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## Original Articles

### ADDRESS IN GYNECOLOGY\*

BY THOMAS S. CULLEN, M.B.

Associate Professor of Gynecology, Johns Hopkins University, and Associate in Gynecology, Johns Hopkins Hospital.

To visit London is always a pleasure, to come as an invited guest to the Canadian Medical Association in the Forest City an honor which I deeply appreciate.

This evening I want to briefly outline the various methods adopted to educate the public as to the early recognition of cancer, and to impress upon them the fact that in the early stages of the disease many patients can be permanently cured.

For several years the medical profession has been fully cognizant of the fact that the laity has a false idea about cancer, namely, the widespread feeling that it is a blood disease and that, consequently, it cannot be cured. It is our duty to impress upon them the fact that in the beginning it is a strictly local process, a process that is amenable to surgical treatment.

Several earnest campaigns have been waged during the last few years. The various committees have devoted their attention mainly to pointing out to the family physicians what might be accomplished by early operation and urging the physician to send his patient at the earliest possible moment to the surgeon. Notwithstanding the splendid efforts in this direction little has been accomplished, not because the physicians were necessarily negligent, but because the patients did not present themselves until the disease was far advanced. It was finally realized that if satisfactory results were to be accomplished the message must be carried directly to the people. It was pointed out that fifteen or twenty years ago

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it was exceedingly difficult to prevail upon persons with appendicitis to be operated upon; now, with the knowledge they have, after appendicitis has been diagnosed, operation is at once sought, and the only question asked by the patient or his relatives is—to what hospital shall I go? When the laity are made fully aware of the cancer situation they will, on the first sign of the disease, present themselves for examination and will gladly avail themselves of surgical aid.

At the meeting of the Clinical Congress of Surgeons of North America, held in New York City in November, 1912, a cancer campaign committee was appointed, mainly through the efforts of Dr. Franklin H. Martin, of Chicago. The committee was instructed to write, or have written, articles on the subject of cancer, and was further instructed to have these published in the daily press, the weekly or monthly magazines, as might be deemed most expedient. The committee has gone cautiously, and through the aid of that master organizer and medical editor, George H. Simmons, was able to enlist the co-operation and support of some of the most representative magazines in the country. Mr. Bok, editor of the *Ladies' Home Journal*, and Mr. Harriman, managing editor of the same journal, manifested the deepest interest in the campaign. After much thought they came to the conclusion that a lay writer could better reach the public ear, and they naturally selected Mr. Samuel Hopkins Adams, who was such a dominant factor in the campaign against patent medicines, and who was last week made an associate member of the American Medical Association in recognition of his splendid crusade. Mr. Adams visited various surgical clinics throughout the country, and then wrote a most comprehensive article on the subject. His first article was published in the *Ladies' Home Journal* for May, 1913. It is well worth a thorough perusal not only by every layman, but also by each member of the medical profession. *Collier's Weekly* for April 26th, 1913, and the May number of *McClure's Magazine* also contain admirable articles on the same subject from Mr. Adams' pen. The medical profession is under a deep debt of gratitude to Mr. Bok, Mr. Harriman, Mr. Collier and Mr. McClure for so freely opening their pages for the enlightenment of the public on this very important subject.

It has been estimated that these three articles reached a reading public of between eight and ten millions. *Harper's Weekly* for March 29th also contained a timely article urging cancer patients to be operated upon without delay. Abstracts from the magazine articles appeared in many of the daily papers throughout the country. The *Baltimore Sun* contained a full column, the *Baltimore*

*News* and the *Baltimore American* each devoted ample space to the subject. The *New Orleans News-Item* gave a full abstract of Mr. Adams' article from *McClure's*, and the *Detroit News-Tribune* for Sunday, April 27th, 1913, with the permission of the *Ladies' Home Journal*, copied Mr. Adams' article in full. I have just mentioned a few of the daily papers that have given this matter wide publicity. The entire press of the country has been most liberal in its dissemination of our knowledge of cancer. This support was not confined to the papers of the United States. The Canadian papers have also strongly emphasized the necessity of patients suffering with cancer having their ailment attended to promptly. I have splendid clippings from the daily press of London, Toronto, Montreal, St. John, N.B., Winnipeg, and Vancouver. Our committee wishes to express our deep sense of appreciation of the hearty support given us by the press of Canada and of that of the United States in the dissemination of this knowledge, and we feel confident that they will gladly continue to publish any new data on the subject, until every one on the continent has a clear idea of just what cancer is, what its early symptoms are, and how they can best be treated.

An advertiser is naturally looking for results, and in like manner the cancer campaign committee was anxious to find out what influence Mr. Adams' article had had on the community at large. It was not long before they were forthcoming. I will relate just a few of them to you. Within a week after the appearance of Mr. Adams' publication, a colleague of mine told me that he had just operated upon a patient with cancer of the breast. The nodule **was not larger than a pea**. When asked why she came so early, she said that she had just read the article in the *Ladies' Home Journal* and felt that it was unwise for her to delay,—the outlook in this case is excellent. Another colleague had for weeks been urging a patient with cancer to be operated on, but to no purpose. Within three days after the appearance of the article, which she had carefully read, she entered the hospital and was operated upon. Dr. C. Jeff Miller, of New Orleans, wrote me that, as a result of the *Ladies' Home Journal* article, a lady soon came to him with an early cancer. Dr. T. C. Kennedy, of Indianapolis, under date of May 13th, 1913, writes: "A lady out in the state noticed a lump in the left breast. Seeing the article in the *Ladies' Home Journal*, she immediately consulted her family physician, who referred the case to me. I operated on her at St. Vincent's Hospital last Thursday, doing a Halsted. Here is a case that has a good chance of getting entirely well, as it was taken early."

Dr. Franklin H. Martin, of Chicago, early in May of this year, saw a beginning carcinoma of the breast. The husband had just read the article in the *Ladies' Home Journal*, and insisted on his wife consulting a surgeon. Dr. Martin removed the entire breast and the axillary glands, and feels sure that the outlook for a permanent cure is an excellent one.

My experience as to the strong impression made by Mr. Adams' article has been similar to those already related. In one morning I saw three patients from widely different points—one from New Orleans with some bleeding due to slight pelvic inflammation, another from Alabama with some bleeding due to a prolapsus, and a third from Maryland, with a small, but benign tumor of the breast. Each had read Mr. Adam's article, and each hastened her visit as a result of this article. All were afraid of cancer, and in each case I was able to relieve the patient's mind, telling her that no malignancy existed. Two of these three patients required minor operations.

From what you have heard, the knowledge of cancer has already been widely disseminated and it is bound to bear fruit. The more the subject is investigated the clearer it becomes that if the women of the country are made aware of what can be done if cancer patients apply early for treatment, it will be unnecessary to pay much attention to the men. If men are sick, unless very ill, they pay no attention to it, and only after they are urged by their mothers, wives, sisters or daughters, do they seek medical aid. As a matter of fact the woman is the health guardian of the household.

*Skin cancer.* Cancer of the skin is easily and promptly recognized and is usually soon brought to the attention of the physician.

*Cancer of the lip* is also soon discovered by the patient, and as a rule the physician's advice is sought early. While in many instances wide excision of the growth is at once advised, yet it is appalling to find the number of patients that are still treated in a palliative manner. Only a few months ago a friend drew my attention to an ulcerated area on his lower lip. His associates had not noticed it because of his long moustache. On questioning him I was surprised and distressed to learn that a supposedly competent physician had been burning the "ulcer" every few days for fully two months. Very valuable time was lost. Within a few days the growth and the glands of the neck were removed. These glands, on microscopical examination, were found markedly involved by cancer, and the patient's ultimate outlook is a very gloomy one.

