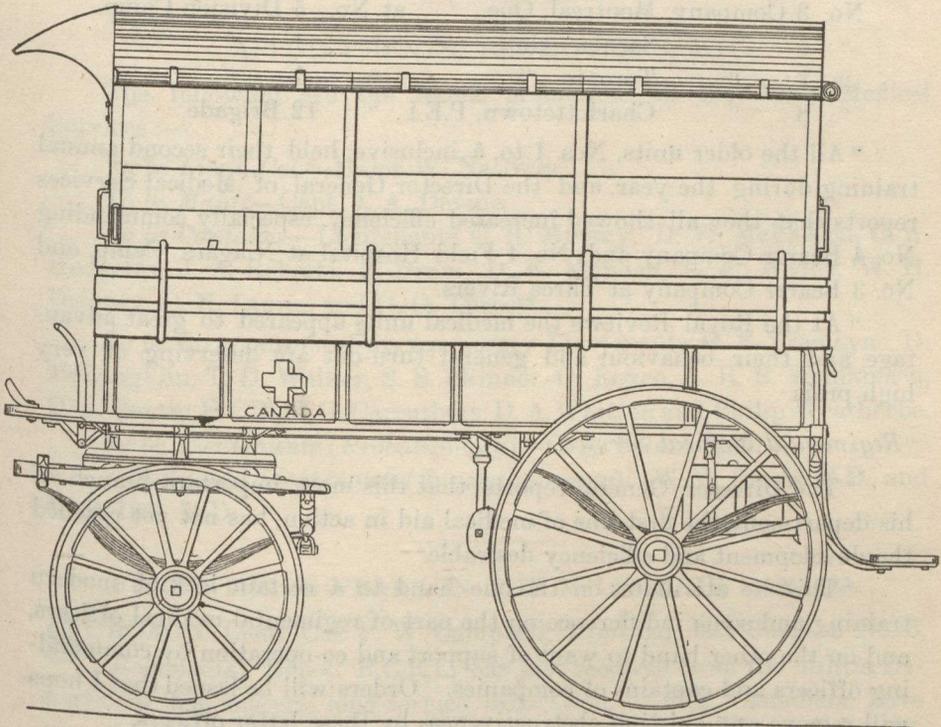
The following is an extract from the Report of the General Officer Commanding for the year ending 31st Dec., 1901 :

*"To the Honourable the Minister of Militia and Defence :*

MEDICAL SERVICES.

*"Canadian Army Medical Staff.*

"The establishment of the various ranks of the Canadian Army Medical Staff was completed during the year. All the officers have now



A Canadian Military Ambulance.

qualified for their respective ranks, as required by G. O. 19 of 1900. In addition to these, there is now a list of 22 supernumerary second lieutenants, 13 of whom have already qualified for promotion to the establishment as vacancies occur. Forty-five of the officers of the Canadian Army Medical Staff are doing duty with units of the Medical Corps.

"Nine courses of instruction have been held in garrison or district camps, in which 38 officers of the Staff or Regimental Medical Services have qualified for their commissions.

*"Canadian Army Medical Corps.*

"The following units of the Canadian Army Medical Corps were

organized, recruited and executed their first training during the drill season of 1901, viz.:

*"Bearer Companies.*

No. 6 Company,	London, Ont.,	at No. 1 Division Camp.
" 7 "	Hamilton, " "	1 " "
" 8 "	St. John, N.B.,	12 Brigade "

*"Field Hospitals.*

No. 3 Company,	Montreal, Que.,	at No. 5 Division Camp.
" 6 "	Sarnia, Ont.,	" 1 " "
" 7 "	Toronto, "	" 1 " "
" 8 "	Charlottetown, P.E.I.,	12 Brigade "

"All the older units, Nos. 1 to 5 inclusive, held their second annual training during the year, and the Director General of Medical Services reports that they all showed increased efficiency, especially commending No. 4 Bearer Company and No. 4 Field Hospital at Niagara Camp, and No. 3 Bearer Company at Three Rivers.

"At the Royal Reviews the medical units appeared to great advantage, and their behaviour and general turn-out are deserving of very high praise.

*"Regimental Medical Service.*

"The Director General reports that this most important branch of his department, the first line of medical aid in action, has not yet reached the development and efficiency desirable.

"This he attributes on the one hand to a certain lack of modern training and some indifference on the part of regimental medical officers, and on the other hand to want of support and co-operation by commanding officers and captains of companies. Orders will be issued that I hope will remove any existing obstructiveness by these latter officers.

*"Nursing Service.*

"As provided for in General Order 62 of 1899, para. 23, a Militia Nursing Service has been organized this year, and eight of the senior nurses having seen service in South Africa will form a very reliable nucleus for this branch which I hope may be given an opportunity to further develop in 1902.

*"Appointments.*

"Your acceptance of the Honorary Colonelcy of the Canadian Army Medical Corps has been a source of much gratification to all ranks and

will contribute in no small degree to stimulate *esprit de corps* and promote zeal and efficiency.

"At the close of the year His Majesty's Government signified its acceptance of a Canadian medical unit for service in South Africa, and the formation of a special service field hospital was at once taken in hand and was proceeding at the end of December.

"I consider that the Canadian Medical Services are in a condition of high and very creditable efficiency."

---

#### APPOINTMENTS, PROMOTIONS, ETC.

The following are the recent promotions in the Army Medical Services:—

*To be Lieut.-Col.*—Major W. Nattress.

*To be Major*—Capt. J. A. Devine.

*To be Captains*—Lieutenants C. R. Murray, D. W. McPheron, C. A. Hodgetts, J. A. Roberts, L. Drum, D. E. Mundell, C. F. Wylde, W. H. Delaney, C. N. Laurie, and G. G. Turcott.

*To be Lieutenants*—Supernumerary Lieutenants H. E. Timayne, D. McLaughlin, T. D. Walker, S. S. Skinner, G. Royce, A. R. B. Williamson, D. B. Bently, F. O'Neil, G. Carruthers, D. A. Whitton and Philip Weatherbe.

*To be Lieutenants (Probationary)*—C. A. Peters, M.D.

—*To be 2nd Lieutenants (Supernumerary)*—W. W. Sands, M.D., and H. P. Hill, M.D.

---

#### FORTY-THREE YEARS IN THE MILITIA OF CANADA.

**S**URGEON Lieut.-Col. F. W. Campbell, Montreal, late Surgeon No. 3, Regimental Depot, R.C.R.I., has just received from the Militia Department his 'officers' long service decoration.' Few Canadians have served longer or more enthusiastically in the Canadian Militia than Col. Campbell. He enlisted as a private in No. 2 Co, Montreal Rifles in August, 1855, and when the nine rifle companies in Montreal were in 1857, formed into the First Battalion Volunteer Militia Rifles, Dr. Campbell became hospital Sergeant and served in this capacity until 1860 when he was gazetted assistant Surgeon. He became Surgeon a few months later. The regiment this same year changed its name to the First Prince of Wales Regiment, in honor of the distinguished favor conferred upon it by being reviewed by the Prince of Wales, on the occasion of the visit of H. R. H. to Montreal in 1860. Surg.-Major Campbell remained with this regiment until December, 1883, when he was appointed Surgeon to No. 3 Regiment.

tal Depot, R.C.R.I. and P. M. O. of the St. Johns' Camp. On the 1st December, 1898, Col. Campbell retired having reached the age limit. This veteran officer saw service in the field and was on the frontier in the Fenian Raids of 1866 and 1870.

We congratulate Col. Campbell on the reception of his well merited decoration and trust he may be long spared to enjoy the confidence and respect in which he is held by his fellow officers in Montreal, and by all who know him throughout the Dominion.

---

#### KHAKI FOR NURSES.

**I**N our issue of February, we gave a list of the Nursing Sisters, who sailed for England on the 27th of January, *en route* for South Africa. The Director-General has received a very pleasing communication from them, dated 22nd February, from Madiera, in which it is stated they had an uneventful but very comfortable trip to England on the "Corinthian." Their reception in London was very encouraging, and indeed flattering, being entertained at dinner by Lord Strathcona where they met a number of leading London people especially interested in "aid to the sick and wounded in South Africa."

Their uniform, while perhaps a little sombre in color so far as the fair sex is concerned, is at any rate serviceable and to some extent picturesque. It consists of a khaki dress with Canadian Militia brass buttons, and a light brown felt hat with turned up brim at one side, with scarlet hackle secured by a maple leaf pin or brooch.

---

#### ATTACHED FOR TRAINING IN ENGLAND.

Brevet Lt.-Col Fiset, A. M. S., Aldershot.

Surg. Lt. Farwell, 53rd Regt., Aldershot.

Lt. Marlow, No. 4, B. C., Volunteer Ambulance School, London.

---

#### SMALL POX ON BOARD THE "VICTORIAN."

It is unfortunate that small pox made its appearance on the Victorian on her way out to Cape Town with the 2nd half of the C. M. R. and No. 10 Canadian Field Hospital on board. So far as we learn several cases of measles first developed, followed by four cases of mild small pox. The Victorian, with all on board except the afflicted ones, was sent on to Durban and was there quarantined.

---

## CURRENT MEDICAL LITERATURE.

Conducted by A. J. MacKENZIE B. A., M. B.

