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ABSTRACT OF THE PRESIDENT'S ADDRESS*

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This large assemblage of medical visitors has suggested to me that it might be of interest to review the history of the early and important visits of medical men to this city and province. There are three periods which seem of particular interest from this aspect.

The explorers, de Monts and Champlain, after receiving authority from Henry IV, King of France, to undertake the colonization of Acadia, sailed from Havre on the 7th of April, 1604, and arrived four weeks later at the southwest shore of Nova Scotia. De Monts and Champlain later on explored the Bay of Fundy in a smaller boat of eight tons. Leaving their ship with the greater part of the members of the expedition at St. Mary's Bay, Nova Scotia, they took with them about a dozen men. On the 24th of June, 1604, they entered what is now known as the harbor and river of St. John, as Champlain says in his remarkable account of the exploration, "one of the largest and deepest rivers we have yet seen, which we named the River St. John, because it was on that saint's day we arrived there."

It is not mentioned whether they carried a surgeon with them in the pinnace, but it is probable there was one. There were at least two surgeons in the expedition, and as the leaders were in this boat, it is likely one was with them, more especially as it is known that on a later occasion, in a voyage made in a pinnace south of Cape Cod, a surgeon was carried. Were a surgeon present when Champlain discovered St. John, as is

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likely, he would of course have been the first physician to visit these shores.

The stay of de Monts and Champlain in St. John was very brief, as they soon proceeded to the River St. Croix, New Brunswick, to search for a locality suitable for a settlement. St. Croix Island was selected and the remainder of the expedition joined them there. As it proved, they were unfortunate in their choice. The situation of a settlement on an island prevented them, at some seasons of the year, having free access to the mainland for a supply of water and food; there was much illness resulting from their mode of living during the winter of 1604-5. Champlain gives an interesting account of the severe and fatal illness which appeared among the colonists. He says: "During the winter many of our company were attacked by a certain malady called the *mal de terre*, otherwise scurvy, as I have since heard from learned men. There were produced in the mouths of those who had it, great pieces of superfluous and drivelling flesh (causing extensive putrefaction) which got the upper hand to such an extent that scarcely anything but liquid could be taken. Their teeth became very loose and could be pulled out with the fingers without its causing them pain. The superfluous flesh was often cut out, which caused them to eject much blood through the mouth. Afterwards a violent pain seized their arms and legs, which remained swollen and very hard, all spotted as if with flea bites; and they could not walk on account of the contraction of the muscles, so that they were almost without strength and suffered intolerable pains. They experienced pain also in the loins, stomach and bowels, had a very bad cough and short breath. In a word they were in such a condition that the majority of them could not even be raised up on their feet without falling down in a swoon. So that out of seventy-nine who composed our party thirty-five died, and more than twenty were on the point of death. The majority of those who remained well also complained of slight pains and short breath. We were unable to find any remedies for these maladies.

"A post-mortem examination was made of several bodies to investigate the cause of their malady. In the case of many, the interior parts were found mortified, such as the lungs, which were so changed that no natural fluid could be perceived in them. The spleen was serous and swollen. The liver was woody and spotted without its natural color. The vena cava, superior and inferior, was filled with thick coagulated and black blood. The gall was tainted. Nevertheless many arteries, in the middle as well as lower bowels, were found in good condition."

The surgeons, however, of this expedition conducted by de Monts and Champlain, were the first to visit this portion of Canada, and it is interesting to have a record of their post-mortem findings in the cases of scurvy.

At Port Royal one of the surgeons was Deschamps of Honfleur and another was Master Stephen; both of these surgeons had scurvy to deal with and both performed post-mortems, but they were evidently not the same surgeons as those who came to New Brunswick.

Later on the history of St. John is prominently associated with the name of La Tour, both on account of the eminence of Charles La Tour and the bravery and beautiful character of Madame La Tour. Professor Ganong writes me that in his work in connection with Acadian history he has found no reference to suggest the presence of a physician with La Tour, nor does he find or recall anywhere in pre-loyalist documents anything bearing on the subject, except what I have just mentioned.

The second visit of interest from a medical point of view was on the occasion of the foundation of the city. Previous to 1783 there were merely a few log huts, where the city of St. John now stands. On the 18th of May, 1783, there landed from twenty ships three thousand men and women, in June of the same year two thousand, and in September three thousand. These men and women who desired to retain their allegiance to the British Crown founded the city as it were in a day. Hence it is called the "Loyalist City," and the 18th of May is annually observed in commemoration of the landing of the Loyalists.

With the Loyalists came a number of medical men, seventeen of whom are mentioned in a paper by J. W. Lawrence. Several had held commissions as surgeons in the revolutionary war. Of these physicians a number remained in St. John, others went to various portions of the province, while others returned to their old homes. Among these may be mentioned Dr. Paine who, with others in 1785, presented a memorial to the Governor-in-Council, praying that a charter of incorporation might be granted for the institution of a Provincial Academy of Arts and Sciences. This was the initial step in the movement that led to the foundation of what is now our Provincial University. Another was Dr. Samuel Moore, who has the distinction of having performed the first post-mortem examination in St. John, and the following is his report to the Honourable George Leonard, J.P.:

"Sir,—Agreeable to your request I examined the black man's head. I am perfectly satisfied he was murdered, after examining

where the fork perforated the temporal bone of the skull. I sawed off the arch of the head and found the ventricles of the brain everywhere impacted with matter. The symptoms before death were also very obvious. All the Jury were spectators. Your servt., Sam'l Moore. October 6th, 1798."

The last important visits in the history of the province to which I shall refer are those of the Canadian Medical Association. The Association met here for the first time in 1873, six years after its formation, when Sir James Grant was president, and there were fifty-five members present. The next visit was twenty-one years later when Dr. T. O. Harrison, of Selkirk, was president, and one hundred and nineteen attended. And now the Association is meeting for the third time in our city, and we hope there will be four hundred members here. Among the names of those who were present on the former occasions and who are no longer with us, one may mention Graham of Toronto, Wright of Ottawa, Hingston, Buller and Bell of Montreal, Bayard of St. John, Parker and Farrell of Halifax, Muir of Truro, and MacLeod of Charlottetown. Surely these names are illustrious and revered in the annals of the Association.

It is interesting on looking over the records of the previous meetings to notice that a Dominion Medical Act, inter-provincial registration, and a uniform standard of medical education for the various provinces of the Dominion were among the subjects discussed, as they had been at earlier meetings and as they continued to be for many years.

The difficulties arising in obtaining Dominion registration, especially owing to the matter not coming within the jurisdiction of the Dominion Government, were fully recognized, but it is now well known to us all that, after much patience and persevering efforts, the Canada Medical Act was finally brought into existence under the able leadership of our honorary president, Sir Thomas G. Roddick.

Another subject with which the early meetings here dealt was that of vital statistics. This, with a proposal for a department of public health under the Dominion Government, has been constantly brought to the attention not only of the Association but of the Government from that date to the present time with, so far, little or no result. From the history of the Canada Medical Act we must derive the lesson that movements of this kind succeed after persistent effort, finally are accepted and pass into law.

The establishment of a department of public health means so much to the state, it is a matter of such tremendous and vital

importance, that the Association must continue its efforts towards prevailing upon the Dominion Government to undertake this great measure of reform.

A great future lies before the Canadian Medical Association; the ground of its foundation is so firm and the reasons for its existence and extension are so substantial and vital that one need not fear for its success. From its own intrinsic worth it will move on, overcoming difficulties. It is destined to become one of the principal factors in influencing Canadian public opinion and the parliaments, and in bringing about changes and reforms of the greatest value to the health and well-being of the state and the individual. While for our comfort all this is true, it does not follow that our every effort is not required to improve the position of the Association and to put it in a foremost place at the earliest opportunity.

There are several particular requirements towards the accomplishment of which we should direct our special energies at the present time. There are about eight thousand medical practitioners in Canada. Of these eight thousand, fifteen hundred and twenty-five are members of the Association—one-fifth of the medical population. Here is an opportunity for missionary work. There are many to be brought into the fold. We must not forget, however, that the membership has grown materially in recent years, and perhaps a steady gradual growth is of a more permanent character. Nor must we fail to remember and appreciate the splendid work which has already been done by many members of the Association; far from it. It remains for us to be the torch-bearers, to carry on work well begun.

A largely increased membership, interested in the work and objects of the Association, is one of the great desiderata of the Association, and it is for the members to exert their influence, so far as is possible, toward the consummation of this object. The membership should include a good representation of the two principal races in Canada. Last year the eminent Lucas-Championnière was invited to attend this meeting. He viewed with pleasure the prospect of meeting his French-Canadian confreres, and he had the matter under consideration when death removed his notable figure from the medical world.