*Cancer of the tongue.* Any growth of the tongue naturally calls for immediate intervention. My colleague, Bloodgood, has fre-

quently drawn attention to the small white patches on the lip or tongue of smokers. He looks upon these as precancerous lesions, and if, after a week or two, they still persist, then he advocates their immediate removal.

*Cancer of the stomach* is one of the very frequent varieties of cancer. In the late stages, to be sure, it can be diagnosed from blood in the stomach contents, the reaction of the stomach juices, and by the co-existent nodule that can in some cases be detected. In the early stages of the disease, however, most of these signs are wanting, and it is only in the early stages that a reasonable hope of a permanent cure can be thought of. In the right upper abdominal quadrant we most frequently find gall-stones, duodenal ulcer, or cancer of the stomach. Any marked disturbance in this region calls for prompt operative interference. A delay in a case of cancer of the stomach until definite signs are present usually means a delay until the case is advanced too far for operation.

*Cancer of the intestine* may be detected early if the growth partially or almost completely blocks the lumen of the bowel, or if it be associated with a great deal of bleeding. Sometimes when the patient is thin the nodule can be palpated. In stout individuals, however, the cancer may have extended far before symptoms sufficiently definite to enable one to make a diagnosis are present. If there be any obscure abdominal condition present, and if this does not yield promptly to treatment, then an exploratory operation should be promptly undertaken, as many valuable lives may in this manner be saved, lives that would be absolutely doomed if delay were advised.

*Cancer of the rectum* usually gives its tell-tale warning in the form of blood or of pain on defection, and its recognition is not difficult.

I have referred only to the more common varieties of cancer; time will not permit me to discuss the subject in detail.

If we are successful in our cancer campaign, and of this there is not the shadow of a doubt, then we must be prepared to give these patients the best possible service. We must be able to diagnose accurately the borderline cases, and then when cancer does exist we must do such an extensive and thorough operation that the patient is given the maximum chance for a permanent cure.

In cancer of the skin, lip, tongue and rectum, a diagnosis can usually be readily made by the surgeon in his regular examination. Cancer of the stomach can in the early stages be detected, as a rule, only with the possible assistance of the Roentgenologist, and mainly by an exploratory abdominal operation. The two chief classes of

cancer that require expert pathological knowledge are cancer of the breast and cancer of the uterus.

*Cancer of the breast.* All surgeons meet with many nodules in the breast. Some of these are definitely fibrous in character, others are definitely cancer, while not a few are on the borderline and can only be positively diagnosed on microscopic examination. It is wise to remove all breast nodules, but where malignancy exists it is imperative to do a most thorough and complete removal of the breast, pectoral muscles, axillary glands and fat. Bloodgood, after the most careful and painstaking study of the cases at the Johns Hopkins Hospital, has found that to remove a piece of cancerous breast for microscopical examination, and then delay several days or a week for the pathologist's report is a most dangerous procedure, as nearly all of these patients have a recurrence. The cutting into the growth allows such a widespread dissemination of the cancer that the subsequent operation is of no avail. Consequently, in case of doubt a piece should be cut out and examined immediately, the area of the excision in the meantime being treated as a contaminated area, and if cancer is reported the breast is removed at once, the delay occasioned by the microscopic examination not having taken over ten to fifteen minutes at the outside.

There are many good surgeons through the country, but few good surgical pathologists, except in the teaching centres. The time is speedily coming when every hospital will have a trained and expert surgical pathologist on its staff, a man whose advice can be had at every operation. He will prove to be one of the hospital's most valuable assets. Some may ask why we have not more such men. The truth is that the young physician must make a livelihood, and as the pathologist receives as a rule a mere pittance for his work, few have the scientific perseverance to enter this field. This field must be made sufficiently remunerative to induce plenty of capable men to enter it. When once they embark upon it, learn what a fascination there is in following an individual case to its very rock bottom, obtain here and there a clue enabling them to forecast with a degree of definiteness and precision whether this or that patient will recover, and even every now and then discover something that has never been known to medical men before, then you will find men that will never give up the study of surgical pathology.

When I started medicine a quarter of a century ago, asepsis was slowly creeping into Ontario, and Lister's carbolic spray was still in vogue. We examined very little operative material microscopically in those days. The time is rapidly drawing near when every

surgeon, before he becomes a real surgeon, must have as thorough a grounding in surgical pathology as he now has in the principles of bacteriology. Many conditions that are now obscure to him, after months of study of their finer structure in the laboratory are readily recognized with the naked eye. On opening the abdomen, whether in the clinic or in a small country house, he is always thoroughly familiar with whatever panorama the abdomen in the individual case may unfold. In one case he will find a small nodule not larger than a pin-head; this will give him a clue as to some pathological condition tucked off in a remote corner of the abdomen. In another operation he will at first glance think the case inoperable, but will notice some small familiar nodule partially buried in the adhesions. He knows from past laboratory experiences that this is benign, and will go ahead and finish his operation. A high building requires deep foundations. Few surgeons of the future will attain marked renown unless these foundations consist in a thorough knowledge of surgical pathology, the material that they are daily confronted with.

*Cancer of the uterus.* Bleeding from the uterus that cannot be satisfactorily accounted for should always excite suspicion. On vaginal examination it is frequently possible to make out a uterine tumor. When the uterus is fairly normal in size and not nodular, and the cervix is normal, then of course the organ should be dilated and curetted. Before undertaking to make a diagnosis from scrapings one should have a thorough knowledge of the appearance of the normal endometrium at or between the periods, during pregnancy, and in old age; each is different, and yet perfectly normal.

*Hyperplasia of the Endometrium.* I want to draw your attention to a common, and yet little mentioned, pathological condition of the endometrium causing exceedingly free bleeding at the period and often reducing the patient's hemoglobin to a very low point. The first cases of this kind that were brought to my attention came independently from Dr. F. R. Eccles and Dr. H. Meek, of this city, in 1895. These cases were reported in "Cancer of the Uterus," page 479, published in 1900. These patients are usually from thirty-five to forty-five years of age, but I have noted the condition in girls in their teens. The flow is excessive and the menstrual periods may be almost continuous; there is usually no intermenstrual discharge, however. The mucosa is much thicker than usual. On microscopic examination the surface epithelium is found intact. Some of the glands are very small, others much enlarged. The large glands may be either circular or tortuous. All are lined by thickened epithelium and the stroma is excessively cellular. Often

the nuclei of the stroma cells contain nuclear figures. Scattered throughout the stroma are frequently found large venous sinuses, some of which are thrombosed. Cancer of the body of the uterus is diagnosed from its pattern, and, secondly, from the changes in the individual cells. Gland hyperplasia histologically bears absolutely no resemblance to it.

Where carcinoma of the cervix exists the small cauliflower outgrowths from the cervix or the area of ulceration leave little doubt as to the diagnosis. If one is not certain, then a small wedge of cervix is removed and examined, preferably at once.

While speaking of carcinoma of the cervix, I wish to draw your attention to a pelvic tumor that has thus far in the main escaped notice. Dr. D. S. D. Jessup, of New York, recently sent me a specimen of two tumors, each of which had the same characteristics. In each case the tumor was attached to the cervix and grew into the rectal wall. Both growths were so firmly fixed that while the surgeon was doing a complete abdominal hysterectomy he had to remove at the same time a piece of the rectal wall with the cervical growth. In both cases the tumor consisted of myomatous tissue, with uterine mucosa scattered throughout it. In the February number of the *Proceedings of the Royal Society* is a report of two similar cases by Dr. Cuthbert Lockyer, of London.

I have had two cases which belong in this category. In the first case the myoma had not as yet become firmly grafted on to the rectum. In the second case the adenomyoma filled the left broad ligament, and on account of the patient's extreme weakness it could only be removed in part. I feel confident that, when all rectal growths are carefully examined histologically, some supposedly carcinomatous growths will prove to be adenomyomata. These cases are of so much interest that I will give them somewhat in detail.