### PERITONEAL ADHESIONS.

IN "Die Medicinische Woche," January 20th, and 27th, Dr. E. J. Katunski discusses the question of peritoneal adhesions. He first considers those in which the cause is more or less apparent *e. g.* those due to previous inflammation, those following mechanical injuries as contusions or operative measures which are accompanied by an acute or chronic peritonitis, and thirdly those due to new growths in the abdominal cavity. Here the history may be suggestive of the cause of the symptoms described by the patient but even then the diagnosis is attended with difficulty on account of the variety of ways in which the trouble may manifest itself, simulating organic disease of different kinds, spinal trouble, hysteria etc. until an exploratory laparotomy may be the only means of coming to a decision.

But besides these there are what have been described as the typical peritoneal adhesions, which have no such apparent cause. Among these Gersuny has described one form as frequently occurring, in the form of a band shaped false membrane in the region of the sigmoid flexure attached at one end to the intestinal wall, at the other to the parietal peritoneum, sometimes being fixed to the mesentery or sometimes bridging it over; it necessarily interferes with the movements of the bowel toward the middle line, and becomes apparent as a tight band on pressing the colon to the right. On account of its position it may very easily escape the notice of the surgeon, and therefore in such cases it is well to examine this region carefully. On the other side we find a similar state of affairs frequently in the form of a peritoneal band between the vermiform appendix near its cecal end and the parietal peritoneum, attended by swelling of the mucous membrane and thickening of the muscular coat of this organ.

The cause of these bands in this particular region has been the subject of some discussion. Gersuny, in the desire for some theory one would think, and arguing from position, has suggested that the minor hæmorrhage attending the rupture of a Graafian follicle becoming organised gives rise to the connective tissue band; the idea gains support from the fact that nine out of ten of these cases occur in women and in the records of more than fifty cases operated upon, there was no evidence of previous

peritoneal inflammation either from the statement of the patient or from the evidence of the laparotomy. Our writer places no weight on this theory but thinks the cause of these obscure conditions must be sought in the history of intestinal affections of children and that it is possible for a sub-inflammation of the visceral peritoneum, either peri-typhlitic or peri-sigmoidal to occur without its presence being diagnosed in a young child, and without leaving evidence other than the formation of these bands.

The diagnosis of this condition again offers difficulty. The symptoms complained of are generally, constant pain in the lower part of the body on both sides, pain in coitus, obstinate constipation, dysmennorrhœa, inability for and pain on exertion. On palpation one finds increased sensibility, not always pain, on both sides of the lower abdomen and pain on vaginal examination. The writer believes that it is possible to detect the condition of the colon by inducing contraction through massage but the differentiation from organic affections in the neighborhood offers great difficulty. The treatment is necessarily surgical, but where there is uncertainty as to the condition, medical treatment might be given a trial. The possibility of the co-existence of this condition with any other abdominal disturbance should always be borne in mind and sought for during laparotomy for any cause.

---

#### THE CLINICAL EXPLORATION OF THE AURICULAR APPENDAGES.

**I**N "Le Progrès Médical," February 8th, 1902, Dr. Ernest Barié, of the Laënnec Hospital, has an article on this subject. He calls attention to the importance of the auricular appendages clinically, and to the fact that examination of them is neglected on account of the difficulty of learning anything with regard to them in the ordinary exploration of the precordium. The position of the left appendage is described as marked out by a trapezoidal space in the left dorsal region corresponding to the sixth and seventh vertebræ, lying between the edge of the spine and the vertebral border of the scapula, bounded above by a line drawn through the spine of the scapula, below by a line through its inferior angle. Here the dullness is found to be an oval, with horizontal diameter about 3cm and vertical about 7. The position of the right appendage is represented by a space to the right of the vertebral column, reaching from the sixth rib to the upper border of the ninth, and three fingers breadth.

Enlargement takes place outward and downward, and it is only in extreme dilatation that the superior segment is augmented. The left

appendage enlarges in many secondary cardiac lesions, both valvular and non-valvular, but it is in mitral stenosis with asystole that the most noticeable dilatation is seen, and here it affords a valuable aid to clinical diagnosis. Enlargement of the right auricular appendage is found in some rather interesting cardiopathies, *e. g.*, mitral stenosis with asystole, in adhesion of the pericardium, in reflex dilatation of the right heart due to gastro hepatic or febrile disturbances, and it explains those cases of cardiac pulmonary congestion and œdema, which do not follow the mechanical laws of hypo-stasis, but are due to direct pressure on the pulmonary veins by the dilated appendage.

---

#### AERIAL CONVECTION OF SMALLPOX.

THE Lancet, February 22nd, has an editorial on this subject, in which attention is called to the fact that we cannot hope to get rid of smallpox by isolation, for the infection can be borne by the air as well as by personal contact, and thus we find another argument in favor of vaccination. The spreading of infection from the hospital ships in the Thames to the hamlet of South Purfleet, which is about three quarters of a mile distant, seems to be well authenticated, occurring, as it did, in the direction of the prevailing winds. The knowledge of this danger will, in all probability, be followed by violent opposition to the erection of small-pox hospitals.

---

#### A NEW METHOD OF DEALING WITH THE PERITONEUM IN OPERATING FOR RADICAL CURE OF HERNIA.

IN the "British Medical Journal" for March 1st, 1902, W. F. Brook suggests a new method of dealing with the peritoneum in operations for the radical cure of hernia. The peritoneal wall should present no pouching or pouting after operation, as this will inevitably tend to recurrence, and for prevention of this the author has adapted his method of dealing with umbilical hernia. Briefly the procedure is as follows:—A large elliptical piece of skin with long axis in the middle line is dissected off the tumor, the sac is isolated as far as the edges of the ring and opened by a transverse incision, the peritoneum is detached all around well back from the edges of the ring and two flaps fashioned, each of which is a little wider and about 2 inches longer than the diameter of the ring. Through the free edges of the flaps running sutures are now passed, the two ends of the centre suture of the upper flap are threaded on a semi-circular needle which is carried through the ring and thrust from within outward through the whole thickness of the belly wall, emerging at a point in the middle line about 2½ inches below the ring. The same pro-

cedure is adopted with each of the other sutures and they are tied tightly over a piece of lead wire bent to the required shape. The lower flap is treated in the same way except that the needle with the successive sutures, instead of being introduced into the abdominal cavity, is made to penetrate the abdominal wall from the space around the upper segment of the ring. The abdominal wound is then closed in the ordinary way. Of course, as in any operation, precautions must be taken to prevent too great strain upon the site of the repair, but the opposition of two tightly stretched layers of peritoneum overlapping offers, in the writer's opinion, an additional safeguard, and his experience seems to warrant his conclusion.

The same principle is applied to operation on inguinal or femoral hernia, and is essentially the same as that now used by Prof. Kocher of Berne, though differing materially from that described under his name in the text books. The following description applies to the operation on inguinal hernia:—

The sac, having been isolated from the cord, is cut across immediately above the part which it is intended to leave in the scrotum. A running silk suture is passed across it just above the point of section. The two ends of the suture are threaded on an aneurism needle. The latter is introduced into the abdominal cavity through the sac, till it reaches a point 2 inches above and internal to the internal ring. Here a little pressure causes it to present beneath the skin, and a small incision is made down to it through the tissue. The suture ends are now disengaged, the needle withdrawn, and by traction on the suture the sac is inverted and pulled well through, twisted, the sac cut off and the stump fixed by one or two buried sutures. The other structures are dealt with as the operator prefers. This method does away with the necessity of slitting up the external oblique fascia roofing in the canal.

---

#### A CASE OF TUBERCULOSIS OF THE SKIN FOLLOWING ACCIDENTAL INOCULATION WITH THE BOVINE TUBERCLE BACILLUS.

**T**HIS case is recorded in the "University of Pennsylvania Bulletin" for February, and is briefly as follows:—On July 27th, Dr G., while performing autopsies on two cows which were the subjects of experimental tuberculosis, wounded the flexor surface of his wrist slightly. No treatment beyond thorough washing was adopted. The wound healed promptly, and nothing more was thought of it until some four weeks later when the scar was noticed to be red, prominent and sensitive. It increased in size till Sept. 10th, when there was a nodule 15 mm. by 8 mm. This was

excised, and two guinea pigs were inoculated subcutaneously, both of which developed generalised tuberculosis, and in the case of one histological examination revealed typical tubercle development.

The notable feature of the case is the rapidity of growth of the nodule, indicating marked virulence of the infecting organism. Such cases do not settle the entire question of the transmissibility of bovine tuberculosis to man, but they prove most conclusively that the bovine germ finds soil and conditions in the tissues of man suitable for its multiplication, and that it produces in animals typical results.

---

#### INTESTINAL SAND.

**I**N the LANCET, March 8th, 1902, Sir Dyce Duckworth, and Dr. A. E. Garrod describe a case where enteric lithiasis persisted for about six months under observation. The patient was a woman *at.* 33, generally healthy and history unimportant except for the presence of a gouty diathesis in various manifestations in the family. The ailment began with an intractable diarrhoea with flatulence and passage of mucus, and after a time the presence of intestinal sand was discovered in the stools. Ordinary methods were unavailing in the treatment of diarrhoea. Each motion contained about a teaspoonful of the brown gritty substance resembling uric acid deposit, insoluble in liquor potassae but readily soluble in boiling nitric acid. On examination the sigmoid flexure and colon were evidently thickened, there was some pyrexia and pain and tenderness. Treatment was directed toward the tendency to lithiasis with some success, as the patient improved in general health and the diarrhoea was lessened. The case differs from those ordinarily described in the absence of acute attacks of pain with aggravation of the symptoms. The features of most cases are as follows: They occur in women of an average age of 35 years, generally there is a gouty history, there is diarrhoea in some cases, constipation in others, and generally muco-colitis associated with paroxysms of pain resembling renal or biliary colic, with distension and vomiting.