A second important requirement is the amendment of the Association's Constitution and method of organization. As time has gone on the organization of the Association has been developed in accordance with what has been found successful in the great medical associations of Britain and the United States

and in accord with our ideas of what is most suitable to our special conditions. Thus the organization has extended to the affiliation of provincial associations and further, to some extent, to the medical societies within the provinces, although in the case of the latter it has not yet been carried out to any great extent, much as there is to be said in its favor and much as it is to be hoped for.

That the method of organization is yet complete and final, no one would for a moment suggest; on the contrary, one would only expect that time and experience would cause changes to be made from time to time to adjust the Constitution according to the general view. I would therefore urge that we exhibit patience and forbearance in the matter of development of organization; changes which are made should apply equally, as far as possible, to all parts of the country. My view is that the plan of organization in a general way is most suitable and appropriate and that it is in the best interest of all for the provincial associations to be affiliated with the central national society.

As the Association is the national medical society of Canada so are the provincial societies the natural representatives of the provinces and bear a similar relationship, and I cannot conceive of any organization so national and suitable as that in which the provincial associations are affiliated with the national. There can hardly be a more workable method of obtaining views of medical men all over the country, nor of considering or carrying forward any general measure initiated in a provincial association. The affiliation has a broadening and educative tendency which cannot be overlooked. As I heard someone say not long ago, "*Wir lernen von ihnen, sie lernen von uns.*" It would seem highly desirable that the connecting link be firm and close in sympathy and light and flexible in its organic connection. The great strength of the British Empire is its sentiment, which holds all its parts firmly together with a certain amount of common interest, and so it should be with our medical societies.

It is desirable to eliminate all that is unnecessary in organization, and as far as possible all that may prove irritating or objectionable, and in this connection it would seem desirable that when it appears to any of the provincial associations that some modification is needed, by all means it should be brought forward, thoroughly discussed, and adjusted to the satisfaction of all.

The provision in the Constitution that a provincial association in whose territory the meeting of the Canadian Medical Association is held shall for that year have an executive meeting only, is one that might easily be abolished, so that each provincial society can do as it sees fit in this matter. There is no principle at stake and no harm would result. Some provinces will prefer not to hold a meeting, while others no doubt will do so. However, the point—it is not a difficult one—can be easily dealt with, and does not require any elaborate argument. I venture to think that modifications can be made in the regulations which will be satisfactory to all and yet not interfere with the principle involved.

The Constitution and By-laws are in a number of instances rather contradictory and defective and it would seem desirable that a revision be soon undertaken. Were one asked the question, "When is the president not the president?" the answer might be, "When he is the president." For the first year, when president-elect, he is mistaken for the president more than half the time, while in reality he has no status; and during the year following the meeting at which he has presided he is busy keeping out of the way of the president-elect, who is actively engaged preparing for the next annual meeting.

Members have spoken to me from time to time of their wishes in reference to the third requirement—that is, a weekly journal. The *Journal* as it now stands serves a most useful purpose and is highly creditable to the Association. A more frequent publication, however, is particularly desirable, and should be kept steadily in view by the Association. It is essential for the well-being of the Association. The difficulty is financial. I trust the Executive Council will carefully consider the matter, and if possible formulate some plan whereby the wishes of the members may be met.

Last year an important movement affecting public health was instituted in Great Britain, under the auspices of the leaders of the profession, to prevail upon the British Government to appoint a royal commission whose duty it should be to make a thorough inquiry into the subject of what has been termed the hidden plague, venereal disease, with the result that such a commission is now pursuing its investigations. The forthcoming report will be received with much interest and it is hoped that it will include practical suggestions for the diminution of this prevalent disease, prevalent indeed, when one considers that the statement is made that there are five hundred

thousand fresh cases of venereal disease every year in Great Britain, one-quarter of these being in its gravest form.

The International Medical Congress, in August of last year, held a weighty discussion on this subject, and I might quote the resolution which was passed: "Sensible of the ravages wrought by syphilis in the health of the country, and deploring the inadequacy of existing facilities for checking its dissemination, the International Congress calls upon the governments of all countries represented, first, to initiate a system of confidential notification of the disease to a sanitary authority, wherever such notification does not already obtain; second, to make systematic provision for the diagnosis and treatment of all cases of syphilis not otherwise provided for." This resolution was said to embody the irreducible minimum of what was right for all civilized governments to do.

Before concluding my address I wish to refer briefly to a branch of medicine in Canada which is deserving of commendation, and which I think has hitherto received but little notice—the Army Medical Corps. Previous to 1899 there was no medical service; each regiment had its own medical officer, that was all. At the present time there is an organized service of seven hundred medical officers and eighteen hundred non-commissioned officers and men ready for the field and, as compared to the rest of the service, it is very complete.

The inspector-general of the overseas forces, Sir Ian Hamilton, in his report on the military institutions of Canada, stated that the medical corps keeps well ahead of every other branch of the service in the completeness of its preparations for war, a state of affairs due largely to the whole-hearted support it receives from the medical profession in all its grades. A militia is, or rather ought to be, the expression, for the purposes of war, of every form of national activity, and other departments of national life, such as railways, telegraph companies, motorists and motor-cyclists, and the unions might well take a leaf out of the doctors' book and set to work to organize themselves for the defence of the country. These words should give much satisfaction to the able Director-General of the medical services and to all connected with the corps so recently formed, and to the profession generally. There is, however, ample room for much further development and the medical profession of Canada can do a great deal towards assisting in the matter. As the establishment is unlimited, members of the profession, especially those who have recently graduated, can join the corps. In this way not only does one share a public

duty, to be fairly assumed by all men, but the personal benefits are not inconsiderable; the physical training and discipline for a period of several years after graduation is to be recommended. The Army Medical Corps has acted as a school of instruction in sanitation in camps and has diffused more practical knowledge of sanitation than has any other organization in the country.

The national development of medical aid is of great service, whether in time of peace or of war, in connection with either military or civil life, and not only does the Medical Corps participate in this development, but the successful progress of such organizations as the St. John Ambulance and the Red Cross Society does much towards fitting our men and women to render aid to the suffering at all times and under all conditions.

It is written in the Apocrypha, "Honor a physician with the honor due unto him for the uses which ye may have of him; for the Lord hath created him." Here is instruction laid down for the laity. To merit the honor, the medical profession has its obligations, and how may they be met? Remember the old Scotch words, "Tak yer auld cloak about ye." The cloak may appear perhaps a little old-fashioned and sometimes be put aside, but when brought out again it will still have the fragrance of lavender; it is our precious heirloom, the mantle of glorious tradition, splendid achievement and high purpose. Let us take it about us.

THE METHOD OF ZADIG IN THE PRACTICE OF MEDICINE *

BY THOMAS McCRAE, M.D., F.R.C.P. (Lond.),
Professor of Medicine, The Jefferson Medical College, Philadelphia.

Mr. President and Members of the Association,—It is first my pleasant duty to express my sense of appreciation of the compliment paid in being asked to deliver the address in Medicine. An honor under any circumstances, it must be regarded as particularly so by one who, living under another flag, is your fellow countryman. "They change their skies but not their hearts who roam."

To some of you the title of my address will bring back a story which we read in our old school readers more years ago

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than perhaps we care to remember. To all of you it must be familiar, but as it serves my text perhaps you will bear with its recital.

Zadig is supposed to have lived at Babylon in the days of King Moabdar. Disgusted with life, he is said to have fled from the city to a secluded retreat on the banks of the Euphrates, where he beguiled his solitude by the study of nature. A habit of careful observation, engendered by such a life, leads to the detection of many trifles which would otherwise escape notice, and these when correctly reasoned upon may lead to discoveries that seem most mysterious and are really marvellous. Strolling along one day near a small wood, Zadig saw hastening that way one of the queen's chief eunuchs, followed by a troop of officials, who appeared like men distraught, running hither and thither as if in search of some lost treasure.

"Young man," cried the eunuch, "have you seen the queen's dog?"

Zadig answered modestly, "A bitch, I think, not a dog?"

"Quite right," replied the eunuch; and Zadig continued: "A very small spaniel who has lately had puppies; she limps with the left fore-leg, and has very long ears."

"Ah! you have seen her, then?" said the breathless eunuch.

"No," answered Zadig, "I have not seen her; and I was really not aware that the queen possessed a spaniel."

By an odd coincidence, at the very same time the handsomest horse in the king's stable broke away from his groom in the Babylonian plain. The grand huntsman and all his staff were seeking this horse with as much anxiety as the eunuch and his people the spaniel, and the grand huntsman asked Zadig if he had not seen the king's horse go that way.

"A first-rate galloper, small-hoofed, five feet high; tail three and a half feet long; cheek-pieces of the bit of 23-carat gold; shoes silver?" said Zadig.

"Which way did he go? Where is he?" cried the huntsman.

"I have not seen anything of the horse, and I never heard of him before," replied Zadig.