CASE 1.—*Myomata of the Uterus; Adenomyoma between the Cervix and Rectum and associated with Rectal Adhesions.*

Mrs. G. P., seen in consultation with Dr. Samuel T. Earle, March 17th, 1911. This patient had several small polypi in the rectum. The uterus lay back on the bowel and was apparently adherent. On March 22nd of the same year Dr. Earle burned off the rectal polypi. These were five or six in number and situated directly behind the cervix. Microscopic examination of these showed that they had been undergoing definite inflammatory changes, as evidenced by the quantities of polymorphonuclear leucocytes on the surface, and by the fact that the underlying stroma contained great numbers of small round cells.



After Dr. Earle had finished his operation I opened the abdomen. The rectum was found adherent to the posterior surface of the uterus low down. On the left side was a corpus luteum cyst. This had evidently ruptured at some previous time, as the surrounding tissues were stained a dark brown. We did a complete hysterectomy, removing the uterus and appendages. I then shelled out a small myoma 1 cm. in diameter from the left side of the pelvic floor, and another 3 cm. in diameter, with a secondary nodule 1 cm. in diameter lying on its surface. This combined nodule was situated between the rectum and vagina on the left. The patient made a perfectly satisfactory recovery. At a later date, however, she had definite renal trouble, as evidenced by pus from both kidneys. X-ray examination showed a calculus in the pelvis of each kidney. As the left kidney had apparently given more trouble than the right we removed the stone from that kidney. The stone in the right kidney the patient still has, as it has given her very little trouble.

Pathological report, No. 16079. The uterus itself is little enlarged. Scattered over the outer surface of the organ are several small fibroids. On microscopic examination the endometrium shows definite endometritis. The larger nodule lying between the cervix and rectum is 4x3x2 cm., and the smaller one 1 cm. in diameter. The larger nodule, on histological examination, consists in the main of typical myomatous tissue, but at one point in a cleft are islands of typical uterine mucosa, and at another point is a miniature uterine cavity. The smaller nodule only contains one or two gland-like spaces. From the history it will be noted that in this case the cervix was adherent to the rectum. We have here a connecting link between the ordinary adenomyoma of the uterus and an adenomyoma involving the rectum. It is the only case that I have ever seen showing this stage.

*CASE 2. Adenomyoma in the left broad ligament and intimately blended with the rectum.*

Mrs. G. S., admitted to the Johns Hopkins Hospital, June 4th, 1913. This patient is thirty-seven years of age, and two years ago was operated upon in San Francisco, a myomatous uterus and enlarged ovaries being removed. At that time it was necessary to also remove a small portion of the rectum on account of dense adhesions.

Since operation she had had a great deal of pain in the lower abdomen and has for months had almost continual bleeding from the cervix. On her admission to the hospital I found thickening posterior to the cervix, also induration in both broad ligaments. Although she was in a very weakened condition from the continuous

loss of blood we felt that something must be done. The cervix was dilated, and on curetting we brought away what, on microscopical examination, proved to be perfectly normal uterine mucosa. The supravaginal hysterectomy had evidently been a high one. The right broad ligament was indurated and board-like, and on the left side there was also thickening.

A few days later we explored the abdomen. When the operation was commenced her pulse was 145. We found the rectum densely adherent to the bladder, and the left broad ligament was filled out by a rather cystic growth. Those assisting at the operation thought we were dealing with a malignant growth which had spread into the broad ligament. In order to determine definitely, I cut the round ligament and separated the folds of the broad ligament, and found we were dealing with a cystic mass 6 cm. in diameter. This was gradually shelled out from its attachment to the rectum, but by this time the patient's pulse had become almost imperceptible, and was between 180 and 190, although she had lost practically no blood. We removed the greater part of the growth, but left a portion still attached to the rectum, and did not dare explore the right broad ligament. A drain was introduced into the pelvis and brought out into the lower angle of the incision. When the cystic mass that was attached to the rectum and had occupied the left broad ligament was cut across, it was found to contain one large irregular cavity about 2.5 cm. in diameter. This contained chocolate-colored fluid, and was lined by a rather smooth-looking membrane, which was brownish tinged. The outer coat looked like ordinary muscle.

On microscopic examination it was found that the wall of the blood-stained cyst was lined by one layer of cylindrical epithelium, and that this rested on a definite stroma consisting of cells having oval vesicular nuclei. The more solid portions of the growth were made up of non-striated muscle fibres arranged in whorls, and of quantities of uterine glands embedded in their characteristic stroma. In some places only two or three glands with the surrounding stroma were visible, but at other points miniature uterine cavities were found.

We are here dealing with an adenomyoma which has formed a cystic mass in the left broad ligament, and which has become densely adherent to the rectum. If the patient at a later date is in fair condition we will then attempt to shell out the thickening in the right broad ligament, remove the cervix, and then a portion of the rectum to which the growth is intimately blended.

Since this note was made the patient had gradually become weaker. She died June 19th. These growths when once removed do not return.

To do the maximum amount of good for the increased numbers that will come for operation as a result of our labors, our surgeons must be thoroughly conversant with the anatomy of the given part, and must have a full knowledge of the paths along which the cancer travels from its point of origin. In cancer of the lip the operator must consider the removal of the glands of the neck. In cancer of the breast he must be familiar with the lymph glands that are first involved, and in cancer of the rectum must remember that the liver is frequently secondarily invaded, and that if such be the case, an extensive rectal operation is contra-indicated.

I shall never forget meeting one of my Baltimore colleagues abroad one morning and saying, "Why, I thought you were going to Dr. ——'s clinic this morning." The reply was: "I did. He was to do a breast operation at 8.45. I arrived at 9, and the operation was over." This was not long ago, and the surgeon has a world-wide reputation. If our work were to be as superficial and incomplete as in this case, then it were better not to undertake any campaign against cancer. But such is not the case, and admirable work is being done in many clinics; not in all, however, I am sorry to say.

Some surgeons fearing they will not be able to close the wound after an extensive breast operation are loath to remove as much tissue as is necessary. They accordingly make their flaps alarmingly near the cancer area. A recent method devised by my friend, Dr. Curtis F. Burnam, obviates this. The surgeon makes as wide a removal as he deems necessary, giving no thought to the raw area left. After the removal of the breast the raw area is measured and a skin area of sufficient size is removed from the abdominal wall. It does seem remarkable that this method has not been employed before as a routine procedure, as the abdominal wall is so lax that a flap of practically any size can be removed and the resultant space easily approximated.

Every wide-awake business man has his hands on the reins continually, has careful records of his purchases and of his sales, and at regular intervals takes stock. Recently I was dining with the general manager of one of the greatest trunk railroads in the United States. He was a keen-eyed business man. After dinner the conversation drifted to methods of keeping track of various data. On my asking him a question he took me back to the dining-room in his private car and opened the buffet, which, in former years,

was usually stocked with viands, and showed me his card catalogue dealing with all phases of the road. In other compartments he had complete data of every piece of work being done on the entire road, also up-to-date statistics relating to the number and character of the employees of the road. This was a working office of the entire road, where he could transact business no matter whether his car was lying on a siding or in a city distant from the home office, where a duplicate set of papers and files were kept. This railroad manager, no matter where he happened to be, was always ready at a moment's notice to satisfactorily transact his company's business.