The gritty material passed was made up of a collection of fine particles of varying shapes and either colorless or a warm brown, non-crystalline and in length from .05 to .2 millimeters, consisting of organic and inorganic parts, the former had no cellular elements in structure but was rich in bacteria while the organic part was chiefly made up, of calcium oxide and phosphorus pentoxide with traces of magnesium and iron. The pigmentation was made up of urobilin and another unknown pink coloring agent. A false intestinal sand is frequently found whose

origin is residual elements of fruits such as the pear or of vegetables, but the true form has no organised vegetable basis.

The particular place of origin of this intestinal sand is of interest and the evidence seems to point to the colon as the site of its elaboration. The presence of urobilin and the absence of cholestrin exclude a biliary origin, the inactive colon is a more probable site than the constant motile small intestine, while the clinical evidence of associated pain, tenderness, distension and muco-colitis support this view.

---

#### CONGENITAL COCCYGEAL MULTIPLE CYSTS AND FIBROUS TUMOR.

**I**N "La Revue Médicale," of January 22nd, Dr. T. M. Brennan, of Montreal, and Dr. Choquette, of St. Hilaire, describe the removal of a coccygeal tumor from an infant of three months. It was situated at the site of the coccyx, being about the size of a small hen's egg, *erg*, it was pedunculated and quite mobile, hard and without fluctuation, and was surmounted by a small polypus which was of softer consistency than the rest of the tumor. On rectal examination several small, rounded, smooth, elastic tumors were found beneath the mucous coat, but the bony coccyx was apparently absent. On operation the tumor was found to consist of dense fibrous tissue, and the cysts contained a colorless gelatinous fluid, without a trace of fat and nothing to suggest a dermoid origin. Laterally two plaques of bone were found, teratological representatives of the coccyx.

The histological examination gave no clue to the origin of the tumors, and there seemed nothing to support the reference to any of the ordinary sources *e. g.* cartilage, bone, mucous membrane, degeneration, nervous or vascular structures, etc.

---

#### MALIGNANT DISEASE OF THE BREAST.

**T**HE LANCET for March 8th has an article by Mr. A. M. Shield on this condition with results of 60 cases operated upon. Of these 40 are tabulated, the others being of too recent occurrence to admit of a full report but of these two have died, one from a previous dissemination while of the 40, 8 are successful after 5 years, 4 for 4 years, 7 for 3 years and 11 for 2 years. Without discussing the cases where the result has been unsatisfactory, we may give the following conclusions which the writer believes the record of these cases supports him in, (1) That the risk of removing cancer of the mammæ by extensive operation is small and should not amount to more than 1 or 2 per cent. (2) That early and

free removal gives prospect of years of freedom and in a good percentage of cases of good health and enjoyment of life. (3) That the cases that do badly are (1) soft, rapidly growing cancer in young and vascular women, (2) cases of long continuance before operation where the skin and cervical glands are widely infected. (4) That in certain cases visceral cancers and cancer in the liver co-exist with or rapidly follow operation, and the explanation of these is uncertain. (5) That the practice of early exploration by incision of small nodules and indurations in the breast is of the first importance, for diagnosis. (6) No one should undertake an operation for mammary cancer unless he is capable and has had sufficient experience to remove thoroughly all lymphoid tissue from the axilla, as the neglect of this is a common cause of failure. (7) The prognosis of mammary cancer is still dubious and sometimes instances arise that falsify ordinary experience, but such do not invalidate the rule "Operate early, Operate extensively."

#### A CASE OF DIAPHRAGMATIC HERNIA.

THE Australasian Medical Gazette of January 20th, reports a case of diaphragmatic hernia of more than ordinary interest, by reason of its extent, long duration, and the fact that it was diagnosed, and operation attempted, though unsuccessfully, for its relief. Drs Clubbs and Gillies, of the Prince Alfred Hospital, Sydney, report the case:

The patient was a healthy man, aet. 70, giving a history of a fall twenty years before resulting in the fracture of three ribs on the left side and other injuries, but with complete recovery. Four days before admission to the hospital, he was seized with a sudden severe pain on the left side of the abdomen, this persisted and vomiting ensued, and he noticed a swelling of the stomach. The vomiting became faecal, the bowels were inactive but acted after cal. gr. 5 and an enema had been given. Briefly the physical signs were as follows; the chest was barrel-shaped, and movement diminished on the left side, hyper-resonance over the left front of the chest with a well-marked metallic tinkling, and this condition was traceable without interruption down to the distended abdomen, cardiac dulness transferred to the right side of the sternum, and an indistinct impulse seen there, *bruit d'araxa* heard all over the left side below the level of the third rib, succussion splash heard at the base behind, respirations were only slightly embarrassed, pulse was 80, and weak and irregular, and temperature 99.

The patient evidently had an intestinal obstruction, and from the continuity of the signs over chest and abdomen a diagnosis of diaphragmatic hernia was made and operation for its relief was undertaken.

An incision was made from the ensiform to the umbilicus, dilated intestine presented, and on inserting the hand a fissure was found in the diaphragm, and in the thoracic cavity a much dilated stomach, and intestines and stomach were found firmly fixed, a trocar was passed through the side of the chest, the viscera drained, and an attempt made to reduce the hernia but it was impossible and as the condition of the patient forbade the operation by removal of parts of the ribs and the attempt at reduction from the thorax, the wound was closed with the trocar in place. The patient died fourteen hours later.

On post-mortem examination, the greater part of the left side of the chest was found to be occupied by the dilated stomach, which was firmly fixed in place by adhesions; behind the stomach lay a foot or more of transverse colon, and behind this the spleen was firmly adherent to the pleura, and from it a fibrous band passed to the margin of the opening, and behind this a knuckle of small intestine had passed and become strangulated, and to this condition, and not to the hernia itself, death was due. About an inch of the duodenum was found in the thorax and about three inches of the tail of the pancreas. No trace of old fracture of the ribs was found.

The hernia was evidently of long standing, and may possibly have dated from the time of the original injury; during this time it gave rise to no symptoms and on no way interfered with the man pursuing an active life. Had the existence of the strangulation of the small intestine described been made out it might have been relieved but for the reduction of such hernias the route through the chest wall, by the re-section of the ribs is evidently the best.

#### THE HEALTH OF THE PEOPLE.

**T**HE Practitioner for March has an excellent article by James Cantle M.B., on the health of the people, in which the writer examines the conditions surrounding life in large cities, with the consequences which follow, and searches for a solution of the problem of the race development, which is presenting itself to all thinkers on social subjects. In Canada we are not confronted with this difficulty to the same extent, but even here we have to consider the relation of the urban to the rural population. The writer makes the statement that in London there are no Londoners of the third generation, that the great cities would be rapidly depopulated were it not for the influx from the country, and that the country in England has had its population reduced beyond its necessities. Town life may suit intellectual activity, physique does not always spell ability, but it does measure procreative power and we must improve the physical conditions if we are to maintain our birth-rate.

The reasons for the detrimental effect of town life are not far to seek—the lack of fresh air, the disinclination to exercise which must of necessity be taken in rooms or be subject to the inclemencies of the weather at some seasons, and the difficulty of providing suitable occupation for the spare time of children especially between the ages of 12 and 17. This age is the most difficult to deal with, for the children are too young to go to work, too old for the primary school, and are at the time when their physical development is most important. The writer believes that large covered play-grounds are a necessity and will be seen during the next decade, but suggests for boys of this age a course of compulsory military service. He says:—"The direct physical benefit obtainable is calculated to increase the work-producing power of a nation. The discipline inculcated during these critical periods of life is potential of great good, the habits of cleanliness taught and the meaning of hygiene and sanitation insisted upon, elementary though they would necessarily be, would affect the man's future life, it may be insensibly and to but a slight degree; but a minimum of education in these matters, touching as it would all classes, means a colossal total toward betterment."

The demand on the capacity for production of the English isles is not confined to the necessities of the population of the great cities, but as a colonising power its brain and brawn are needed beyond the seas. The great health problems then would seem to resolve themselves into two, namely the maintenance of the health of the town-dwellers, and the increase in the numbers of those dwelling in the rural districts. The writer believes the solution of the former to be found in conscription in the way described, for the latter some means of improving the condition of the rural population must be found which will be effective in stopping the migration to the cities.

#### "CICATRICES VICIEUSES."

**I**N *The Gazette des Hopitaux*, March 1st and 8th, Mr. Charles Vinnay discusses under this heading such cicatrices as, either in their process of formation or afterward, assume characters harmful or unsightly. All wounds which suppurate, and therefore heal by second intention, may give rise to this form of scar, but they most commonly follow burns.

These conditions may be divided into two classes, viz.: deformed scars and deformities resulting from scars. Of the first class are those of a color different from the surrounding skin, those showing an elevation above the level of the surrounding tissues, either due to exuberant granulation or to the formation of false cheloids, those showing a depression, here those resulting from long continued suppuration are the most common, and those noticeable on account of their extent. Of the second class are bands, ad-

hesions, deformities of orifices, and the narrowing of organic ducts, etc. The bands are found in the folds of the body, palms, neck, etc.; the symphises unite the members to the trunk or to one another. The orifices most frequently deformed are those of the face, and the ducts the vagina, rectum, the urethra or the oesophagus.