The grand huntsman and the chief eunuch made sure that Zadig had stolen both the king's horse and the queen's spaniel, so they haled him before the court of justice, which at once condemned him to punishment. But the sentence was hardly pronounced when the lost horse and spaniel were found. So the judges were under the painful necessity of reconsidering their

decision; but they fined Zadig for saying that he had seen that which he had not seen.

The first thing was to pay the fine; afterwards Zadig was permitted to open his defence to the court, which he did as follows: "This is what happened. I was taking a walk towards the little wood, near which I subsequently had the honor to meet the venerable chief eunuch and the most illustrious grand huntsman. I noticed the track of an animal in the sand, and it was easy to see it was that of a small dog. Long faint streaks upon the little elevations of sand between the foot-marks convinced me that it was a she-dog with pendant dugs, showing that she must have had puppies not many days since. Other scrapings of the sand, which always lay close to the marks of the forepaws, indicated that she had very long ears; and as the imprint of one foot was always fainter than those of the other three, I judged that the lady-dog of our august queen was, if I may venture to say so, a little lame.

"With respect to the horse of the king of kings, permit me to observe that, wandering through the paths that traverse the wood, I noticed the marks of horseshoes. They were all equidistant. 'Ah,' said I, 'this is a famous galloper.' In a narrow alley, only seven feet wide, the dust upon the trunks of the trees was a little disturbed at three and a half feet from the middle of the path. 'This horse,' said I to myself, 'had a tail three and a half feet long, and, lashing it from one side to the other, he has swept away the dust.' Branches of the trees met overhead at the height of five feet, and under them I saw newly fallen leaves; so I knew that the horse had brushed some of the branches, and was therefore five feet high. As to his bit, it must have been made of 23-carat gold, for he had rubbed it against a stone, which turned out to be a touchstone, with the properties of which I am familiar by experiment. Lastly, by the marks which his shoes had left upon pebbles of another kind, I was led to think his shoes were of fine silver."

This story is one which may well be pondered by every practitioner and student of medicine, for much of our daily task consists in carrying out this method, and our success or failure in diagnosis depends greatly on how successfully we do it. It was the custom of Sir William Osler to read this story to each class as an introduction to the study of observation and diagnosis. The importance of this method in the advancement of medicine has been discussed by Dr. Balfour,* and to-day its

* On the Method of Zadig in the Advancement of Medicine. "Edinburgh Medical Journal," 1900, VII., p. 200.

value in the practice of medicine, and especially in diagnosis, will be considered. There are many followers of Zadig described in fiction, of whom perhaps Sherlock Holmes is the best known. Poe also was attracted by the possibilities of this subject. To the reader of fiction such stories always appeal, and why a detective story should have such a fascination for the majority of us is an interesting subject of enquiry. There is the charm of the unknown and mysterious, the problem of the setting of the powers of observation and reflection against a mystery and the knowledge that at the end of the story we are to have the solution. We have such problems as part of our daily task and our work may be regarded as much like that of the criminal detective. He has a general knowledge of the members of the criminal class; we of disease in general. He knows that certain men have certain methods of work; we know the features of special diseases. It is stated that the police can classify habitual criminals more or less by their methods and, knowing the men in their city who work in a particular way, can narrow down the possibilities of a given crime to a few men. This may be described as the natural history of crime. So, too, we in medicine narrow down the possibilities. But sometimes both doctors and police are puzzled by conditions which do not fall in with the usual manifestations and cannot be classified very readily. The analogy may be carried further, for as the public are often impatient over crimes which cannot be brought home to the guilty parties, so with us they may have similar feelings when we are unable to make a diagnosis promptly.

It is evident that much of the beauty of Zadig's method and the demonstrations of Sherlock Holmes consists in the fact that they work out correctly. Should they come out incorrectly the statements would sound silly. Think of a Holmes story with wrong conclusions.

The essential factor in this method consists in working back from observations of conditions to the causes which brought them about. It is often a question of deciding the doings of yesterday by the records found to-day. It is very evident that in this we have two main processes to bear in mind and keep strictly distinct: first, the collection of the observations, and second, the inferences to be drawn from them. Keeping these separate is essential to any orderly solution of our daily problems, but how difficult this is for the majority of us is brought home to every teacher. Take a group of students who are working at physical diagnosis, and it is a constant struggle to keep

them making observations and not giving inference—usually from insufficient observations, if from any at all. No pains are too great to hammer home into the mind of every student the importance of keeping these two processes separate and not taking up the second until the first is as complete as he can make it. It is just as important for the practitioner as for the student, except that in the latter we are trying to form correct habits; the practitioner should have them. Some teachers are to blame in this regard. The writer once listened to a clinic in which a patient with a retracted chest following empyema was brought in. To the teacher's enquiry of "What do we see here?" the student made no answer. The professor answered his own question with "Fibroid lung." Well, perhaps he did see it—with the eye of faith, but that is not a good eye to use alone in diagnosis—and the student, if he saw with the same eye, could not give reasons for the faith that was in him.

It is an interesting subject of discussion as to whether, having made a mistake, there is any choice between the first and second division. Which is the worse error, to fail to observe certain conditions, or to observe them and interpret them incorrectly? In the writer's opinion the first is much the worse error. Observation is a matter of patience, training and thoroughness, in all of which a man may improve himself, but the use which he makes of his observations is partly a matter of his mental equipment. True he can train his powers of thought and judgment to some extent, but we vary greatly in the quality of our cerebral cells, and the saying of the father of medicine, "Experience is fallacious and judgment difficult," is always true. To observe correctly and decide wrongly is sure to happen to the best of us, but to observe carelessly happens only when we permit it. Perhaps it is not entirely within our power always to prevent this. There are times when the keenest mind seems to miss what may be obvious. The routine of seeing a patient every day may dull the perceptions and what is startlingly obvious to a fresh eye may have escaped observation entirely. Yet here sometimes, perhaps often, it is because there has been a lack of searching rather than a lack of reflection. It is evident that if the first stage—the collection of the facts—is improperly done, we have not the basis for the second and it is bound to be wrong. The game is hopelessly lost from the start. How important, therefore, to give every effort to the collection of our facts.

It is essential, as already said, to keep in mind the two stages of the process—the collection of the facts and the inferences to

be drawn from them. Let us discuss first the collection of the observations. How can a student best be trained to do this and how can a practitioner improve his capabilities of observation? If one has started properly as a student, his training as a practitioner goes on more or less automatically. Many of us may not have learned it as students and have, so to say, to educate ourselves. In this there are two principal things to be considered: first, the importance of method, and second, the importance of inspection.* The acquirement of method is more or less possible for us all. Some few have it by inheritance and deserve no credit; for the majority it is a matter of hard discipline. It is only by adhering rigidly to a definite routine with patient after patient and day after day that a proper reflex can be obtained. The value of this can be illustrated both by history-taking and physical examination. In the former many points are brought out which are missed if routine questions are not asked in regard to every system of the body. Examples of the importance of routine examination occur to all of us; in how many cases does a routine examination of the urine give information of value; how often does a routine examination of the eyes give a clue to the diagnosis? It is a favorite saying of the laity that such and such a doctor can make a diagnosis at a glance. There never was a greater mistake. The principal difference between a good and a bad diagnostician is usually a matter of thoroughness and method. Brains count, of course, but the man who has not collected his facts has but little chance to use his brains.

In the beginning one has to determine that every point is going to be investigated in regular order, and it is important that this order should be invariable, for if one switches about from one routine to another many things will be missed. Take, for example, examination of the head; general features are noted first and particular ones second. It makes no difference whether the eyes or ears are examined first, but the order should always be the same, for if one is accustomed to examine the ear first and the eye afterwards and with a given patient begin with the eye, the ear may readily be overlooked. A haphazard method usually goes with slipshod observations and careless thinking. To practise order and system requires steady adherence to a given plan until the order of events becomes unconscious. With training one observation follows another without any effort and a glance will do what formerly took repeated

* It is hardly necessary to say that to lay emphasis on inspection is not to diminish the value of the other means of examination, but the man who inspects thoroughly is rarely wanting in the other methods.

observations. The student or practitioner has to keep himself to the routine of noting point after point in its order and not to be tempted to look into some interesting condition first. There are some curious instances of this, as, for example, the recognition of precordial bulging. If this is not done at the onset of inspection—if a wide impulse or some other point catches the attention first—it will very rarely be done subsequently, unless some other sign demands its reconsideration. It may be said that this is unnecessary devotion to details, but no detail is too small to be worthy of attention. Take, for example, the examination of the ear. It would be interesting to know how many patients there are to-day whose diagnosis has not been correctly made because a tophus on the ear has not been seen. If a man made a correct diagnosis of gout and cleared up an obscure case once in five years, would it not be worth a glance at the ear in every patient? Take also the recognition of a discharge from the ear. How many of the profession are there who have not been surprised and chagrined to discover that a patient had an unrecognized aural discharge for days after he had been under observation.