Hospital management in years past was notoriously lax, but in recent times business methods have been introduced into many of the newer institutions. It would do all medical men good to visit up-to-date business houses and see the card index systems and the various short-cut methods employed in every-day business. It would also be admirable for the trustees of the various hospitals to see to it that the same systematic and business-like methods are used in the registration of data in the hospitals with which they are connected, as they employ in their individual business. I cannot help thinking of the Episcopal clergyman in New York, who had as his board of trustees several wide-awake business men. On one occasion it took them several hours to discuss the expenditure of a few hundred dollars. Finally, the clergyman in despair leaned over and whispered to one of the trustees, "How would you handle such a proposition in your business?" This trustee replied that such small matters never came to his attention. The ludicrous side of the situation suddenly dawned upon him. Here he and his brother trustees, all millionaires, were spending hours worrying over trivial matters that would, in their business offices, be attended to by junior clerks. The trustee immediately moved that the rector be given authority once and for all to order what was necessary for the church, and to send in the bills to them. The trustees of the hospital and the various members of the medical staff are in some measure in a similar position to that board of trustees. Their time is too valuable to be continually taken up in routine, but it is their duty to see to it that competent clerks are employed to keep careful records of all patients entering the hospital or dispensary. The findings at operation must be recorded with precision and the microscopical examinations of the specimens added to the history.

This is an age of time-saving devices, and all business men are keen to see what results have accrued from their endeavors. What applies to business applies equally well to the subject of cancer.

What is the use of operating year after year in a routine manner, having but a hazy idea of what has finally become of the patient? At least one tactful clerk in every hospital should be assigned to the task of keeping in constant contact with those who have been operated on. In this manner one can at a glance tell how many patients have been relieved by operation. The results of one operator are compared with those of another—of course in a most friendly way, and there is no doubt that a runner can always make better progress with a pacemaker. The careful analysis of a large number of cases always demonstrates wherein future improvements can be made. This continually keeping track of the patients will in itself strongly impress the former patients with the hospital's interest in their welfare, and will stimulate them to urge their fellow-companions to undergo the same treatment if they be taken ill.

These data, to be of use, must from time to time be thoroughly analyzed and published. You and I are continually gleaning knowledge from the publications of other men, both on this and the other side of the water, but how many of us are doing our share in the dissemination of knowledge? In fact, we manifest a remarkable tendency to become sponges instead of springs for the pouring forth of our medical experiences—experiences that other surgeons should know of and profit by. Follow up all your cancer patients; see what has become of them. Many of them will be dead, but some that you have lost track of are still living and well. You will soon become so interested in the return letters that you can hardly wait for the postman to arrive, and when, now and then, a reply says that the patient is alive and well at the end of ten or thirteen years, it will warm the cockles of your heart; it will more than outweigh many of the disappointing results you have had and will make you feel that after all the fight is well worth the undertaking.

A year ago I was asked to write the surgeons of the Southern States to find out what their final results were after operation in cancer of the cervix. The results of my inquiries are given in *Surgery, Gynecology and Obstetrics* for March, 1913. The vast majority had kept but scant histories, and had finally lost track of their patients, so that at the present moment few surgeons in the country have any adequate idea of what their labors have accomplished. Do let me urge upon you the systematic recording of every cancer case, the employment of the most thorough operation in these cases, and the tabulation at yearly intervals of the results. You will thus continually improve your methods, will grow more enthusiastic in your campaign against this dread malady, and

will at the same time give valuable data to your colleagues in the profession.

The aim of our cancer campaign committee was to stimulate a wide-spread interest in the subject among the laity. Its labors have already borne fruit. Within the last few weeks a most representative body of New York laity, both men and women, have joined forces with the medical profession in the formation of the American Society for the Control of Cancer. This committee is assured of excellent financial backing, and is bound to be a great factor for the dissemination of knowledge concerning cancer.

We must not overlook the pioneers in publicity. Dr. J. H. Carstens, of Detroit, Michigan, has for years been doing yeoman work in his state, Dr. John G. Clark, Dr. F. F. Simpson and Dr. J. M. Wainwright, in Pennsylvania, Dr. S. Leigh in Virginia, Dr. F. H. Jackson in Maine, and there are a host of others whose names I would like to mention. I would also mention the splendid work of the Council of the American Medical Association in publishing instructions under the chairmanship of Dr. H. B. Favill.

I would strongly urge upon the Canadian Medical Association, the most representative body of Canadian physicians, the advisability of at once appointing a cancer campaign committee for Canada. This could work independently or in close co-operation with one of the cancer campaign committees of the United States.

Much money has been given by philanthropic people for the study of the cause of cancer. Whether the etiology of cancer will soon be discovered or not is problematical, but in any event the people of the country should be made thoroughly cognizant of the early symptoms of cancer and of the fact that many may be cured by early operation. I can imagine no gift that would yield the philanthropist a greater return than the satisfaction of knowing that as a result of his munificence thousands of lives of cancer patients had been saved by prompt operation.

You in the Dominion have the wealth, the broad-spirited men, and the thoroughly competent surgeons, see to it that in the near future the cancer results of Canada are equal to if not better than those of any other country.

**THE TREATMENT OF RENAL DROPSY**

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H. A. HARE, M.D., PHILADELPHIA.

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The therapy of chronic parenchymatous nephritis (*Therapeutic Gazette*) is limited to the modification of annoying or dangerous symptoms. Little can be done to delay the progress of this disease. Often, in futile attempts to control the malady, the end may be hastened and the patient made more miserable rather than easier.

A rigid diet is oftentimes insufferable, and in Dr. Hare's experience the ordinary simple foods usually taken by people who live well but plainly are not harmful but useful. Foods which are cooked a second time, sausage, scrapple and game which has been "hung" develop by-products with which the lame kidneys cannot deal. Also foods difficult of digestion which are too long delayed in the bowel. It seems heterodox, but Dr. Hare believes fresh red meats, like beef and good mutton, in moderate quantities are not any more harmful than white meats. There is nothing to show that they are except superstition. It is unwise to withdraw all red meats from one who has used them.

Nor does Dr. Hare believe in the milk diet for these cases. It would require not less than four to five quarts a day to provide sufficient calories for maintenance, and no one with impaired digestion and lame kidneys can deal with or get rid of this amount of fluid. If attempted, the result is biliousness, and then the liver cannot perform its poison-destroying functions. He does not want to exclude either milk or meat, but pleads for a simple, mixed, rational diet. He does not believe in drenching the patient's tissues with fluid or starving the patient by lack of protein food. The point is that nutrition must be preserved as far as possible to permit each organ of the body to do its work. A mixed diet, therefore, which is comparatively dry, is essential in renal dropsies, only allowing those quantities needed for the maintenance of life, that is the amount he needs to allay what the patient calls thirst. The patient's inability to deal with liquids is greater than his inability to deal with proteins.

As to salt-free diet, the idea is that if we give salt the body will retain fluid to hold it in solution, and result in increased dropsy. Hare believes this largely fallacious. The salinity of the tissue

fluids is 0.9 per cent., and any quantity of salt placed in the alimentary canal will stay there. By the law of osmosis fluid will pass into that canal until the salt is diluted to 0.9 per cent. and tend to act as a purge which is beneficial. Lame kidneys have not robbed the body fluids of salts, but rather help the body to retain salts. To deprive a patient of all salt spoils his food, stops his appetite, disorders his digestion. His excess of body fluid may demand salt, so that its tonicity may be maintained and so that his cells may not swell up and drown. This is closely associated with purgatives for renal dropsy. Temporarily often the dropsy is diminished, but the after thirst of the patient demands the injection of liquid for its relief. The need of withholding salt after purgation is self-evident.

Dr. Hare condemns the abuse of Basham's mixture. If diuresis is all that is needed, liquor ammonii acetatis is sufficient. As there are only about thirty grains of iron in the body, yet Basham's gives more than this in a few doses to disorder digestion and promote constipation. It is useful as a remedy for anemia following acute nephritis, but in chronic parenchymatous nephritis it is as useless in the anemia as in that of cancerous cachexia.