The gross and minute anatomy of scars present a few characteristics of interest. They are composed of two layers, one epidermal, thin, generally white, without secretion or hair, the other the tissue "*inodulaire*," the dense resistant dermal layer. The tissue contains a few capillaries and venules, but no nerve endings have been made out, the nerves of the surrounding tissues ending in ganglioform enlargements at its margins, yet it is not wholly without sensitivity. It is by no means a moribund tissue, as it possesses the possibility of growth and other evidences of vitality. The presence of lymphatics is denied by some authorities, and the possession of elasticity is also a disputed point, some holding that it is a property of the formative and not of the resultant tissue.

The treatment of these cicatrices may be considered under two headings, prophylactic and curative. In order to prevent their formation one should, 1st—Attend closely to the position of the members in the neighborhood of large cicatrising wounds; 2nd—Restrain the production of cicatricial tissue by the use of grafts. The curative treatment may be divided as open operative treatment and other means. Among the latter we may mention the treatment of discoloration by tattooing with tannin, followed by injection of nitrate of silver, used successfully by Variot. Elevated cicatrices may be treated by compression, scarification or extirpation. Depressed scars are treated by subcutaneous liberation as in tenotomy, followed by the injection of liquid vaseline. The treatment of scars described as uniting or obliterating offers the greatest difficulty. Applications of various medications have been tried but the author classes them all as useless. Mechanical means have been more useful in the form of douches, warm bathing, the so-called Swedish gymnastic method or method of Neumann, consisting in a form of massage, or in extension and the gradual application of force. With regard to the operative form of treatment we may quote Depuytren's rules, viz.: 1st—Never operate for some months or even years after the formation of the scar as Nature keeps up its curative function for some time after it is apparent. 2nd—Never operate without being certain of obtaining a scar smaller or less deformed than that removed. 3rd—Only operate when it is possible to return to the parts their original form or function in some degree. The methods of operative interference may be classed as Incision, Excision, the use of grafts and autoplasty, but space forbids anything more than the mention of these various means of repair.

## PROVINCE OF QUEBEC NEWS.

Conducted by MALCOLM MACKAY, B.A., M.D.

AS a result of the recent epidemic of smallpox a vast quantity of literature on the subject has appeared in the medical journals and daily papers of America and Europe. The mild character of the symptoms found in the majority of the cases has originated the idea which is rife in certain districts that there is no true smallpox found to day in Canada. Unfortunately this view has been prevalent in the Province of Quebec and in order to prove to the general public that it is utterly false the *Bulletin Sanitaire* has published a number of excellent lithographs of typical cases of smallpox reproduced from photographs taken in the Montreal Civic Hospital in January, 1902.

In the same number of the *Bulletin Sanitaire* is an epitome of some very convincing statistics showing the results of vaccination in Europe. The following report by Dr. Laberge, of the Montreal Civic Hospital, lends additional force to the arguments submitted in the leading article of the Bulletin :

"From May 1901, to February 1902, there were received 225 patients. Of this number six died, two being cases of hæmorrhagic smallpox (*picote noire*.) Of the 225 patients not one had a good vaccination mark ; most of them had never been vaccinated, while only eleven had a visible mark, which had been made 20 to 25 years before. The hospital staff consists of thirty individuals, all were vaccinated before entering, and none have contracted the disease though living in the midst of infection for more than two months."

The sixth regular meeting of the Montreal Medico-Chirurgical Society for session 1902 was held on March 21st. Sir William Hingston was in the chair. Dr. McConnell showed a living case of muscular dystrophy and discussed the condition. Among the more interesting features of the meeting was a case of lupus treated with the x rays. This was demonstrated by Dr. Girdwood, the case provoking a lively discussion by the members.

The seventh meeting of the same society was held on April 4th, the president, Dr. Armstrong being in the chair. Dr. Von Eberts showed well marked case of morbus coxæ with some very clear skiagraphs showing the relations of the neck of the femur to the pelvis.

Dr. H. G. Nicholls followed with a most interesting paper. He presented a specimen of primary intestinal tuberculosis, the original lesion having been followed by a general miliary tuberculosis including meningitis, there being in addition a syphilitic ulcer on the leg. He proved conclusively that the primary lesion was in the intestine and remarked upon the rarity of the condition, referring to the importance which Koch attached to this fact in his recent speech at the English Congress on Tuberculosis. Dr. James Stewart pointed out that the case was of particular clinical interest on account of the presence of two chronic conditions, tuberculosis and syphilis. The patient came under his care in a semi-comatose condition, showing symptoms of meningitis. The definite syphilitic history together with the enlarged glands and the ulcer on the leg pointed strongly to syphilitic meningitis, whereas the autopsy demonstrated that it was tuberculous.

Dr. Byers then read a paper on albuminuric retinitis in pregnancy. Some discussion followed in the concensus of opinion of appeared to be that when such a condition was present it was wise to cut short the pregnancy rather than let it go on, subjecting the patient to the risk of sustaining permanent damage to her eyesight.

Dr. Laphorne Smith gave a short resumé of a paper entitled, "A needed change in treatment of cancer of the uterus." He began by quoting a few statistics showing that operations on cases of cancer of the os uteri, where a positive diagnosis had been made were attended by very little success; hence he argued something must be done before this stage of the disease has been reached. He stated that the majority of cancers of the os started from tears and that if we do away with the tear we prevent the majority of cancer. He thought therefore that every case of severe laceration of the os uteri *i. e.* one in which the lining epithelium of the cervix projects into the vagina, should have radical treatment at once; if child bearing was to continue amputate the cervix, if not, then arrange the operation according to the condition present, but in any case repair the laceration. He also advocated removal of the uterus in every case of blood loss after the menopause.

After some discussion which naturally followed this paper the meeting adjourned.

---

The annual report of the cases of typhoid fever treated in the Royal Victoria Hospital Montreal has just been completed. There were 160 cases admitted during the year 1901, the number of deaths was 9, making the percentage of mortality 5.6 for the year.

The following table gives the number of cases admitted, the number of deaths, and the percentage of mortality for the past eight years.

Year.	No. of Cases.	Deaths.	Percent. Mortality.
1894 . . . . .	84	3	3.5
1895 . . . . .	84	4	4.7
1896 . . . . .	72	0	0.0
1897 . . . . .	75	7	9.3
1898 . . . . .	93	4	4.3
1899 . . . . .	86	7	8.1
1900 . . . . .	126	9	7.1
1901 . . . . .	160	9	5.6
Total . . . . .	780	43	5.5

The committee of the Montreal medical profession which has been elected to make the necessary arrangements for the complimentary dinner to be given at the Place Viger Hotel, on April 29th, to Sir William Hingston, Dr. D. C. McCallum and Dr. Rottot on their fiftieth anniversary of their graduation, consists of Dr. F. W. Campbell, chairman; Dr. Roddick M.P., Dr. Lachapelle, Dr. Ruttan, Dr. Guerin, Dr. Marsolais, Dr. Penigo, Dr. Foucher, Dr. Buller, Dr. Dube, Dr. Kennedy, Dr. Laphorn Smith, Dr. Boulet, Dr. Wilson, Dr. Carmichael, Dr. Ross, and Dr. Benoit. This committee embracing as it does all medical schools, creeds, and languages found in the profession in Montreal will undoubtedly ensure the success of the dinner given in honour of the senior physicians of the city

The Western General Hospital of Montreal has entered upon the present year with very bright prospects.

The hospital was originally erected by Major Mills and completed in 1880. Shortly after this date it was leased by the Medical Faculty of Bishops College, who took possession and opened maternity and gynaecological departments. For about ten years the character of the hospital remained unaltered, but in 1894 the college moved their maternity hospital to the building which they now occupy, thus enabling the Western

Hospital Corporation to open the original wing as a general hospital. Quiet but energetic work has gradually placed the hospital on a more secure footing and the last annual meeting of the governors was the most successful in its history. The financial condition was considered most satisfactory, the receipts and donations per month averaging almost double those of the preceding year. As already announced in THE CANADA LANCET, Mr. G. B. Burland offered \$200,000 towards the erection of a new building, while four other gentlemen offered to join a party of twenty to wipe out the debt of the hospital.

---

### FORTHCOMING MEETINGS.

The Canadian Association for the prevention of Tuberculosis will meet in Ottawa, on April 17th, under the presidency of Sir James Grant.

The Maritime Medical Association will hold its twelfth annual meeting in Charlottetown on Wednesday and Thursday, July 9th and 10th. Dr. F. P. Taylor, of Charlottetown, is president, and Dr. Geo. M. Campbell, of Halifax, is honorary secretary.

The annual meeting of the Canadian Medical Association will be held in Montreal on the 16th, 17th and 18th days of September, 1902. The president is Dr. Francis J. Shepherd, 152 Mansfield St, Montreal, the local secretary, Dr. C. F. Martin, 33 Durocher St, Montreal, and the general secretary, Dr. George Elliott, 129 John St, Toronto. Dr. William Osler, Professor of Medicine in Johns Hopkins University, will deliver an address in Medicine and Dr. John Stewart, Halifax, Nova Scotia, the address in Surgery. Arrangements are already well in hand for a very large meeting.