The importance of this routine examination is not only for present diagnosis but also for the future. An illustration of the importance of this and of careful observation may be given. A man aged fifty years began to show nervous symptoms which need not be entered into fully. He consulted a number of neurologists who hesitated to express a definite opinion but all feared an early stage of general paresis. This was some years ago before the days of the Wassermann reaction and spinal puncture. A most important sign in his case was the fact that his pupils were unequal. The uncertainty of the diagnosis worried him greatly and his condition became progressively worse. One day, while talking to an old physician who had long been a friend of his family but had never attended him professionally, he was giving an account of his symptoms and stated that the point which especially bothered his physicians was the persistent inequality of his pupils, to which the old man answered: "You have had that since boyhood, to my knowledge." With this point settled the doubt in regard to diagnosis was removed and the patient made a rapid recovery. In this case neither the man himself nor his wife had ever noticed the inequality. His own physician had never noticed it until the necessity for a special examination arose. Such instances are not rare, and the curious inability to see things which are before us will be discussed later under the heading of inspection.

The importance of *inspection* cannot be overestimated, but its value is often not appreciated. Ask a medical student at the end of his first course in physical diagnosis which of the four methods—inspection, palpation, percussion, and auscultation—seems to him the most important, and the most common answer is auscultation, unless his instructor has been a disciple of Zadig. This is natural, for while he has been accustomed to using his eyes—carefully or carelessly—all his life, the use of the stethoscope comes as a new experience and appeals to his sense of working with some kind of apparatus. The value of inspection is twofold, both in the information it gives of itself and the fact that it starts one right in the further methods of examination. No average man can be a good diagnostician if he begins his examination by percussion or auscultation. The word average is used because there are some men who are superior to method although they would be better with it. It is not so very rare for a complete error to be made in the side of the chest in which a tuberculous lesion is situated. To begin percussion on the diseased side may give a false standard, and it is in avoiding this that inspection so often comes to our aid. As regards our knowledge of cardiac disease the writer feels that we would be much more efficient in diagnosis (as regards the essential state of function), prognosis, and treatment if we did not listen to a heart say for five years after graduation but obtained our knowledge from inspection, palpation, and percussion. Like all sweeping statements there are exceptions to this, but it is surprising, if the effort be made, how much can be determined without the use of the stethoscope. Certainly as regards treatment the indications are based better on the means of examination other than auscultation. The old direction, "Eyes first, hands next, ears last and least" is an excellent one to keep in mind.

In the recognition of one class of diseases inspection is particularly important. The reference is to the disturbances due to disorders of the glands of internal secretion. We are learning of the frequent occurrence of these cases and for many of them the first suggestion of the diagnosis must come through our eyes. There is no better example than the condition of status lymphaticus in adults to which special attention has been drawn recently by Haven Emerson.* Here is a clinical picture which, once appreciated, seems to be frequently coming before our observation. I fancy that this is much like the common experience with a new phrase or word to which our attention is directed. We

* Archives of Internal Medicine, 1914, XIII., 169.

are always meeting it and we wonder how we failed to see it before. The eye has been trained to see it.

"The eye sees only what it is trained to see." This is a matter of daily example. The impression falls on the retinal eye but not on the cerebral eye. No instance of this impresses me more than to look up a busy railroad yard at night when the signal lamps are lighted. To me they are so many colored lights, but little more. To the engineer they chart his course and every one carries a plain message. Yet the impression on his retina and mine is the same. Somewhat of the same is seen if one rides on a locomotive at night. The engineer picks up the signal lights ahead sooner than the passenger. This, of course, is partly due to his knowledge of where the lights are situated, but greatly to his eye seeing what it is trained to see. Reverse the conditions and put the engineer in a hospital ward. He sees a sick man, recognizes that his breathing is labored and distressed, but nothing more; to the physician the whole condition is clear; he knows the signals along this track. How many eyes—yes, and skilled eyes, too—looked at the thorax and never saw the so-called Litten's sign or diaphragm phenomenon? Many of us look at it every day and fail to see it, even after we know about it. How often does the diagnosis of a thoracic aneurism go begging for want of a careful glance?

It is tempting here to digress for a moment to refer to two necessary preliminaries before inspection can be thorough. These are sufficient light and the exposure of the part to be seen. We would not try to take ordinary photographs without sufficient light, yet we constantly try to take the more important visual and mental ones without it. Then as to the second matter, the exposure of the part to be inspected; it seems absurd to dwell on it did not experience prove the contrary. How many chests are examined through the clothing or with the shirt tucked up and important points missed? The effect of this slackness in examinations for life insurance has been emphasized by Greene,* especially as regards tuberculosis and cardiac disease. It is as sensible to try to read the contents of a book through the cover as to hope to inspect when the area is not exposed.

How can a man train his powers of observation? By use, may be answered, but this is not everything. Use may be careless and lead to deterioration rather than to improvement. It must be a use which involves proper method and thoroughness. For some of us the training which was given to Kim in Kipling's story of that name may be helpful. He was trained for

* Modern Medicine, first edition, Vol. VI., p. 758.

work in the secret service in India and at one stage under Lurgan Sahib he was allowed to look for a minute at a tray which contained various objects. It was then covered and he was required to detail what was on the tray. To Kim's enquiry as to how another had attained greater accuracy than himself in doing this, the answer was, "By doing it many times over till it is done perfectly—for it is worth doing." We might all carry this around as a daily reminder.

Daily life offers many chances of practice. How careful a description can you give of the personal appearance, clothing, etc., of the last patient who consulted you? If he had been a thief who walked off with something from your office could you give the police a description which would help them to capture him? The people we meet on the street, those in the street cars, all with whom we come in contact, may serve as subjects. It may be objected that this is unnecessary and tiresome, perhaps using up mental energy on things of no special importance. But nothing which trains the powers of observation can be unimportant, and far from being tiresome it adds to the interest of the day. "Strive to be one of those upon whom nothing is lost," said a wise teacher. To endeavor to make out as much as possible about those about us from observation alone is an interesting study. Besides it is using a part of our mental equipment which some of us leave unused. It demands observation and reflection. We remember the bewilderment of Watson when Sherlock Holmes made what seemed to be marvellous statements about his doings, and his surprise at the apparent simplicity of the methods.

But with this outside training—if it may be so called—must go the steady day by day observation of our patients, and with this there must be an honest reckoning of our mistakes. No part of the training is more essential. We all know the man who has made an incorrect diagnosis, but who, before the operation or post-mortem is over, has nearly convinced himself that he did make the correct diagnosis and before night is quite sure of it. For him no good has come from the lesson. To learn we must face the mistakes and try to find out why we made them. Then comes our gain. In this connection is an excellent saying, "It is easy to be wise after the event, but very difficult to be wiser," which can be illustrated by an example. A patient dies in whom you have made a diagnosis of typhoid fever, and on autopsy miliary tuberculosis is found. You are *wise* after the event, but the laboratory *Diener* or a first year student is just as wise as you. To be *wiser*, or in other words to lessen

the chance of your making the same mistake again, is quite another matter. You will certainly be no wiser if you have persuaded yourself that after all you did think it was miliary tuberculosis. For one's own training it is better to make an incorrect diagnosis than none at all—if you call yourself to account afterwards.

The second part of my subject—the inferences to be drawn from the observations—is a very different matter. Here the possibilities of error are much greater and what seems a simple diagnosis may involve complex inferences. A frequent mistake is to fail to recognize that there is any question of inference and to think that physical signs give a diagnosis directly. Take, for instance, the combination of diminished expansion of one side of the thorax, increased vocal fremitus, dullness and tubular breathing. We may say that we observe lobar pneumonia but we do not—that is only an inference which may be wrong.

No one can give rules for methods of thinking, but it is possible to carry certain principles into operation. One is to strive to be delivered from hasty judgments. "Men see a little, presume a good deal, and so jump to the conclusion." How common this is needs only a little study of our mental processes. In some this is a habit, in others a fault of education. Take, for instance, the men for whom the hearing of crepitant râles has only one meaning—pneumonia; not uncommonly the same man never grants the presence of pneumonia in the absence of such râles. Another point is to endeavor to cultivate the habit of orderly thinking exactly as of orderly examination. This should be within the power of the majority, and is worth every effort. As a rule it is possible in a problem of diagnosis to state all the possibilities and by exclusion narrow them down to one, possibly to two or more. In the latter event it becomes a matter of deciding as to probabilities, and even if we do not decide properly, at any rate we know the problem and are better able to know subsequently why we erred if we go wrong. Otherwise it is usually a more or less haphazard process of guess work. The assembling of possibilities and excluding one after another has all the delights of an intellectual game. Sometimes we are saved from error by our lack of knowledge of the finer points of the game. I well remember a fellow house-officer and myself being much interested in the diagnosis of an obscure abdominal condition. We went over it from every side and to the best of our ability, coming at last to a diagnosis. The attending physician was much interested and examined the patient very carefully, at last making a diagnosis which had never even occurred

to us to consider. He suggested a rare condition which neither of us had ever seen, but we felt that consideration of it should not have escaped us. We were in a very humble frame of mind until the operation showed that our diagnosis had been right. It was so principally because the rare condition had not come to our minds. The moral of this is not that ignorance is an advantage. But some of us are too much attracted by the thought of rare things and forget the law of averages in diagnosis. There is a man who is very proud of having diagnosed a rare abdominal disease on several occasions. But as for some years he made this diagnosis in every obscure abdominal condition, of course being nearly always wrong, one cannot feel that he deserves much credit.