What should we do then? Drain excess of fluid by tapping serous cavities and by the use of Southey's tubes if the anasarca is really severe enough to interfere with function; modify water intake, but do not induce suffering by thirst. If there is high blood-pressure, relax the renal vessels with nitrates if possible; if it is low and the heart feeble, improve the circulation by digitalis, caffeine, and if the nephritis be really a chronic one, devoid of true inflammation, by theocin, in an endeavor to stimulate to increased activity such cells as can still functionate.



**INTERNAL HEMORRHAGES: CAN WE CONTROL THEM?**

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FRANK BILLINGS, M.D., CHICAGO.

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In this paper (*J. A. M. A.*, July 26th, 1913) are discussed those internal hemorrhages due to rupture of a diseased artery or vein. The chief forms commonly encountered are gastrorrhagia, hemoptysis, intestinal hemorrhage and hematuria. The type of hemorrhage considered is always accidental. There is an associated morbid anatomy. Hemorrhage from a ruptured or torn blood vessel ceases when a thrombus is formed within the vessel, therefore treatment should endeavor to excite thrombus formation in the wounded vessel. The first principle of treatment is rest, both mental and physical. The patient should be given moral support, reassurance of recovery; on the part of the physician there should be firmness, a calm demeanor, and a quick and methodical procedure. Opium should be used at once, in the form of morphia sulphate, hypodermically. It produces mental calm and physical quiet. It should be repeated judiciously to hold the desired result. In severe hemorrhages in pulmonary tuberculosis, typhoid, ulcer of the stomach, etc., absolute physical quiet should be maintained from twenty-four to forty-eight hours. Food is not necessary and thirst may be controlled in all forms except hemoptysis by small quantities of water. In hemoptysis, normal sodium chloride or calcium chloride solutions—250 to 500 c.c.—may be injected into the rectum every four to five hours. An ice-coil—better than an ice-bag—may be placed over the bleeding organ. If hemorrhage persists and cannot thus be controlled, test for coagulability of the blood—a drop of blood on white paper or a horse hair in a capillary glass tube, and if the coagulation time is over four or five minutes measures to improve the coagulation time may be used. For this calcium chloride, phosphate, lactophosphate or lactate in doses of one gramme every two or four hours may be used. Or when necessary it may be given in solution per rectum. It is not to be given by the mouth in gastrorrhagia. If coagulation is considered due to lack of ferment it may be supplied by intravenous or hypodermic use of normal human or normal horse-serum, or even diphtheria antitoxin horse-serum. Ten to thirty c.c. or even a larger amount may be injected at once and repeated if necessary.

Dr. Billings does not place any confidence in stypticin, ergot or such drugs, as they increase blood-pressure, stimulate the heart

and produce vasoconstriction, which might expel the thrombus. Nor would he use hypodermoclysis of sodium or calcium chloride except in proximate ensanguination only, and then for the purpose of supplying the patient with a circulating medium.

Such drugs as strychnine, camphor, ammonia, digitalis, should only be employed to counteract dangerous collapse, and should never be used to control the hemorrhage.

In gastrorrhagia the stomach must have absolute rest until the bleeding is controlled—no food, drink or ice by mouth.

In hemoptysis due to chronic ulcer of the stomach, the hemorrhage may not cease so long as the stomach is dilated with blood and other contents. Here lavage with normal salt solution until the stomach is empty is safe and often effective. When the stomach is emptied a large dose of bismuth subnitrate may be used with benefit, and it is much more beneficial here than any form of iron or other so-called styptic.

In typhoid hemorrhage rest is absolutely essential—not even a bed-pan used—but the bowels allowed to empty themselves in a folded sheet.

In all treatment of internal hemorrhages, absolute quiet and opium is the sheet-anchor.

In the discussion which followed the reading of this paper, von Mansfelde, Ashland, Neb., said that powdered aluminium, the pure metal ground into a powder, 160 grains to the dose, and mixed with glycerine, will stop almost magically hemorrhage from the stomach except from larger vessels. In ulcer of the stomach it can be used again and again without the slightest harm. He believes it acts as a covering of a tenacious character. It is put out by a German manufacturer in powders of 160 grains.

Dr. Billings, replying to a question in regard to the use of gelatine and extract of guinea-pig testicle in the treatment of internal hemorrhages, said that the value of gelatine depended upon its calcium content, and there is a danger in it causing tetanus. Animal extracts he considered as practically the same as serums. He has little confidence in astringents, and, so far as his own experience goes, the prompt use of horse-serum is about as effective as the human serums, and in large cities that is always at hand. It is useless to use a lot of remedies which have nothing to do with thrombus formation.

## TUBERCULIN TREATMENT

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BY HECTOR MACKENZIE, M.D., CANTAB.

Consulting Physician to the Brampton Hospital for Consumptives.

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In giving a brief summary (*The Lancet*, Aug. 23rd, 1913) of what is known about tuberculin, Dr. Mackenzie first outlined Koch's original observations and experiments.

In recognized tuberculous patients very minute doses—one-thousandth of a cubic centimeter—was generally sufficient to produce a reaction. Three results may follow, local, general and focal. 1. A painful swelling at the seat of injection on the second or third day, or an area of redness around the puncture. 2. A general reaction may be produced, rise of temperature in 24 hours, headache, general malaise, pains in the limbs, loss of appetite and sometimes dyspnoea. 3. A focal reaction, an inflammatory reaction at the seat of any tuberculous disease present. In the case of pulmonary tuberculosis, there will be an increase of cough and expectoration, possibly traces of hemorrhage, or pain over the affected part. Increase of rales on auscultation and tubercle bacilli may then be found in the sputum after the injection.

One property of tuberculin about which there is no doubt is its power of revealing the presence of tubercle in the animal or human body, but while it has been of the greatest value as a diagnostic in cattle it is more limited in its usefulness in man. The tests introduced in recent years are the cutaneous test of von Pirquet, the percutaneous test of Moro, and the conjunctival test of Calmette. The von Pirquet test is practically useless for positive diagnosis, except in the case of children, and the Calmette test is now but little used on account of the undesirable effect on the conjunctiva. It is only the first time that the ophthalmic test is applied that it is trustworthy. The tests do not distinguish between active and arrested or healed disease. Professor Sahli is absolutely opposed to the use of tuberculin as a diagnostic, while Mackenzie considers it is only very rarely that there is any necessity to use it for purposes of diagnosis. Sometimes it helps to clear up the diagnosis. He strongly deprecates its indiscriminate use as an ordinary means of diagnosis.

Following Koch's discovery of tuberculin, the results were so disastrous that it was almost entirely dropped as a mode of treatment. But the whirligig of time has brought it into repute once

more as a therapeutic agent. This is due to some faithful adherents of the original method and to Wright's extension of the underlying principles, and at the present day tuberculin, rightly or wrongly, is being widely used as a therapeutic agent.

Dr. Mackenzie has satisfied himself that old tuberculin is inert by the mouth. In the case of T. R. one is able to produce the same constitutional effects through oral administration as through subcutaneous, but the dose must be considerably greater. Generally speaking a dose of 1-1,000th of a cubic centimetre is on the borders of reaction, and in starting treatment it is never wise to administer more than 1-1000th to 1-100th part of the reaction dose.

A very large proportion of the human race become infected at some period of life with tuberculosis. Of these, a large proportion recover spontaneously and without medical treatment. The race which has long known the presence of tuberculosis in its midst has acquired a certain degree of resistance, but natural resistance may be broken down by many causes.

The aim of the physician is to assist nature in bringing about a cure, and he endeavors to remove those causes which have lowered the natural resistance, often even removing local tuberculous tissue. What the physician wants is something specific, but have we got it in tuberculin?