The Medical Society of Nova Scotia will meet in New Glasgow on July 2nd and 3rd. The following is the programme so far as arranged: Address in Medicine—Prof. F. G. Finlay, Montreal; address in Surgery—Prof. G. E. Armstrong, Montreal; discussion on Vaccination—Drs. A. P. Reid, A. Halliday and M. Chisholm; Insomnia with Some Suggestions for Treatment—H. H. MacKay M.D., New Glasgow; Examination of Water, Chemical and Bacteriological—Andrew Halliday, M. B., Halifax. Case reports (1) Supra-pubic Cystotomy, (2) Abscess of the Lung—E. D. Farrell, M. D., Halifax; the Treatment of Puerperal Sepsis—Ernest Kendall, M. D., Sydney; papers have also been promised by Drs. L. H. Morse, of Digby, and G. H. Cox, of New Glasgow.

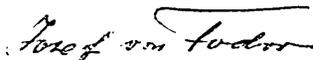
---

*Budapest, January 27th, 1898.*

# Certificate of Professor von Fodor.

At the request of the Apenta Company of Budapest, I hereby certify to them that I have for a considerable time repeatedly examined the APENTA SPRINGS at Ofen (Budapest) and the filling of the water, which were placed under my scientific supervision, and that I have become convinced that the working is conducted very satisfactorily from a hygienic point of view.

I have also satisfied myself by repeated personal investigations that the APENTA WATER as despatched is constant in its chemical composition.



*Royal Hungarian Ministerial Councillor; Director of the Hygienic Institute of the Budapest University; Knight of the Austrian Order of the Iron Crown; L.L.D., Cambridge; Honorary Member Sanitary Institute of Great Britain, Royal Institute of Public Health, etc.*

DUNCAN FLOCKHART & CO.'S

(HOWARD'S)

**Quinine  
Capsules**

1, 2, 3 and 5  
Grains each

GUARANTEED . .

**Howard's Quinine**

SAMPLES OF ANY SIZE SPECIFIED  
SENT ON APPLICATION



**R. L. GIBSON,** 88 Wellington Street West,  
TORONTO



# POTENT RELIABLE SAFE

Parke, Davis & Co.'s Anti-diphtheritic Serum embodies all that is best in diphtheria antitoxin.

Its record is an unbroken series of successes.

During the seven years of its administration it has saved thousands of human lives.

In all these years not a single fatality has been attributed to its use.

Parke, Davis & Co.'s Antidiphtheritic Serum is

**ALWAYS POTENT, ALWAYS RELIABLE, ALWAYS SAFE!**

HOME OFFICES  
AND LABORATORIES  
DETROIT, MICH.  
BRANCH LABORATORIES  
HOUNSLOW, ENG.,  
WALKERVILLE, ONT.

## PARKE, DAVIS & CO.

BRANCH HOUSES  
NEW YORK, KANSAS  
CITY, BALTIMORE,  
NEW ORLEANS, CHICAGO  
LONDON, ENG. &  
MONTREAL, QUE.

Address us at WALKERVILLE, ONT.

# THE CANADA LANCET

VOL. XXXV.

APRIL, 1902.

No. 8.

## EDITORIAL.

### OUR EARLY HISTORY.

**I**N order to collect material upon which the future historian of the medical profession may draw, we have decided to ask for contributions from the older members of the profession. These will be published under the title "Pioneer Experiences." Every medical man who has had experience in new districts, villages, or in new rural communities can give many valuable facts. These will include: the difficulties of travelling, the poverty of the community, the various duties performed by medical men, the defects in the supply of medicine and nurses, the surgical difficulties, the names of the early doctors, characteristic stories of doctors or patients, and all other facts and circumstances which will throw light upon the self-sacrificing work performed by the fathers of Canadian medicine.

The letters to the editor embodying this information should not be more than 1500 words in length. Copies of old diaries, letters, clippings, historical descriptions and old photos of men, places or articles will be a pleasant addition.

If the profession will help us in this matter, these letters will be collected during the next six months, carefully edited and grouped. The publication of them will be begun next autumn.

THE CANADA LANCET trusts that the profession will give its generous assistance in securing the information which, it is but right, should find a prominent lodging-place in the files of the oldest medical journal in Canada.

---

### HOW SHALL WE DISPOSE OF OUR DEAD ?

**T**HE rapid extension of the area of our cities and the constant increase in the density of population brings prominently forward the question of the disposal of the dead. It is undeniable that the present method, suitable as it is for rural districts and in places thinly inhabited, is, in its application to large cities, fraught with dangers and difficulties of no little moment. The sentimental associations of green church-yard are

sacred to many and worthy of respect from all, but they are not regarded by the ruthless promoter or the soulless corporation when it comes to a question of a route for a railway or a site for a manufactory; so that in the vicinity of growing towns cemeteries are being constantly moved back and not desecration but complete destruction awaits them; and we can look forward to no quiet, undisturbed sleep for our dead. Then, too, there is no point of view to be regarded as belonging to the deceased person, the safety, the welfare, even the convenience of the living are the potent factors in the consideration of the question, and the danger of contamination of air and water from the proximity of a decaying mass of animal matter is not imaginary.

The solution of the difficulty seems to lie in the adoption of cremation which provides a safe, hygienic and at the same time æsthetically unobjectionable mode of disposal, and, too, of preserving the remains of the deceased. It is a method hallowed by age and supported by reason, and when one becomes accustomed to the idea it should bear no unpleasant or sacrilegious suggestion. It has already been adopted in all the principal cities of the civilised world and its advocates and adherents are constantly increasing in number.

---

#### REGULATION OF QUACK ADVERTISING.

**A**FTER having taken measures to protect the public from the Christian science traffic, the German government is stated to be giving its attention to the regulation of the advertising of patent medicines. The tremendous increase in the sale of these remedies during recent years has led the authorities to consider the matter one of national importance. It seems remarkable that governments in different countries should have so long allowed the most heartless, mercenary and de-picable class of swindlers a perfectly free hand to openly traffic in human ills and suffering. There has been no limit beyond which they have not been allowed to go in the publication of transparent falsehoods and claims so absurd and wilfully misleading that self-respecting physicians usually consider them unworthy of serious consideration or denial. These advertisements are paid for and published in both the secular and religious press, without regard to their fraudulent character or the dishonourable purposes they are intended to serve. The high standing and respectability of the journals in which they appear are often taken by the unthinking public as a kind of endorsement of the reliability of the nostrums advertised.

If individuals or companies receive money for remedies warranted to cure conditions that are known to be *incurable*, surely they are obtain-

ing such money under false pretences and should be amenable to the laws governing fraud. Their offences, however, are so commonplace and have been tolerated so long that even the most glaring of them are passed over without notice or comment. Sure cures for cancer may be seen advertised in almost any paper one picks up, a claim which in the present light of medical science, could be and is only made by a knave or a fool. In either case, the undiscerning multitude should have protection under our laws from such obvious frauds. Every reputable physician knows, and every intelligent layman should know, that the person who claims to cure all cases of tuberculosis, Bright's disease, asthma &c., is attempting to deceive, with a view to extorting money from the unhappy victims of real or fancied diseases. Why should such open dishonesty be allowed to go on without question or punishment?

Those in authority adopt vigorous measures to suppress the common abortionist and yet we may daily see advertised in the public press, un-failing remedies for "suppressed menstruation," "monthly irregularities," and other thinly veiled allusions to what are commonly interpreted as means of producing abortion. These advertisements suggest criminal acts. What an educative influence such suggestion of crime must have on the community! When some unfortunate individual finds that the legally-advertised means of relieving her trouble to be a failure, is it a matter for surprise that she should conclude that it is no worse to try other methods and so procure the surer services of the "operative abortionist." Morally she is justified as much in resorting to one method as to the other.

Nostrums containing morphine, cocaine and other dangerous drugs, capable of ruining the health or of laying the foundation for drug habits are advertised and sold, and administered to helpless children as well as to adults, who are quite unaware of the dangers to which they are exposed. No one can estimate the harm done in this way and yet there is no attempt by the authorities to give the public any protection.

It is unnecessary to multiply instances of worthless, or what is worse, positively dangerous remedies that are advertised as certain cures for all sorts of ills.

The medical profession has not done its duty in permitting this condition of affairs to continue so long without protest or warning. Public opinion must be educated and pressure must be brought to bear in proper quarters in order to stem an ever growing evil. No assistance, but instead the strongest opposition, may be expected from the public press which is probably not aware of the amount of harm that is being done, and has not yet attained to that degree of altruism where mercenary ends will

be sacrificed for the public good. The German Government, however, has set an example that will form a precedent and so make the matter more readily dealt with in other countries.

The patent medicine interests not only have the backing of the public press but they are possessed with great financial and personal influence in high quarters that will be exercised to the fullest extent to prevent any legislation that will interfere with their having a free hand in so fruitful a field for money-getting.

---

### POST-GRADUATE WORK IN TORONTO.

**I**N a number of letters recently appearing in both the lay and medical journals of Toronto, Dr. Lucius Oille, of St. Catharines, expresses himself strongly in reference to the lack of provision for post-graduate and research work in medicine at this centre. He refers to the large number of graduates anxious for special work or further experience who are forced to go to institutions in either the United States or Europe in quest of advantages which they cannot obtain at home. This means a very considerable financial loss to Ontario and certainly tends to lower the prestige of our own institutions in the esteem of those who have been unable to have their wants supplied by them. This very class is the most influential and progressive among our graduates. Taken altogether we believe Dr. Oille's criticisms are just and are deserving of the most serious consideration.