You may say, and properly so, that this address has dealt with simple things. But it is the simple things which require to be kept constantly before us and which must form the foundation of our diagnostic ability. I feel very strongly that it is the duty of teachers of medicine to insist on their students learning the simple clinical methods thoroughly and to impress them with the view that nothing can take the place of our own powers of investigation. The advances on the laboratory side and the perfection of instruments have added much to our powers of diagnosis, but they have given some men the idea that they are everything and the use of one's eyes and hands is looked on as old-fashioned. The man whose first idea in an obscure thoracic case is to have an X-ray plate taken and who cannot "bother" with physical signs does not deserve the name diagnostician. The safety with which the abdomen can be opened has led many men to neglect the principles of abdominal diagnosis for the short cut of an abdominal exploration. Many men are not willing to make the effort to arrive at a diagnosis by more laborious methods. Two examples of this are in my wards at this time; one man has had three abdominal sections in the effort to discover the source of his abdominal pain which a thorough physical examination would have shown to be a spondylitis with referred pains; the other has tabes with severe gastric crises, and his abdomen was opened by a surgeon who made the statement that a laparotomy was the quickest way to make a diagnosis. It was not in this case. To my mind accurate habits of working and thinking are a great safeguard against these supposed short cuts to diagnosis.

It is easy to criticize and point out the faults of others. The more we study our own errors the more sympathy we have for the mistakes of others. We should all have the desire to

reduce our errors to the minimum and to eliminate entirely those due to careless observations and slovenly habits of thinking.

To observe accurately, to reason clearly, to hold ourselves to as high a standard of efficiency as our equipment permits, are within the powers of all. The development of these depends on the man himself, and in this we may all be aided by a study and imitation of the methods of Zadig.

THE HISTOLOGICAL AND CLINICAL CHANGES INDUCED BY RADIUM IN CARCINOMA AND SARCOMA

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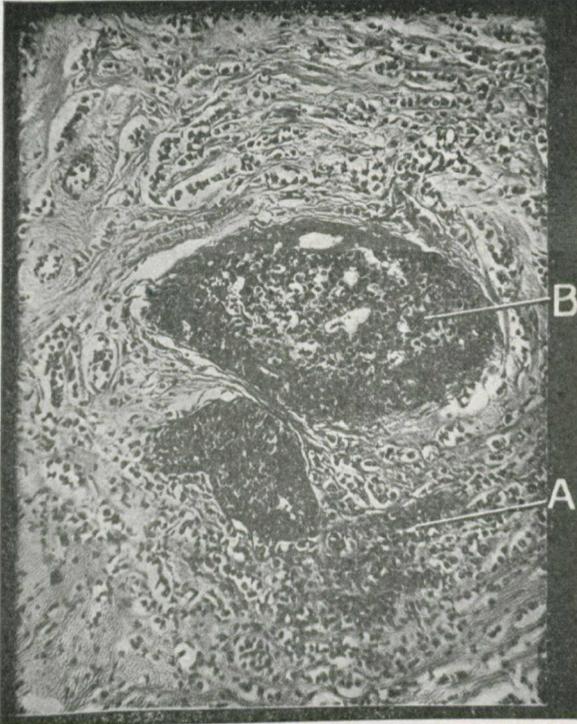
AND

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Pathologist to Grace Hospital, Toronto.

The histological changes induced by the action of radium rays have been reported from time to time in medical literature. In order to confirm these for our own satisfaction a study was made of tissue removed from two cases under radium treatment, and careful observation made of the cellular changes.

The first case was one of adeno-carcinoma of the breast. This patient had been referred for radium treatment nearly two years ago by Dr. G. P. Sylvester. He had removed the right breast for carcinoma twelve years before. There had been no evidence of recurrence until the summer of 1912, when a mass appeared in the right axilla. An operation was performed at which as much as possible of this mass was removed. It was impossible to clean the axilla entirely as the growth was adherent to the large vessels. With the object of destroying that portion of the growth which could not be removed, radium exposures were given. When the treatment was begun there was a perceptible thickening of the axillary tissues and some considerable edema of the arm. Under treatment the parts regained their normal, the mass disappeared and the swelling of the arm subsided. This favorable condition of the right side has persisted, and there is now no evidence of malignancy in that region.

In March, of this year, the patient spoke of a lump in the left breast, and on examination, a hard mass of induration, about one and a half inches in diameter, about the nipple was found, together with an enlarged axillary gland. There was retraction of the nipple. The patient was advised to have immediate operation, but this she did not wish to undergo at the



SECTION I.

Adeno-carcinoma—Very deep in breast tissue.

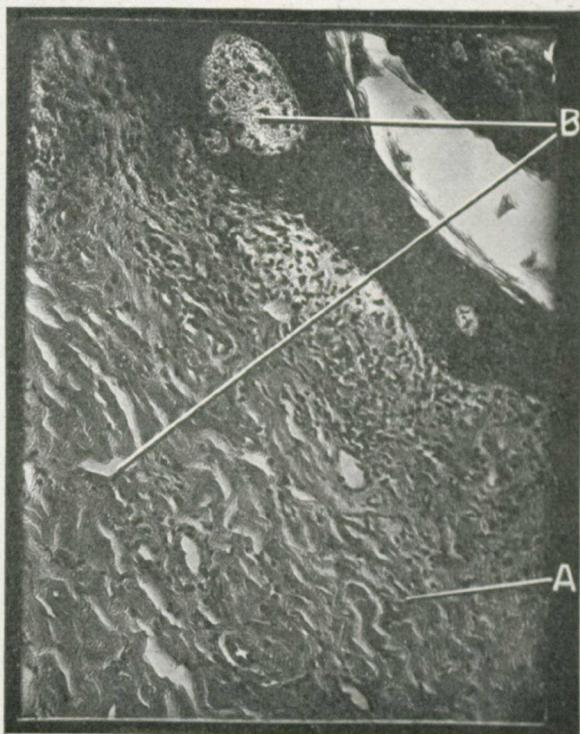
- A.—Cells affected by rays showing necrobiosis, necrosis and pycnosis.
 B.—Cells hypertrophied and vegetating.

hands of any other than Dr. Sylvester, so as a compromise it was decided to irradiate the parts, with the hope of retarding the progress of the disease until her surgeon's return. This was accordingly done by Dr. F. C. Harrison, a careful watch being kept over the condition until the end of May, when the breast was removed.

Portions were obtained for examination, and the pathologist's report indicates the effect of the radium rays on the cancer cells.

PATHOLOGIST'S REPORT.

A specimen of what proved to be an adeno-carcinoma of the breast was submitted to us after being subjected to the influence of radium. Vide sections I and II.



SECTION II.

Adeno-carcinoma of breast after Radium.

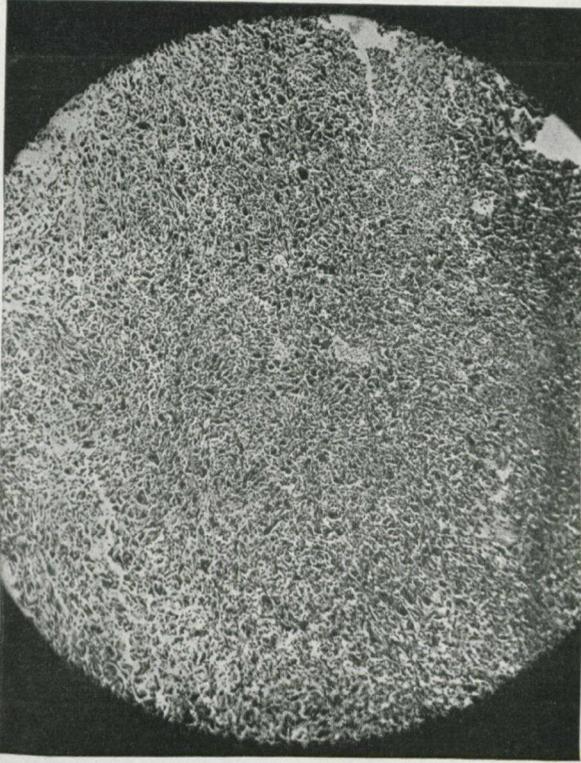
This section shows the effect of the trophic stimulus on the connective tissue, which thickens and the eosinophilic debris during absorption of growth.

A.—Hypertrophied connective tissue.
B.—Eosinophilic carcinomatous debris.