There are three methods in which tuberculin is used in the treatment of pulmonary tuberculosis: 1. The original method of Koch—in which tuberculin is given without any attempt being made to prevent reaction. 2. Reactions are not discarded, but tuberculin is administered in increasing doses until a reaction occurs, and then more cautiously administered until another reaction occurs, and so on. 3. In the third plan an effort is made to avoid reactions altogether.

The plan of starting with very small doses and gradually increasing these and avoiding reactions is that which is most followed at the present time. One starts with a dose which is a thousandth part of that which might be expected to give a reaction, and the dose is gradually and tentatively increased. A good rule is never to double the previous dose, and a careful watch should be kept for any sensitiveness or reaction. A local reaction should be taken as a danger signal and the dose diminished. A general reaction is an indication for suspending treatment for a time and then working up again from a smaller dose. Petraschky has advocated repeated courses extending over a period of two years, alternating three months' treatment and three months' interval without.

As to results of tuberculin treatment no one can claim it is a direct cure. What should be brought about in attempting to follow Nature is an immunity to further infection with the bacilli. Tuberculin calls into being antagonistic forces inherent in the body for combatting tuberculous infections. Even where no selection of cases is made it is the common experience that the general tendency of cases which come under medical treatment of any kind is towards improvement. But every one who uses tuberculin uses it in selected cases, in ambulant cases at a dispensary, at the hospital, at a sanatorium, at a health resort. If the patient is febrile he is put down as mixed infection and unsuitable for tuberculin. The febrile and active cases are not as a rule good subjects for tuberculin. Most of the cases that do well appear to be cases that one would select to do well under favorable conditions of hygiene and cure. We are to bear that in mind in judging results. Tuberculin as a remedy, if it is a remedy, must be put on a lower plane than such remedies as salicylate of soda and acute rheumatism, quinine in malaria, antitoxin in diphtheria, etc. The most that can be claimed for tuberculin is that it promotes the natural defences of the body. So does fresh air, good food, hygiene, care, climate.

Although having used tuberculin for a number of years in every way possible, Dr. Mackenzie feels still uncertain as to its value as a remedy. As a remedy which will surely benefit a patient, its case is not fully made out, and it is still on its trial. What is needed is practical proof.

## THERAPEUTIC NOTES

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**Leukemia.**—J. Meyers and T. Jenkins (*Albany Medical Annals*) draw the conclusion from a study of cases published and their own case that benzol is a valuable addition to the therapy of leukemia of any kind. In all cases it reduces the white cells, but not to normal. In cases of 100,000 to 200,000 it may give brilliant results. When Roentgen rays can be used in combination the results are very favorable. The red corpuscles and hemoglobin are generally beneficially influenced.

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**Gonorrhoea in the Female.**—Hofmann (*Interstate Medical Journal*) says the first thing to do is to ascertain the presence of the gonococcus in the discharges. Separating the labia with thumb and index of left hand, swab all the exposed parts with a solution of 3.5 per cent. iodine crystals in 95 per cent. alcohol. Force a few drops into the orifices of Skene's glands with a hypodermic syringe, the needle blunted by filing. Repeat this in the vulvo-vaginal glands. Except in isolated instances has Hofmann found it necessary to treat the urethra directly. When this is done the patient is placed in the Sims' position and Sims' speculum introduced, the vagina swabbed dry with cotton and the presenting cervix thoroughly painted with the iodine solution by means of a cotton swab. The cervical canal is not touched. Then paint the anterior wall thoroughly, then the right and left sides. Next press the swab firmly into the posterior cul-de-sac, partly withdraw the speculum, rotate it to press against the anterior wall and reintroduce as far as possible. Swab the posterior wall. Then introduce a strip of gauze as high up against the posterior wall as possible, remove the speculum and allow the gauze to protrude beyond the introitus. There will be some smarting and burning for a half hour, though some will complain of no inconvenience. Doses of 5 to  $7\frac{1}{2}$  grains of urotropin are given four times daily with plenty of water. Rest for the patient in bed as much as possible; light diet. The applications are repeated every third day in both acute and chronic cases, and two days after the third treatment another smear taken. If gonococci be present the treatment is continued along with vaccines, the latter in large doses at short intervals being valuable. Hot douches are taken by the patient, recumbent. From four to six quarts of

normal salt solution, twice to four times daily, each followed by a one quart injection of permanganate of potash solution, 1-5,000 or picric acid 1-250, the gauze drain being removed by the patient at the first douche four hours after the local treatment. With this treatment Hofmann claims uniformly encouraging results and rapidity of cure.

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**Sciatica.**—G. A. Young (*Interstate Med. Jour.*) advises diaphoretic treatment as the primary treatment in an acute attack of sciatica. A full hot bath, hot drinks, repeated doses of tincture of aconite, complete rest, often cut short an attack. Aspirin, salicylates, bowels opened, prolonged hot applications are of service. Hypodermic injections daily of 1/10 to 1/6 grain of pilocarpine nitrate are valuable in sciatica as well as in interstitial neuritis. In the chronic cases Young gives the pilocarpine in the evening, the patient sweating between blankets, and then rubbed down and placed in a warm bed. The treatment mostly in the professional eye at the present is that of Lange-Schlösser. It consists in the injection of 100 c.c. of 0.1 per cent. of beta eucaine in physiological salt solution. This is inserted into the perineural sheath of the sciatic nerve.

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**Progressive Baldness.**—The biokenetic treatment, as devised by Jaquet, consists in biotherapy of the digestive and genital tracts and nervous system, active movements of the muscles of the scalp, brushing and massage. These all favor the action of local applications. As to the general rules of biotherapy, there should be prolonged mastication of all food, at least three-quarters of an hour at each meal. The meat ordinarily consumed should be decreased, and no evening meal at all. As well should the fats and hydrocarbons be decreased. Acids, spices, stimulants should be suppressed. The quantity of liquids should be reduced, and intellectual and mental work after meals should be eliminated. Of internal drugs allowed, tincture of nux vomica or an alkaline mixture in case of flatulent dyspepsia. The following may be given with advantage: Bicarbonate of soda, 2 dr.; phosphate of soda, 1 dr.; sulphate of soda, 1-2 dr.; water, one quart. A tumblerful of this should be taken warm at each meal. Sexual excess should be avoided. Ovarine is useful in women who are approaching the menopause. Biotherapy of the nervous system is conducted through suppressing nervous strain and avoiding all brain work

after meals. All causes of irritation, whether due to lesions or teeth, gums, chronic coryza, troubles of accommodation, should be sought and corrected.

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**Enuresis.** —Simpson (*Edinburgh Med. Jour.*) says change of scene may sometimes be beneficial. If the incontinence is specially evident during the first two or three hours of sleep, it should be seen to that the child passes water immediately before going to bed. Then he should be aroused two hours afterwards, and the bladder again evacuated. This is especially important where the urine is alkaline. Regular habits of urinating throughout the day should be established, and he should be encouraged to retain the urine as long as possible. Tea and coffee should never be given, and the last meal and fluid should be at least an hour of bed time. Tilting of the bed, Simpson does not consider to be of any value, but plenty of fresh air and a fair amount of exercise are important. Drug treatment averages three to six months, as the condition has become more or less a fixed habit before it is regarded in a serious way by the parents. Belladonna, citrate of potash and urotropin are three drugs of undoubted efficacy, but a careful examination of the urine is to be made before either is employed. In cases where the urine is normal, or at least presents no abnormal features, and the incontinence is the result of some debilitating condition, tonics should be first administered, and then belladonna, commencing with ten minims of the tincture two or three times a day, and gradually increasing to 20 to 25 minims. In most cases 15 minims will be found the maximum dose necessary to be employed. In cases where the urine is extremely acid, the acidity may be reduced by ten grains of citrate of potash thrice daily, and when the acidity has been overcome, the belladonna may be begun. If the general health is not good, two to three minims of liquor strychnine may be added. Where the urine is alkaline, dieting is of first importance, all carbohydrates being prohibited. If it is very alkaline, acid sodium phosphate may be given, and then, when the alkalinity has been reduced, belladonna as above. Where it is established bacilli are in the urine, if this is very acid, reduce with acetate of potash, and administer urotropin, 5 to 10 grain doses thrice daily. In mixed infection, vaccines may be used to advantage. Ergot should be tried if belladonna fails. If the child is backward mentally, thyroid extract may be tried, 5 grains daily. If the child is highly nervous and has disturbed sleep, 5 to 10 grains of potassium bromide may be added to the evening dose of belladonna.