The letters are written in a friendly spirit and with no desire to do any injustice to Toronto as a medical centre, but rather with a view to awakening those in authority to the necessity of making provision for work that has heretofore been too much neglected. Some, in reply to Dr. Oille have claimed that such facilities are already provided, but this statement cannot be taken seriously. It is better for us to admit frankly that no satisfactory facilities for postgraduate medical study exist here at present. Others have claimed that we have not a sufficient amount of material to provide for both undergraduate and post-graduate instruction. Here again we must agree with Dr. Oille as against those who have tried to reply to his criticisms. The various hospitals, homes, asylums etc., provide a super-abundance of material if it were properly utilized. These hospitals, homes, asylums, dispensaries, etc., with material available for clinical teaching in the city of Toronto, contain over 2,000 patients. Surely the field is an ample one. The New York Polyclinic Hospital, where many Canadians are attracted, has less than 100 beds, and the N. Y. Post-graduate hospital less than 200

beds. There is no city on the American continent so favorably situated as Toronto for a post graduate school. The summers are sufficiently cool and pleasant for work to be carried on, if desired, during the whole of that season. Living is comparatively inexpensive—not more than half what it would cost in most other centres for post-graduate work. There is abundance of clinical material available. The only thing necessary is that these advantages should be appropriated and turned to proper account.

---

## EDITORIAL NOTES.

The St. John, N. B., Medical Society meets once a week. Dr. W. L. Ellis is president.

---

Dr. John Stewart of Halifax has been appointed secretary of the Medical Society of Nova Scotia in succession to the late Dr. W. S. Muir.

---

The Murray Memorial Ward of St. John's General Public Hospital was opened on the 1st of March with appropriate ceremonies. The room contains five beds.

---

McGill University's seventh annual course of instruction for general practitioners will commence April 28th and close June 7th. Full information concerning this course will be found in our announcement pages, or may be secured from Dr. Ruttan, Registrar, Montreal.

---

Regina's Hospital is making steady progress. The officers for the current year are: President, Dr. Goggin; vice-president, G. W. Brown; treasurer, G. Michaelis; secretary, James Balfour. Drs. Low, Martin, Graham, Miller and Field are members of the medical staff, and Dr. G. Pearson Bell, consulting physician.

---

The Nova Scotia Branch of the British Medical Association met in Halifax recently. Dr. Hattie, superintendent of the Nova Scotia Hospital, read an interesting paper on Epilepsy. Drs. Murphy, C. D. Murray, Sinclair, Mader, M. A. B. Smith, Mathers and Trenaman took part in the discussion. Dr. Walsh, president, occupied the chair.

---

Under instructions from Archbishop Bruchesi, of Montreal, the different parish priests at High Mass, recently, stated that unless Roman Catholics were granted separate civic hospitals they would be forbidden to enter neutral ones and that if necessary the church would build one

at their own expense for the accommodation of their adherents. The reasons for this decision were not stated.

---

There is one incident in the life of the late Dr. Bucke of London which is not generally known. When a young man, he was caught by a storm in the Rocky mountains and was lost in the snow. When found his feet were frozen so that circulation had ceased. His companions amputated the feet—anaesthetics being a thousand miles away. For six weeks the stricken man lay in that mountain cabin and passed through a time of regeneration—coming out a man of deep earnestness and courageous determination.

---

A story is told of one of Dr. Bucke's runaway patients

This one was a recent arrival and supposed to be dangerous. Therefore a search was made and telegrams sent to his friends. About three months afterward one of the employees of the asylum accidentally found the man working for a farmer ten miles away. The man had hired out and was doing good service, living in the farmer's household. The employer said nothing, but went home fast to report to Dr. Bucke. "Leave him alone" said the Dr. "He is getting better treatment than we can give him here." The man worked a year for the farmer, saved a hundred dollars, bought a new outfit of clothes and disappeared.

---

There has been a new out-break of the bubonic plague at Sydney, Australia. The city theatres have been closed and the city hotels quarantined. The general conclusion seems to be that, the infection was not wholly cleaned out a year ago, in spite of all the precautions taken. The rats are again the objects of pursuit. Brisbane also has some cases, and the Central Board of Health at Adelaide has proclaimed New South Wales, Queensland and Victoria as plague infected. In New South Wales all letters are disinfected by spraying with formalin.

---

About the 7th of last month a case of small-pox was discovered at the University of Toronto in the person of a fourth year natural science student. He was removed to the Isolation Hospital, where as the case was a very mild one he soon recovered. Precautions were taken to prevent the possible spread of the infection by disinfecting the laboratories where he had been working, and the University required all attending lectures to be vaccinated. This was carried out by the junior members of the medical faculty with a commendable thoroughness and despatch. Fortunately there was no further development and the mild scare was soon lost in the examination excitement.

Elbert Hubbard, editor of the Philistine, tells of a recent visit to Dowie of Chicago. "I went in with the throng and was making my way down to a seat when a big man, who looked like the engineer of a switch engine, stopped me, and blocking the way asked very bluntly but not unkindly : 'Do you believe on the Lord Jesus Christ?' I hesitated. 'Ye-e-s,' I gasped. 'Thank God ! And you have no use for doctors ?' 'No' I said with emphasis that made up for my former hesitancy. 'Right this way' said my friend and he gave me a good seat. 'You see we give the Believers the best seats and the others can take what they can get' \* \* \* \* Dowie is working a tremendous Scheme."

The Winnipeg General Hospital has got past the day of deficits ; at the annual meeting held on March 7th it was announced that there was a surplus, owing to the magnanimity of individual citizens, the civic grant of \$10,000 a year and the provincial grant of 37½ cents per patient per day. The Dominion grant has decreased from \$13,000 to \$3,000. This item is due to the treatment of immigrants. The board of directors were elected by ballot, being Hon. William Hespeler, J. S. Aikins, F. W. Thompson, Dr. Chown, and Mr. Justice Bain. Immediately after the meeting adjourned the board of directors held a meeting, and elected the following officers : President, Hon. William Hespeler ; vice-president, E. L. Drewry ; honorary secretary, treasurer, Mr. Justice Bain.

The University of Toronto has determined to establish a combined science and medical course by which a student may, after receiving his B.A. degree complete the course for M.B. in two years. The details will be published in the annual calendar but so far as we have learned Anatomy has been made optional in the third and fourth year, thus enabling the student to complete the purely scientific part of his medical course in connection with his arts work. The advantages of a broad educational basis for the professional man will be acknowledged by all, but the necessity of post-graduate work has deterred many from undertaking a course of such length, and the practical working of this arrangement will be watched with interest. The change is not so radical as might appear, as it has always been possible to complete both courses in seven years.

"The general Council of Medical Education and Registration of the United Kingdom" as it is described by the Medical acts which constituted it, has recently been at variance with the colleges with regard to the extent of its jurisdiction over the details of medical education, which differ very materially among the different teaching institutions but which conform, it is claimed, to the general standard required. A committee of

the General Medical Council reported to a special meeting last month that the courses of study prescribed by four of the licensing bodies did not afford a sufficient guarantee that the persons pursuing them possessed the requisite knowledge and skill required for the practice of their profession. This rather sweeping report was withdrawn, and it was determined to inspect these particular examinations and to ask for further information before taking action. It is in the power of the Council to report to the Privy Council, but at present it seems as if the way were being paved for an amicable arrangement of the difficulty.

---

The profession in Australia is at present exercised over the project for the establishment of a Medical Association which should include in its scope all the different states and represent in its own way the union which political federation has given to that great land. At present there are six branches of the British Medical Association in as many provinces, but with no general connection except such as is derived from a tri-ennial inter-state congress; but this state of affairs has seemed to many unsatisfactory and a strong movement is on foot for an amalgamation in an Australian Medical Association, with annual meetings and general jurisdiction, still remaining if thought desirable a branch of the British Medical. A natural conservatism opposes such a change and argues a loss of prestige and the difficulties which distance imposes on general meetings in Australia. To a Canadian it would seem that the direct advantages of the present connection must be slight, while the growth of a national sentiment and the benefit of national meetings such as we have in this country, where the distances are also very great, would more than counterbalance any loss.

---

A bill has been introduced into the Legislature of the State of New York to provide for compulsory vaccination. The public health authorities of the state and city of New York are in opposition to it or any compulsory vaccination law, on the ground that it is unnecessary and harmful, tending to destroy public confidence and sympathy in the work of the Health department. We believe the stand taken will commend itself to the common sense of the medical profession. There has been too much compulsion in the matter of vaccination. There is something in human nature which objects to being forced, even for its own good. Let those who have faith in the efficiency of vaccination as a prophylactic against smallpox—as all have who are amenable to conviction by demonstrated results—take advantage of the means of protection it affords. An outbreak of smallpox among the anti-vaccinationists will do more than any else to convince them. The public have got the peculiar idea fixed in

their minds that the medical profession has some personal, selfish motives to serve in their strenuous and persistent advocacy of compulsory vaccination. The enlightened and common sense manner in which the New York health authorities seek to obtain the confidence and support of the public in carrying out whatever measures they advise is an example that may well be followed elsewhere. The fact that those who believe in vaccination do not seek by compulsory legislation to force others to a like way of thinking will remove one of the strong arguments by which the anti-vaccinationists appeal to the public to resist compulsion as an interference with personal liberty.