We found the upper portions of the skin which previously had been reported to be infiltrated with the growth to be totally free from any remains of malignant tissue. Deeper in the tissue, however, there seemed to have survived a diffuse growth, the

cells smaller as we neared the surface. These cells would also have been destroyed had radiation been continued.

We noticed that some of the carcinomatous cells were markedly hypertrophied, some were monstrous, some vegetative, whilst the protoplasm showed marked eosinophilia, proving beginning de-



SECTION III.

Before exposure to Radium.

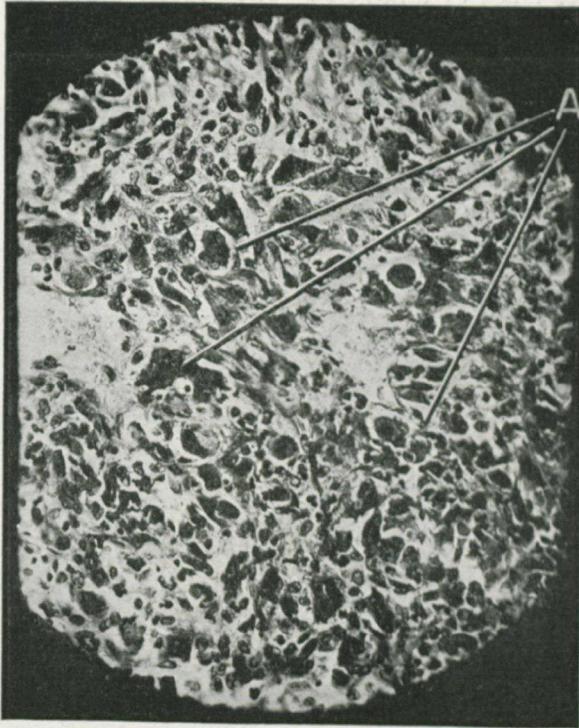
Low power view of sarcoma, showing large cells, irregular in size, shape and arrangement. Very little leucocytic infiltration is visible anywhere.

generation. The various tissue elements had become broken up and eosinophilic, young fibroblasts had evidently replaced the growth in the parts nearer the surface.

The second case from which we were able to obtain specimens was that of a railway fireman, twenty-eight years of age, referred by Drs. Bruce Riordan and R. A. Thomas. He received a blow over the right tibia in March, 1913. A swelling persisted

and was incised in January, 1914, under the impression that it was an abscess.

A report of the tissue examined was that it was a myeloid sarcoma, but the development of a secondary mass in the right groin indicated that it was of a more malignant type, and on a



SECTION IV.

Before Radium.

High power view of section of sarcoma. Note the huge cells, mitotic figures everywhere.

A.—Huge cells, vegetative type.

second examination the tumor was found to be a round-celled sarcoma. Dr. Riordan wished him to have the benefit of radium, although the case was most unfavorable owing to metastatic development.

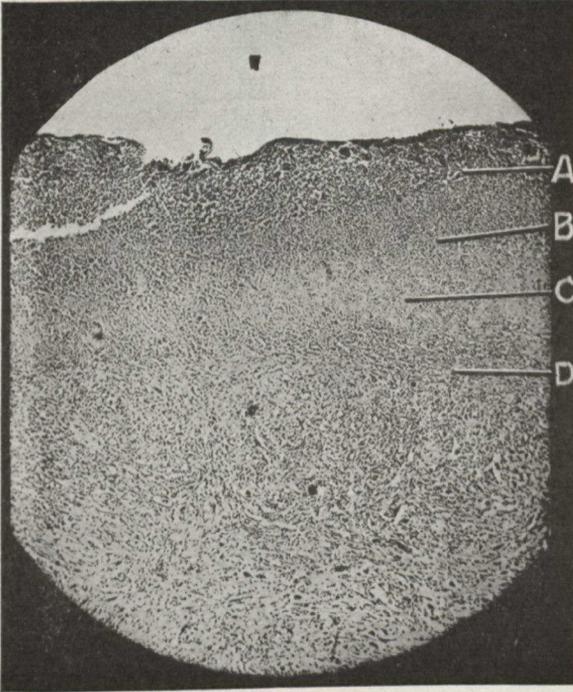
Radiation was accordingly undertaken, and three weeks later a portion of tissue was removed for examination from the primary lesion. The striking changes induced by the radium rays

are very apparent, and are particularized in the pathologist's report.

PATHOLOGICAL REPORT OF SPECIMEN.

The tissue consists of a portion of a large fungating growth removed from the anterior surface of the thigh.

The epidermal elements have completely disappeared and their place taken by a large fungating tumor which clinically is



SECTION V.

After exposure to Radium.

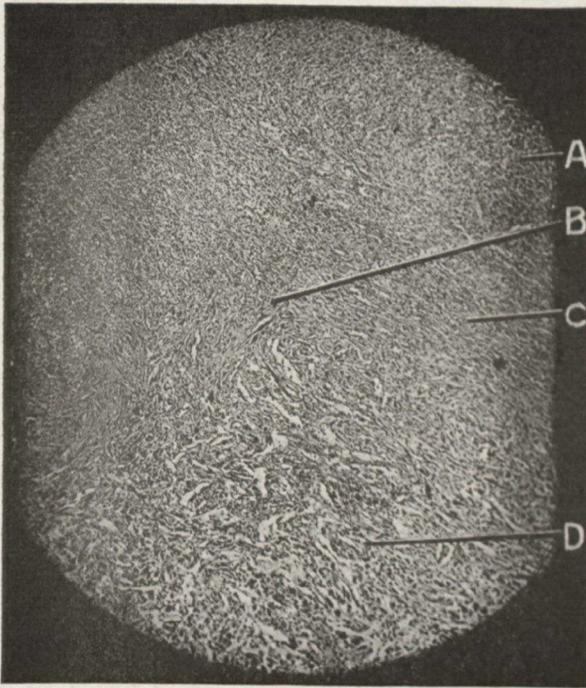
Low power view of sarcoma, showing marked changes.

- A.—Intense leucocytic infiltration.
- B.—Note decrease in size of tumor cells.
- C.—Eosinophilic degenerative process.
- D.—Connective tissue bundles arranging themselves in definite layers as result of radiation.

sarcomatous. On microscopic examination one sees that this is a large celled sarcoma with very large cells and a few spindle cells. The sarcomatous tissue infiltrates all around it, there is no tissue reaction, but a connective tissue stroma is present which is edematous and filled with a pigment which is evidently hemo-

siderin. The nuclei are often very large and measure about 16 x 15 microns. The size varies, but everywhere it shows mitotic figures and conform to all the characteristics of malignant sarcomata. Vide Sections III and IV.

On June 4th the tumor was exposed continuously to the radium rays, a dosage of 240 centigram hours being given, and on June 15th another portion was removed.



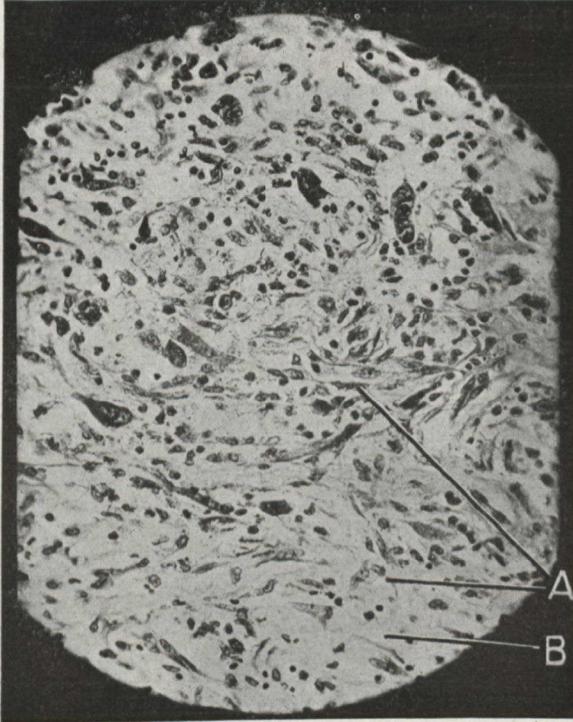
SECTION VI.

After exposure to Radium.

- A.—Intense round cell infiltration.
- B.—Note decrease in size and shape of cells.
- C.—Connective tissue and cells becoming arranged in definite layers.
- D.—Deeper portions of growth not completely influenced by radiation as yet.

Here we see wonderful changes. In place of the sarcomatous fungating mass we find a mass much reduced in size. (Sections V, VI and VII.) The large cells of the growth under the influence of the rays have changed to smaller connective tissue cells and spindle cells. The cells show necrosis and necrobiosis. The

connective tissue cells have been mobilized and also the leucocytic infiltration is most intense; due doubtless to the trophic stimulus the connective tissue has become vascularized not by a mere inflammatory reaction, but by a truly specific stimulus,



SECTION VII.

After Radium exposure.