## Reviews

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*Manual of Operative Surgery.* By JOHN FAIRBAIRN BINNIE, A.M., C.M. (Aberdeen); Surgeon to the General Hospital, Kansas City, Mo.; Fellow of the American Surgical Association, etc. Sixth edition. Revised and enlarged. With 1,438 illustrations, a number of which are printed in colors. Price, \$7.00. Philadelphia: P. Blakiston's Son & Co.

It is well known that this is one of the best books on operative surgery before the medical profession, and the fact that this is the sixth edition, testifies to its popularity. The aim of the volume is not so much a text-book as to serve as a guide to the surgeon when in trouble. A considerable amount of space is, therefore, devoted to rare and difficult operations, rather than to those of every-day occurrence. As such it may be said to be an advanced work on operative surgery. Surgeons will find in the present volume those chapters devoted to operations on the stomach largely rewritten and special attention paid to the anatomy of the lymphatics of the gastro-intestinal tract. A new chapter is added on the treatment of tumors in general, whilst many others have received new and special attention.

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*Diseases of Children.* By various authors. Edited by ARCHIBALD E. GARROD, D.M., M.A., F.R.C.P., F.R.S.; FREDERICK E. BATTEN, M.D., M.A., F.R.C.P. and HUGH THURSFIELD, D.M., M.A., F.R.C.P. Illustrated. Price, \$8.00. Toronto: The Macmillan Company of Canada, Limited.

The list of contributors to this handsome and comprehensive volume embraces the names of many well-known physicians, especially many having prominent connection with hospitals for sick children in London, England. Its extent is seen in 1,184 pages, 182 illustrations, and two colored plates. The editors have been happy in their selection of collaborators whose peculiar attention to special portions of the department of children's diseases have qualified them to write with undoubted authority. In this volume then, the present state of the knowledge of children's diseases is abundantly and comprehensively set forth, making for completeness which has hitherto not been approached. A work of such far-reaching and absorbing scope cannot but be appreciated by the medical faculty.

*International Clinics*. Vol. I. XXIII. Series. Philadelphia and Montreal: J. B. Lippincott.

Nineteen papers complete the information which this copy of *International Clinics* includes, and the final one is the yearly review of all that has been produced in each branch of medical science during the year. The summary is probably the most valuable paper in this issue.

David Summerville has written a short but very instructive article on Intestinal Intoxication, showing the parallel action of ferments and of bacteria, but proving that the endproducts produced by the germs are highly toxic. His paper is one of the best in the volume.

Rugh describes and illustrates his results in Potts' disease, by performing the operation advised by Albee; the method is now historical and the improvement in the patients most satisfactory.

The papers on Poliomyelitis, Gall Stones, Scarlet Fever, Retarded Mental Degeneration in Children, and Care During Gestation are valuable as giving a summary of our knowledge at the present time of these conditions.

Among new procedures or methods referred to in other papers are (1) the fact that tenderness at the right rectal colic margin is a sign of appendicitis, the examination being made by rectum (Reder); (2) Aneurisms are curable by spinal percussion (Abrams); (3) Transverse incision is best in Lepectomy and Epigastric hernias (Ginsburg); (4) Bilateral cerebral abscess may occur (Dennis).

A series of other papers are less scientific but interesting, especially that on the Deterioration of the Caucasian Race, by Irvin.

# Dominion Medical Monthly

And Ontario Medical Journal

EDITED BY

<b>Medicine:</b> Graham Chambers, R. J. Dwyer, Goldwin Howland, Geo. W. Ross, Wm. D. Young.	<b>Psychiatry:</b> Ernest Jones, W. C. Herrman.
<b>Surgery:</b> Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.	<b>Ophthalmology:</b> D. N. MacLennan, W. H. Lowry.
<b>Obstetrics:</b> Arthur C. Hendrick.	<b>Rhinology, Laryngology and Otolology:</b> Geoffrey Boyd, Gilbert Royce.
<b>Pathology and Public Health:</b> John A. Amyot, Chas. J. C. O. Hastings, O. R. Mabee, Geo. Nasmyth.	<b>Gynecology:</b> F. W. Marlow, W. B. Hendry.
<b>Physiologic Therapeutics:</b> J. Harvey Todd.	<b>Genito-Urinary Surgery:</b> T. B. Richardson, W. Warner Jones.
	<b>Anesthetics:</b> Samuel Johnston

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## COMMENT FROM MONTH TO MONTH

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**The Police Control of Prostitution** consists not in statutory or common law, but in police power, and only reaches the public prostitute. It cannot reach or control prostitution in general. It is but a factor in the enforcement of the law. Until something better is devised the police must deal with this social evil.

Suppression and regulation are the alternative methods to be chosen, or both; but both to date have been tried and have not proven satisfactory in different localities.

In the suppression of this vice of prostitution we cannot get away from the concrete fact, as Peterkin puts it, that the sexual instinct is an immutable law of nature. Therefore, it is moving against nature to attempt to suppress this instinct.

Suppression of the public vice simply drives the prostitute to another locality, and it is quite questionable whether any general good is accomplished.

Therefore, whilst admitting that suppression is correct in theory, it does not appear to have proven itself in practice.

The problem is a national one. Each community should be compelled to look after its own. It will do no good to simply drive them out of one community for them to find "homes" in another.

It is a moral and a public health question, and as such must be looked after by the police officer and health officer, and is not to be solved by either without the aid of the other.

Much good will be accomplished when all venereal diseases, like every preventable disease of whatever nature, are required to be reported to the medical officer of health.

Until the social evil problem becomes established upon a scientific and systematic basis, all good moralists, as well as all good physicians, will hope that the efforts put forth will result in great good to the nation at large.

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**The Care of the Child Before School Age** was the subject of a timely and important paper by one Dr. David Forsyth before the conference on infant mortality, held in London last August. This is a subject possibly of even greater importance than the medical supervision of elementary school children.

In Great Britain and America nothing so far seems to have been done in this direction, although it has been well known that much physical deterioration overtakes children before the fifth year of age.

It seems, therefore, if medical supervision of the school child is essential, it must be even more so for the child prior to school life, as every child should have equal opportunity to enter upon school life without any handicap.

Possibly this will be future work for the municipality, that all children will come under the surveillance of the medical officer of health.

Dr. Forsyth outlined the scheme followed by the Westminster Health Society in Westminster, which keeps every child under medical supervision from the time of its birth until its fifth year. This work, however, is too important to leave to voluntary societies, and must necessarily in the future, when it is taken up in real earnest, come within the domain of the municipal officer of health.

There can be no more insistent work in any community, and he will be a wise officer of health who early recognizes this means of grappling with the problem of infant mortality.

## Editorial Notes

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### ONTARIO MEDICAL ASSOCIATION

Abstract of minutes of annual meeting of the Ontario Medical Association, held in London, June 26th, 1913.