---

## OBITUARIES.

### THEODULE BOLDUC.

**D**R. THEODULE BOLDUC, formerly of Montreal, and at one time, assistant house surgeon in the Notre Dame Hospital, died suddenly, on March 20th, of heart disease, in the parish of St. Urbain County of Charlevoix, at the age of twenty-six years. It was only ten days before that the young doctor, full of health, gave up his office at 2264 Notre Dame street, in Montreal to go to practice his profession in St. Urbain, and his numerous friends were much surprised upon hearing of his untimely death.

---

### JOHN COVENTRY.

**D**R. JOHN COVENTRY, of Windsor, Ont., was born Dec. 9th, 1836, and died Feb. 22nd, 1902, of pneumonia, after ten days' illness. He was born in Scotland, and educated at Dollar Academy and Edinburgh. Coming to America in 1853 he entered various pursuits, taking up land, keeping store at Fingal in West Elgin, and at one time joining a party to survey the Northern Pacific Railway. The party reached the foothills, but were driven back by the Indians. He was then given a tract of land in Wisconsin, and after performing his settler's duties found he had to give up his allegiance to the British Crown in order to confirm his title. This he absolutely refused, and returned to Canada. He then took up the study of medicine and graduated at Buffalo Medical College in 1863. He then joined the 116th New York Volunteers as assistant surgeon, and served through the Civil War. Being afterwards offered the position of Chief Quarantine Officer of the southern ports, he declined and returned north, when he took a course at Ann Arbor. Again returning to Canada, he graduated at Victoria College in 1866. Locating in Wardsville, Middlesex Co., he remained there until 1873, when he removed to Windsor and continued in practice until the time of his last illness. He took a great interest in matters of sanitation, and to his judgment and foresight may be ascribed the remarkably clean health records of Windsor during his period of office as Health Officer. He strongly advocated a Dominion quarantine station at Windsor, and made more than one journey to Ottawa at his own expense to urge upon the Government the

necessity of this step. He was a prominent member of the Executive of the Health Officers' Association of Ontario since its formation, and was President in 1884. In 1897 he was elected President of the Ontario Medical Association. He always took a great interest in the affairs of the City, and was a councillor for several years and mayor for the consecutive years '80, '81 and '82. In 1882, when Windsor had an epidemic of smallpox, he gave up his practice for three months and devoted his time and energy to stamping it out. That the citizens appreciated his efforts was shown shortly after when they presented him with a silver service and \$500 in gold. A Conservative in politics, he was very liberal in his views, and a very strong believer in British connection. As a fellow practitioner he was of the true type and a perfect gentleman at all times. The esteem in which he was held by all classes was evidenced by the very large and representative gathering at his funeral.

---

### WILLIAM SCOTT MUIR

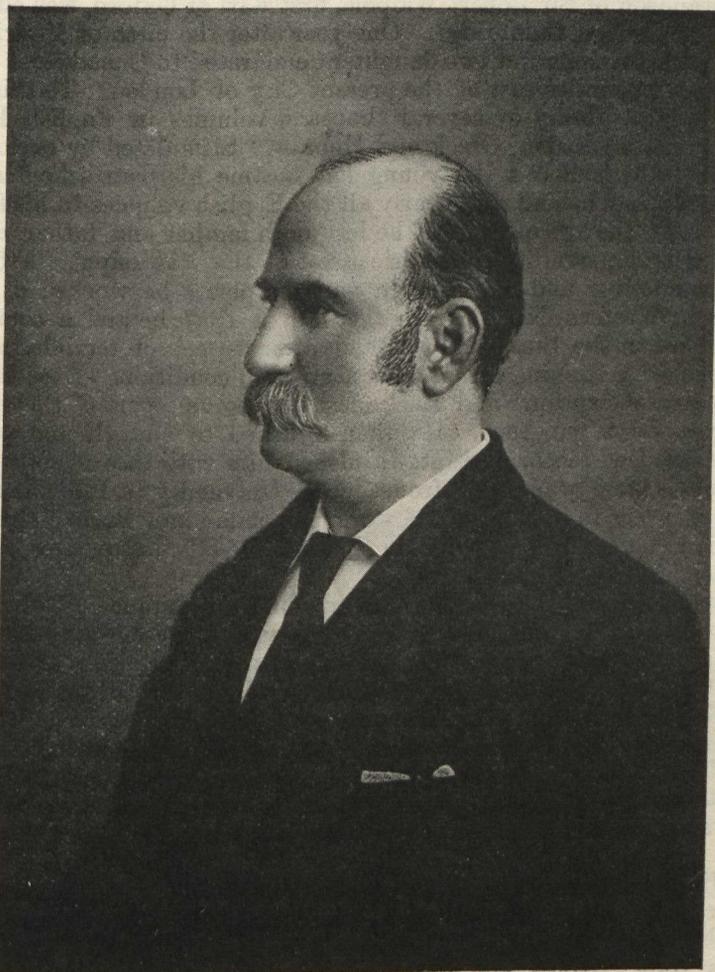
THE sudden death of Dr. Muir, Truro N.S., President of the Maritime Province Medical Association and Vice-president of the Canadian Medical Association, occurred at his home on March 10th, after a four days' illness. The day before his death, an operation for appendicitis was performed and the appendix was found gangrenous.

"Dr. Muir," says the *Maritime Medical News*, "was borne at Truro in October 1853, and was the third son of the late Samuel Allan Muir, who settled in this country about sixty years ago and practiced in Truro. He was a remarkably able man, a graduate of the University of Glasgow, and for many years one of the most prominent practitioners in this province. In those days most medical students began their career as private students or apprentices to leading practitioners, and Dr. Muir had generally three or four young men studying under him. It was thus from his father that Dr. W. S. Muir acquired the rudiments of medical science. He then studied under the medical faculty of Dalhousie College Halifax, graduating in 1874. He filled the position of resident physician and surgeon in the Provincial and City Hospital (now the Victoria and General Hospital) and thereafter practiced for a few months in Shelburne. He then went to Edinburgh where he continued his studies, and took the L. R. C. S., and L. R. C. P. He returned to Nova Scotia and settled in Truro in 1877, where he soon acquired a large practice.

"As an all-round practitioner, Dr. Muir had no superior and but few equals. His frank and genial nature, his transparent honesty, and his whole-souled devotion to his profession gained him the confidence of the public and the esteem of his colleagues. As years passed on he came to be largely called in consultation and he was very successful in surgical work. He had one of the best libraries in the country, was a subscriber to several medical journals, and kept well abreast of the march of medical progress.

"He was selected by the authorities of Dalhousie College as an examiner in *Materia Medica* and *Therapeutics*, and was also an examiner for the Medical Faculty of King's College and for the Provincial Medical Board.

"Dr. Muir was a man of fine physique, and in his younger days distinguished himself in various branches of athletics. He was an enthusiastic cricketer. He was also possessed of a fine voice and sang in St. John's church, and took an active interest in its affairs.



BY KINDNESS T. C. ALLAN & CO., HALIFAX.

**DR. W. S. MUIR.**

"Dr. Muir married, in 1879, Catherine, daughter of the late Walter Lawson, C. E., of Aberdeen, and leaves one son, Walter, at present pursuing his studies at King's College, Windsor."

Resolutions of sympathy were passed by the Medical Society of Nova Scotia, of which he was secretary for many years, and by the St. John (N.B.) Medical Society. Dr. Muir was a strong supporter of Dominion Registration.

## RICHARD MAURICE BUCKE.

**D**R. R. M. BUCKE, late Superintendent London Insane Asylum, was killed by a fall, Feb. 19th. He was born March, 1837, at Methold, Norfolk, England. His father, Rev. Horace Walpole Bucke, a great, great grandson of Sir Robert Walpole, first Earl of Oxford, was educated at Trinity College, Cambridge. One year after the birth of Maurice, the father, with five sons and two daughters, emigrated to Canada and settled on a farm two miles east of the present City of London. To this home he brought a library of several thousand volumes in English, French, Italian, Spanish, Latin, Greek and Hebrew. Stimulated by curiosity to read his father's books, the young lad became his own school master. While yet a boy he had read nearly all the English volumes in his father's library. At the age of sixteen he lost both mother and father, and set out on a tramp over the territories west of the Mississippi. After five years wandering and working in various places he worked at placer mining in Western Nevada. In the fall of 1857, he and a companion became lost in the Sierra Nevada and after a week of terrible hardship they reached a mining camp in a semi-dead condition. Here his companion died of exposure and Bucke lost one leg and part of the opposite foot from frost gangrene. He then returned to Ontario and by good fortune his dead mother's estate furnished him with the means to study medicine. After graduating from McGill University in 1862, he spent a couple of years in post graduate work in London and Paris. Returning to Canada he settled in the Town of Sarnia. His first patient was the late Hon. Alex. McKenzie.

It was while at Sarnia he formed the acquaintance of Walt Whitman, to whom he was friend, biographer and literary executor. Dr. Bucke's "Life of Whitman" is still the standard book on the subject. In 1876, he was appointed Superintendent of the Hamilton Asylum and the following year he removed to the London Institution.

His work can be considered under (a) asylum reforms and (b) literary efforts. Dr. Bucke inaugurated in America absolute non-restraint, discontinued absolutely the use of alcoholic beverages in any form, and encouraged the employment of gynecological surgery in the treatment of insane women.

His first literary venture of any dimension was a two-hundred-page essay called "Man's Moral Nature," published in 1879. In the eighties he published "The Life of Whitman;" in 1898, "The Wound Dresser," and in 1899, "Notes and Fragments." His greatest effort, "Cosmic Consciousness," was published in 1901. At the time of his death he had ready for publication some discoveries in cipher supporting the Baconian authorship of the so-called Shakespeare's plays.