High power view of section of sarcoma. Compare this section with Section IV to note the remarkable change.

- A.—Note complete change in type of cell from huge vegetative round cell to definite and regular smaller shaped cell, more adult in type. Connective tissue cell and spindle cells.
- B.—Myxomatous changes supervening in some parts of section.

which has expressed itself in the definite form of connective tissue elements.

From a review of the literature and study of our specimens we are forced to conclude and agree with other original workers that due to the influence of radium the tumor cells undergo

necrosis or necrobiosis. The connective tissue cells are mobilized and also leucocytic infiltration supervenes, due to the trophic phenomena stimulated, the connective tissue becomes vascularized in the usual way, not by a mere inflammatory repair, but by a true trophic stimulus which expresses itself in a definite form of connective tissue, with fibres parallel to the surface radiated.

On close perusal of the current and past literature we find meagre reports. On similar studies, however, Dominici and Barcat¹ experimentally produced radium burns and which on healing they showed to be composed of fibroblasts and connective tissue bundles parallel to each other and parallel to the surface of the skin. They found that the fixed cells became rarified, the chromoplasm of the parenchymal cell disappeared and becomes changed into hyaloplasm, the connective tissue bundles separating and the fibro blasts thickening.

Thus they also discovered that those portions of the tissue which had been subjected to radium become essentially differentiated from those not affected, by the alteration and regular direction of the connective tissue bundles.

Their texture is somewhat analagous to a flat fibroma with connective tissue bundles arranged in regular manner.

Degrais and Anslem Bellot², in a recent article, pointed out that when epitheliomatous cells are exposed to radium there is a hypertrophy of the nucleus and degeneration of the protoplasm, and a certain amount of keratinization takes place. At later dates, 20 days or so after radiation, these epitheliomatous masses become transformed into keratinized debris. The formed elements break up and disintegrate; young fibroblasts and connective tissue cells, lymphatic cells and polymorphonuclear cells infiltrate the growth and carry on a phagocytic function, and meanwhile cicatrization occurs at the expense of the hyperplastic and regenerated stroma of the tumor.

In the Freiburg Clinic, Ashoff, Kronig and Gauss³ obtained results similar to these. Kronig and Gauss⁴ also report the disappearance of myomata by means of radiation of mesothorium. In a recent number of *Progressive Medicine*, a review of the article by Gauss⁵ shows ten pieces of tissue excised from time to time during the course of treatment; these revealed such striking changes as in some instances to lead to a suspicion of a mixing of the specimens, so wonderful are the changes. For instance, one tissue at the beginning shows an adeno-carcinoma. Two weeks later it shows connective tissue and cancer nests. Three weeks later it shows benign tissue with epithelial debris.

Doderlein⁶ has reported several cases where carcinomatous cells have necrosed, and it seems that the connective tissue takes a new life after being relieved of the products of carcinoma cells.

Teitschlaender⁷ reports that with mesothorium the cells increase in size, lose their characteristic form and increase in the size of the nuclei. There is pyknosis, round celled infiltration and eosinophilia. Thus the chief action of mesothorium on carcinoma seems to be the inhibition of karyokinesis and activation of leucocytes and destructive changes, allowing the normal tissue to regenerate.

CONCLUSIONS.

In sarcomata the retrogression takes place according to the following law.

1. The size of the body and of the nucleus of the large cells decreases.

2. As they shrink the neoplastic elements elongate, the shape of the nucleus becomes regular, and they eventually assume the form of large embryonic connective tissue cells, forming into a celled mass similar to that of a true fibroma. Thus we may emphasize the fact that sarcomata are transformed by radium into a tissue analagous to that of a fibroma with myxomatous changes.

As regards epitheliomata and carcinomata, under the influence of the radium rays, the following change takes place:

1. The cells gradually diminish in size and staining properties.

2. This atrophy corresponds not to the metamorphosis of these definite formed elements, but to their destruction as shown by keratinization or absorption.

3. The epitheliomatous cells disappear either by means of progressive absorption of protoplasm and nuclei through the leucocytic infiltration or by a sort of granular degeneration.

The other processes associated with the development of every epithelial tumor are arrested, while vascular connective tissue is organized according to the method just described.

4. As proof that the changes initiated by radium in the tumors are such as to lead to immunity, great importance must be attached to the cellular infiltration, first leucocytic, then later a round celled infiltration. It has been recently shown these require different reactions of the tissue for their function, hence radium must affect the blood.⁹ These infiltrations have always

been noted in all cases of experimental transplantation of malignant cells, and always accompany the cases in which the animal becomes immune and the tumor disintegrated⁸.

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Tuberculosis. — Kutschera (*Wiener klin. Wochen.*), advises the patient to drop the tuberculin on the skin and rub in with thumb until all has disappeared. This is the percutaneous treatment. It has proved particularly practical and effectual and protects against the flaring up of latent tuberculosis. The more potent subcutaneous technic, however, is advocated when the disease is manifest. For members of families exposed to tuberculosis, this percutaneous treatment is especially adapted. It is well to commence with one drop of a one-twenty-five dilution once a week. This is increased by one drop each for four weeks. When the four-drop dose is reached, a change should be made to a one-five dilution, and so on, finally using one drop up to four drops. This treatment must be kept up for two years after the last manifestations have subsided, and the inunction made at a different point each time. The patient may be seen by the physician once a month or every three months.

THERAPEUTIC NOTES

Tuberculosis. — E. G. Reeve (*Practitioner*), has treated patients with a morning dose of 20 grains of potassium iodide. Children down to three years stand this dose very well. The chlorine water is given regularly in three doses of one ounce each at the ordinary times. In early cases, a good prognosis may be given; great and lasting improvement in the advanced cases.

Scorbutus. — E. Freise (*Monat. für Kinder*), reports the case of a child of eleven months clinically cured in seven weeks with a total administration of 13.79 gm. of an alcoholic extract of the common beet. It was given in the form of an emulsion in water, two c.c. of extract in 100 c.c. of water per day, added to which were a few drops of normal hydrochloric acid. Repeated Roentgen examinations showed extensive repair proceeding in the bones.

Tabes and Syphilis. — Boggs and Snowdon (*Arch. Int. Med.*), report eight cases treated by the intraspinal method. It would seem from these that the treatment is a step in advance. There was uniform relief from pain and definite improvement in locomotion. In some this was returned to normal. There was also marked psychic effect from this treatment. The quick relief of the pain so encouraged the patients that they more cheerfully used their legs to practise walking and stair-climbing.

Obesity. — J. M. Anders (*N. Y. M. J.*), says this is a symptom rather than a pathological entity. Successful treatment demands the removal of underlying causative conditions. There should be painstaking inquiries to ascertain the cause. In persons predisposed to corpulency prophylactic measures are advised and encouraged. If there is a hereditary predisposition, the fat-forming substances must be restricted during childhood and adolescence; but the normal amount of fat may be allowed, as well as protein, where the young person takes an average amount of muscular exercise. For anemia, iron; and for imprudences in eating and drinking, correction. Physical torpor should be overcome by suitable exercise. The prevention of gouty and rheumatic dispositions is essential.

Gastralgia.—Schnirer gives several combinations for gastralgia in general. Of course any underlying causes of this condition, such as gastritis, cancer of the stomach, chlorosis, central nervous disease, etc., should be treated. Two of his combinations are as follows: Mentholis, grains xv; alcoholis, drachms vi; syrup, drachms v; aquae, ounces v—one tablespoonful every four hours. Extra belladonna folium, grains two-thirds; extract opii, grains, four-fifths; olei theobromatis, sufficient quantity to make one suppository. Directions: Insert one at beginning of the attack and repeat once, if necessary.

Gonorrhoea.—Fulton (*Northwest Medicine*) treats gonorrhoea by means of the heated bougie held in the urethra thirty minutes at a temperature of 110 to 120°F. He maintains this temperature by running water at 120°F through a hollow bougie and allowing it to run out at 118°F. The mildest astringent injections are prescribed and pot. citrate internally. In acute cases, in the majority of them, one application, rarely two, are sufficient. There is a rapid disappearance of the gonococci. The discharge is rapidly changed to mucopurulent or mucoserous and generally in eight days it had disappeared.

Pyorrhoea Alveolaris and Furunculosis.—F. Tweddell (*Med. Rec.*), to prevent these conditions uses thirty to sixty drops of sulphuric acid, diluted in two to three ounces of water, three or four times daily, rinsing the mouth well after. Marked changes were noted in twenty-four hours; and the effect on boils and carbuncles was astonishing, the astringent action being wonderful. Small doses are of no use. After forty-eight hours, if there is no improvement, the dose should be increased. Treatment is seldom necessary more than eight or ten days, as the improvement is so rapid. Never were any gastric or other symptoms noticed.

Bladder Drainage.—E. B. Claybrook (*Old Dom. Jour. Med. and Surgery*), believes it safer and simpler to use a good trocar instead of the usual needle. When the stylet is withdrawn, a soft-rubber catheter should be fed through the sleeve into the bladder. Then the sleeve should be withdrawn carefully over the catheter. A strip of adhesive should be wound around the catheter, one turn, and the two free ends fastened to the skin. There is no leakage, and when removed the sinus heals rapidly in two or three days if the urethra is freely open.

Reviews

Pan-American Surgical and Medical Journal. New Orleans, U.S.A.

This is a new monthly medical journal—a monthly review of surgery, medicine and the allied sciences, and is the official organ of the Louisiana State Medical Society. Its first number gives fine promise of its future activity and usefulness.

The Ileo-Cecal Valve. By A. H. RUTHERFORD, M.D., Edin. Price 6 shillings. London: H. K. Lewis.

There are two colored plates and twenty half-tone plates in this book. The illustrations comprise one-half of it. The literature on the ileo-caecal valve is very fully reviewed. It constitutes a thesis submitted for the degree of M.D. to the University of Edinburgh.

International Clinics. Volume II. Twenty-fourth Series, 1914. Philadelphia, London and Montreal (201 Unity Bldg.): J. B. Lippincott Company.

Six papers on diagnosis and treatment, three on medicine, eleven on surgery, two on obstetrics and one on the teaching of sex hygiene, constitute this volume. The volume is exceedingly well illustrated, and the papers are of the better class.

A Manual of Surgical Anatomy. By CHARLES R. WHITTAKER, F.R.C.S. (Edin.), F.R.S.E. Senior Demonstrator of Anatomy, Surgeon's Hall, Edinburgh, etc. Second Edition. Revised and Enlarged. Price 6 shillings net. Edinburgh: E. & S. Livingstone.

The first edition of this work appeared in 1910, and was published at the request of his students. The new edition has enlarged the work by about 100 pages. The new edition is a book of 336 pages. It is concise and well arranged. The illustrations and diagrams are numerous and well arranged. It should be a very useful book for students in their final years at college. One has pleasure in recommending this work to the students,

W. W. J.

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And Ontario Medical Journal

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COMMENT FROM MONTH TO MONTH

A **General Practitioner** is not "accustomed," like the inhabitants of Drumtochty, but often "compelled" to break almost every law of health, especially in Canadian country districts. It is equally quite true he has wholesome food and plenty of fresh air, but then his life often has its limitations. The exacting demands of a busy country practice all too soon break down the health of the strongest and more robust.

There died suddenly in Stratford, Ontario, on the afternoon of the eleventh of July, at the early age of forty-eight years, Dr. Fred Parker, a man who was the very embodiment of Ian Maclaren's William MacLure.

Entering Trinity Medical College at the beginning of the session of 1891-92, he applied himself so diligently to his studies that he was successful in carrying off the first scholarship in each year, the Special Prize in Physiology of the First Year, the Gold Medal of the Final Year, as well as the Gold Medal at Trinity University.

In the north country, at Bruce Mines, he began the practice of his profession. There his field was extensive and his work laborious. Ten years ago he removed to Milverton, near Stratford, and soon built up one of the largest general practices in all Ontario.

Strong of frame and big of heart, as he was of body, he spared not himself to the calls of suffering humanity. In the teeth of the bitter and biting blast, through the sleet and blinding snow, often night after night without sleep save that snatched in cutter or buggy driving home—the reins dangling at his horse's heels—now digging his horse from deep snowbanks, and again performing all sorts of unheard-of feats in pursuit of his duty, this big-hearted man gave his life for his patients.

A man of unusual common sense, replete with native wit and humor, an able speaker, a most entertaining companion, a firm, true and straightforward friend, it is not surprising that he was often solicited to try for Parliamentary honors. But he had chosen his life for humanity, and to that humanity he gave it.

The medical profession can ill afford to lose men of his calibre.

Industrial Insurance, which involves medical examination of employees and prevention of sickness, should go hand in hand with workmen's compensation. In this age the watchword all along the line is prevention.

In Ontario there has recently been enacted workmen's compensation legislation, but not yet, either in Ontario, or in any other province, or city, has there been any attempt made to provide for the medical inspection necessary in any scheme of prevention of occupational diseases, save for a tentative survey in Toronto.

Once the employer of labor is convinced of the economic value of such a scheme to himself, then medical inspection of factories and other industries will rapidly come.

Of course, the great feature is as to how the burden of cost is to be divided. There are three beneficiaries under such a scheme: the state, the employer, and the employee. It is clear, then, each should bear a proportionate part of the cost of any plan projected.

Writing upon this subject, Dr. J. W. Schereschewsky, Surgeon, United States Public Health Service, sums up with the following conclusions:—

1. Industrial sickness insurance is an economic necessity in modern social evolution.
2. The basis upon which industrial insurance should rest is the prevention of illness and physical disabilities.
3. Frequent periodic physical examinations of workers constitute the logical means by which defects and diseases can be detected in their incipency.

4. The scope of such examinations should be extended to include home as well as factory conditions.
 5. Industrial insurance based upon preventive measures should redound greatly to the benefit of society.
 - (a) by reducing the annual loss of time through illness;
 - (b) by establishing hygienic standards;
 - (c) by establishing minimum hygienic standards for industries.
 - (d) by favoring the enactment of uniform industrial legislation;
 - (e) by increasing the efficiency of local health authorities.
 6. The cost of carrying industrial insurance based on preventive principles should be less than that of present systems.
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The Examination of the Urine. By A. FERGUS HEWAT, M.B., Ch.B., M.R.C.P. (Edin.), Tutor in Clinical Medicine, University of Edinburgh. Fifth Edition. Edinburgh: E. & S. Livingstone.

In a simple and concise manner are herein set forth brief notes on the examination of the urine, the blood, the sputum, pus, gastric contents, the feces. It is a small, compact book, and quite a practical one. There are several illustrations. Students and general practitioners will find it useful.

Abdominal Surgery. Clinical Lectures for Students and Physicians. By THORKILD ROVSING, Professor of Clinical Surgery at the University of Copenhagen. Edited by Paul Munroe Pileher, A.M., M.D., Brooklyn, New York. Philadelphia, London: J. B. Lippincott Co.; Montreal Office, 201 Unity Building.

This book of 500 pages is splendidly arranged, and consists of series of clinical lectures on the most modern methods of investigating diseases of the stomach and duodenum from a surgical standpoint. He handles his subject in a masterly way, and it is evident that he thoroughly understands the subject, and, in addition, is a clear and able teacher. This book is well worth careful study, and should be in the hands of every physician and surgeon. Rovsing has a world-wide reputation as a surgeon and as a teacher. This work will add to his already splendid reputation.

W. W. J.

News Items

M. J. Glass, M.D., Poplar Hill, Ontario, a graduate of Trinity in 1887, died on the 5th of July, aged 65 years.

Dr. O. C. Gruner, Assistant Pathologist in the University of McGill, Montreal, has resigned and returned to England.

Dr. Walter S. Bloor, Queen's University, Kingston, has been appointed Professor of Biological Chemistry at Harvard University.

Dr. Gordon G. Copeland, Toronto, after extensive study abroad, has commenced the practice of gynecology and obstetrics at 73 Bloor Street East, corner of Church St.

Dr. Edmund E. King, Toronto, is spending August at his summer home in Hastings County, Ontario. Much sympathy is expressed to Dr. King on the recent loss of another daughter.

The Canadian Public Health Association has issued a comprehensive circular of its fourth annual conference to be held in Fort William and Port Arthur on the 10th, 11th and 12th of September.

Dr. Keith Simon, who has recently been appointed Pathologist to Grace Hospital, Toronto, has opened offices at 653 Bloor Street West. Dr. Simon is prepared to carry out any pathological investigations for the profession.

Dr. J. Bruce Coleridge, Ingersoll, died recently in Woodstock. Dr. Coleridge, although still a very young man, 36 years, was recognized as one of the best speakers in the Conservative party in Western Ontario, and had been twice Mayor of his native town. He was an able practitioner and popular with his confreres.

The death of Albert Roberts Pyne, M.B., took place in Toronto on the 6th of July. He had been a Dominion Analyst since 1892 and was recognized the Dominion over as an expert in biological chemistry. He was a brother of the Hon. R. A. Pyne, the very popular Minister of Education in the Whitney Government.

The sympathy of this journal is extended to the *Canadian Journal of Medicine and Surgery* for the loss of its editor, Dr. J. J. Cassidy. Dr. Cassidy had been the editor since the foundation of the journal many years ago; and was recognized as an able writer, particularly upon public health matters, in which he took a strong interest.

Dr. Harvey Clare, Assistant Medical Superintendent of the Toronto Hospital for the Insane, has been appointed Medical Director of the new Reception Hospital for Observation and Treatment of Incipient and Suspected Mental Cases. The pavilion on the grounds of the old Toronto General Hospital has been fitted up for the purposes of this hospital.