In addition to having the best Whitman collection in the world, his literary library exceeded five thousand volumes.

While possessed of literary ability of fine quality he was a thinker as well as a scholar, and his love was for those things that lie upon the spiritual side of life. In the highest sense possible he was a good man, full of high purposes and noble actions. He loved all innovators and emancipated persons.

He leaves a wife and a family of six; one son is practising medicine in London.

## PERSONAL.

Dr. Dow, of Owen Sound, has had pneumonia.

Dr. Moore, of Brockville, has returned from New York.

Dr. McKillop, of Wardsville, has been very ill for a time.

Dr. H. B. Anderson, of Toronto, has returned from New York.

Dr. T. R. McInnes, of Vancouver, has returned from Australia.

Dr. F. X. Duplessis, of Richmond, Que., is removing to Montreal.

Dr. Mylks, of Kingston, has recovered from a blood-poisoned hand.

W. F. Roberts, of North End, N.B., has been visiting in New York.

Dr. J. E. M. Carnwath, of Hopewell Hill N. B., was married recently.

Dr. W. Milne, of Blyth Ont., is building a new office and drugstore.

Dr. J. Collinson, of Iroquois, has been attached to a Montreal hospital.

Dr. D. R. Livingstone, (Trinity '01), has begun practice at Winnipegosis, Man.

Dr. Charles Sheard, Medical Health Officer of Toronto, is spending a short holiday in New York.

Dr. Chambers, of Kincardine, has moved to Port Elgin. He has been succeeded by Dr. Cawthorpe.

Woodstock, N.B., is endeavoring to start a hospital. Neepawa, Man., is also in that frame of mind.

Dr. T. H. Morgan, (Trinity '97), has been appointed an assistant in dermatology in the New York Post Graduate Medical School.

Dr. R. Evatt Mathers, of Halifax, has recently visited some of the United States eye, ear and throat hospitals.

Miss Jessie Duncan has succeeded Miss Davis as lady superintendent of the Cornwall Hospital.

Dr. D. Fraser, of Lakefield, has been appointed an associate coroner for the County of Peterborough, Ont.

Dr. K. Colbeck, recently house surgeon in the Western Hospital, Toronto, is practising in Grand Valley with Dr. Hopkins.

Dr. A. E. Randall, of Truro, N.S., is collecting a Muir memorial hospital fund in memory of the late Dr. W. S. Muir.

Dr. T. C. Gadbury, of Bryson, Que., has been appointed health officer for the county of Pontiac by the Quebec government.

Dr. Fred E. Bayfield, recently connected with the General Public Hospital of St. John N. B., has gone with the Elder-Dempster S. S. Co.

Dr. Easton has resigned his office as medical health officer for Smith's Falls, a position he has held for the past fourteen years.

Dr. Ritchie (Tor., '97), now engaged in practice in Warren, Ohio, paid a visit to Toronto a few days ago, and returned a benedict.

Dr. R. M. Minnes, of Ottawa and Dr. D. MacLennan, of Toronto, recently spent a short time in New York hospitals devoted to their special line of work.

The directors of the Royal Jubilee Hospital of Rat Portage have expressed themselves as pleased with the work of the past year, and speak highly of Miss Reynard the matron.

Dr. Harry J. Watson, (Trinity '96), has been appointed chief of the largest brigade hospital in the medical service of the American army in the Philippines.

Dr. Graef, (Tor. '98), of Vancouver, formerly resident medical assistant in the Toronto General Hospital, is attending the New York Post Graduate School, doing special work on the eye, ear, nose and throat. He leaves for England in a short time to pursue his studies along this line.

Miss Edith Mayou, who was at one time assistant superintendent in the Victoria Hospital at Montreal, has been appointed lady superintendent of the Victoria Hospital Training School of London Ont. She is an Englishwoman who has had much experience in the United States.

News of the sudden death of Dr. F. H. Thompson, (Trinity '98), who was acting as surgeon to a party engaged in a geological survey in Alaska in the service of the U. S. Government, recently reached Toronto. The deceased was well known and popular in Toronto, where his family reside.

Dr. E. P. Gordon, a graduate in medicine of Toronto University and at one time surgeon R.M.S. Empress of India, died recently in San Francisco. The deceased was about 36 years of age and was well known in Toronto where he practised for a few years. Some three years ago he was forced to give up his practice and go west owing to failing health.

At the triennial election of the British Columbia Council of Physicians and Surgeons held recently, the following were elected members of the council for the term now beginning: Drs. Jones, Fagan and Davie, of Victoria; Dr. Walker, New Westminster; Dr. Proctor, Kamloops; and Dr. R. E. McKechnie, Nanaimo. The members of the medical profession in the Province elect the council, whose duties are to conduct examinations and transact the business of the council.

## BOOK REVIEWS.

### VENEREAL AND SEXUAL DISEASES.

A Manual of Venereal and Sexual Diseases, by William A. Hackett, M.B., M.C.P.S. (Ont.), Professor of Dermatology and Venereal Diseases Michigan College of Medicine and Surgery; and N. E. Aronstam, M. D., Ph. G., Assistant in Chemistry and Clinical Dermatology. Michigan College of Medicine and Surgery; G. P. Engelhard & Co., Chicago, 208 pages, cloth, \$1.00.

THE authors have given us in this volume a concise and at the same, time comprehensive description of the symptoms and therapeutics of venereal and sexual diseases. They claim to discard all theoretical knowledge pertaining to the subject, and to treat it entirely from the clinical and practical side. This attitude is manifest in their suggestion that in gonorrhoea the gonococcus is not always present and the implication that it is not a necessary concomitant.

Part I. Gonorrhoea and its complications, is the best part of the work, many useful hints, and formulae being given, including illustrations and directions for the Valentine treatment. The limits of space prevent the description of the syphilides to be of great value, and Part IV. Sexual Diseases while suggestive is also rather brief. On the whole it is a useful and convenient handbook for either student or practitioner and merits a wide popularity.

A. J. M.

### CLINICAL PATHOLOGY OF THE BLOOD.

Clinical Pathology of the Blood, a treatise on the general principles and special applications of Hematology. by James Ewing. A. M., M. D., Professor of Pathology in Cornell University Medical College, New York City, illustrated by thirty engravings and fourteen colored plates drawn by the author. Lea Brothers and Co., New York and Philadelphia, 1901, 432 pages, cloth, Price \$3.50.

THE last few years have seen a vast increase in the amount of our knowledge of the blood in its physiological and pathological states, and a distinct advance has been made in scientific diagnosis, by the careful study of varying changes produced therein by altered conditions of the body. The use which has been made of this knowledge in practice rarely exceeds the determination of the number and form of the cells, and the rough estimation of hemoglobin, the further knowledge which may be gained being neglected. The patient and minute investigations into the many aspects of this subject have brought to light much that is of an interesting nature, and have added much to the stock of human knowledge, they have also furnished us with data that form useful bases for diagnosis and treatment, but to the ordinary member of the medical profession this has been a closed book, as it could be found only in the monographs or journals where it was first published. It has re-

mained for the author of this work to bring the results of these labors before the reading public in the form of his text-book, in such a manner as to be generally available.

Whether this knowledge will be of general use remains open to question. Many of the processes are too complicated, too difficult, and for their success too dependent on constant scientific practice of laboratory methods to be of much use to a busy man, or to one to whom such appliances are not available, but at least we are assisted to a rational as opposed to an empirical position with regard to disease and its cure.

The book consists of 432 pages, embellished by thirty engravings and fourteen colored plates—one feels that it would gain by fuller illustration.—There is an introduction on interpretation and analysis of the blood which closes with the very suggestive and sensible statement that the examination of the blood having been performed, its results are to be interpreted only in the light of the fullest clinical information, Part I treats of general physiology and pathology, Part II of the special pathology of the blood, Part III, IV and V of the blood in various diseases, and Part VI on animal parasites. Much of the theoretical discussion in the volume, abstracts of special articles, and reports of cases have been set in fine print, so as not to encumber the main text. All available sources of information have been freely consulted, and the writer constantly cites authorities, so much so indeed as to give the text a disconnected character. At the end of each chapter a complete Bibliography is given.

A. J. M.

### NOTHNAGEL'S ENCYCLOPAEDIA OF PRACTICAL MEDICINE.

Variola, by Dr. H. Immermann, of Basil; Vaccination, by the same writer; Varicella, by Dr. Th. Von Jurgensen, of Tübingen; Cholera Asiatica and Cholera Nostras, by Dr. C. Liebermeister, of Tübingen; Erysipelas and Erysipeloid, by Dr. Herrmann Lenhartz, of Hamburg; Whooping Cough, by Dr. Georg Sticker, of Giessen; and Bostock's Summer Catarrh, by the same author. Edited with additions by Sir John W. Moore, M.D., F.R.C.P., Professor of Medicine in the Royal College of Surgeons in Ireland. Authorized translation from the German under the supervision of Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia and London: W. B. Saunders & Company, Vol. II, 1902.

**T**HE articles in this volume are of very high merit. It would be difficult to give greater praise to one than another. They are so exhaustive as to leave nothing untouched. To each article is appended a complete bibliography of the subject. The type and paper could not be surpassed. Indeed, in matter and form the volume is a superb one, and reflects great credit on both authors and publishers. Such a work should have a wide sale. To read it is a real pleasure—there is so much reward for the trouble.

J. F.