The President, Dr. C. F. McGillvray, occupied the chair. Communications were read by the Secretary, Dr. F. Arnold Clarkson (1) from the Huron Medical Society, asking that steps be taken to federate all the county societies with the Provincial Association. On motion of Dr. Bingham, seconded by Dr. Mullin, the following committee were appointed to bring in a report at next meeting: President, Vice-President, Secretary and Drs. Moore, Wallace and Moorehouse (London). (2) From the National Sanitarium concerning the action of the Ontario Medical Association at its last meeting.

*Secretary Ontario Medical Association, Toronto:*

DEAR SIR,—Your letter of 28th May, forwarding copy of resolution of the Ontario Medical Association, has been duly received and considered by the Board of The National Sanitarium Association, and I am instructed to write as follows:

The Board feels that the action taken by the Medical Association is altogether unusual, and the Board does not believe that any incident or occurrence at the Toronto General Hospital, St. Michael's, the Isolation or any other hospital occupying a similar position has heretofore received the attention of the Medical Association.

The subject of the resolution, if at all a proper one to be considered by the Medical Association, should, in the opinion of the Board, have been impartially investigated before they undertook to pass judgment upon it.

Our Board had no notice of the resolution proposed by Dr. McPhedran, and no proper opportunity to submit evidence.

Our Board do not at present deem it necessary to go into details of the subject matter of the resolution, but may briefly refer to the following:

Dr. Caulfield took exception to the publication of an extract from his official report of February 23rd, 1912, to the trustees, and

made that the principal ground for tendering his resignation, to take effect in six months' time.

In view of the character of his letter, and for other important reasons, it was decided by the Board to terminate his engagement forthwith and to pay him a sum equivalent to six months' salary.

The Board, through its Secretary, closed the laboratory and placed it in charge of the physician-in-chief.

So far as his work in the laboratory was concerned, the only request Dr. Caulfield made on leaving was that everything should be left undisturbed for four days. Not only was this done, but for a period of two weeks nothing was disturbed, the motor being allowed to run and the gas kept burning.

The physician-in-chief then considered it necessary for the safety of all the inmates of the hospital that the growing tubercular material in the basement be sterilized. Through some misunderstanding, which the Board exceedingly regrets, tubes containing cultures, in the upper laboratory, were similarly treated.

Our Board feels, and your Association will appreciate, that the loss of these cultures is a most serious matter for the Sanitarium Association.

The trustees paid Dr. Caulfield a sum equivalent to six months' salary, notwithstanding the fact that after a service of only some three years in their employ, he had previously been given leave of absence for six months, to pursue his studies in Europe, his full salary being paid during that period.

The trustees undertook the further burden of paying the salary of a substitute to carry on the work during Dr. Caulfield's absence.

The trustees have further shown their interest and sympathy in connection with laboratory work in a very practical way—\$1,500 having been contributed from amongst their number towards Dr. Caulfield's salary, so that it might not be a burden upon the institution.

The trustees believe the real nature and value of the deliverance of the Medical Association will be better understood and appreciated when the facts are made clear, and especially when it becomes known that the member who proposed the resolution, which reflected unfairly on the National Sanitarium Association, afterwards accepted the chairmanship of the committee appointed to report upon his own resolution, and that he some six months ago had a serious difference with the Board regarding his proposed

appointment as consultant-physician to the Muskoka Hospitals of the National Sanitarium Association.

I am,

Yours faithfully,

(Sgd.)

R. DUNBAR,

*Sec.-Treas.*

P.S.—A copy of the above letter is being forwarded to the Secretary of the Association, and one to the chairman of the committee, who will doubtless bring it before the other members of the committee and before the Medical Association. R. D.

Dr. Adam Wright gave notice of motion re separation of the Ontario Medical Association from the Canadian Medical Association. This, with the other notices of motion of the previous meeting, was laid over until next year.

The next meeting will be in Toronto in May, 1914.

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### THE RELATIVE VALUE OF TURTLE TUBERCULIN IN THE TREATMENT OF TUBERCULOSIS

“The treatment of individual diseases with medicines or by methods having a selective curative action has until recent years been limited. With the establishment of the germ theory, and vaccine therapy of certain diseases and the development of information concerning immunity, new methods of specific treatment have been made possible, and are now practiced under the terms of serum and vaccine therapy.” This is part of an introductory paragraph of a valuable contribution on the above subject appearing in the *New York Medical Journal* for September 13th, 1913, by Doctors J. W. Beattie, of New Hampshire, and E. E. Meyers, of 418 Central Park West, New York City.

The authors mention the fact that to Robert Koch belongs the honor of giving to the world 23 years ago tuberculin, which was the first great advance in the diagnosis of tuberculosis. Prior to this, the disease was generally recognized as a fatal malady; it was not diagnosed until the disease was advanced and the symptoms marked and then death was required to substantiate the diagnosis. His discovery of the difference in the action of the remedy on the healthy and the tuberculous has proven to be one of the most important discoveries in the modern study of tuberculosis. This discovery gave the profession the tuberculin test which has not only made possible an early diagnosis of the presence of tuberculosis, but

has also given us a more thorough understanding of the nature of the disease and the essentials of its prevention, as well as led to its specific treatment.

Drs. Beattie and Myers quote von Ruck's reference to the claims of Friedmann for the superior value of a living tubercle bacilli in the treatment of tuberculosis, and deprecates the Berlin doctor's spectacular advertising propaganda in the daily press. Von Ruck said "inasmuch as living tubercle bacilli of the human type have been found in vaccinated cattle both in their flesh and in their milk, as long as three years after their intravenous injection, the objection to the use of the living tubercle bacilli as an antigen, or vaccine for prophylactic purposes in the human subject is well founded. A more formidable objection, is however, the danger of virulence."

They aver Prof. Piorkowski, working along the lines of Prof. Koch's discovery, isolated a living antigen in the form of tubercle bacilli recovered from a turtle, as far back as 1903 without in any manner questioning its non-virulence. Since that time he has continued his research along this line, and has at last succeeded in perfecting a tuberculin produced from the tubercle bacilli of a deep sea turtle which is non-virulent, and with which, he has successfully experimented with thousands of cases during the past few years at his laboratory in Berlin.

Further quoting Piorkowski, the authors refer to his lecture delivered at the Royal Hospital for the Diseases of the Chest, London, Eng., on April 1st, 1913 (*British Journal of Tuberculin*, July issue, 1913). On discussing his turtle tuberculin, Piorkowski said, "We must differentiate between mammals which produce their offspring alive, and the class to which human beings and oxen belong, and birds, i.e., that is, animals which lay eggs, thirdly, reptiles, which possess horny or long integument and also lay eggs. Lizards, crocodiles and turtles belong to that last class. Finally, we have to think of fishes which breathe as long as they are young through gills or by their lungs, and also lay eggs. We thus see very clearly that resemblances are to be found only among lung-breathing animals, and it is for this reason, probably, that the results described are obtained on the injection of tubercle bacilli or similar kind. It became very evident that turtles were especially adapted for our purpose."

In further describing his work along this line Piorkowski says, "it is very noteworthy that the turtle tubercle bacillus in its further behavior, both culturally and morphologically, displayed an extraordinary resemblance to the human tubercle bacillus. Its growth at 37 degrees F. is remarkably characteristic. The main



point about this strain is that it can be used without risk of any manifestations—a circumstance which may be ascribed to the fact that for the last ten years it has been reinoculated afresh daily, and thus has acquired generally an extraordinary innocuousness, becoming both avirulent and atoxic.”

The authors in explaining the biological action of Piorkowski's turtle tuberculin quote the latter as follows: “Let us for example, consider atoxic action a little more closely. When a poison enters the body, e.g., tubercle toxin—the first point concerns the existence of receptors which can take up the tubercular poison. If these do not exist, no infection by tubercle bacilli can occur, for the organism possesses congenital immunity towards the action of these bacilli.

The harmless turtle tuberculous toxin combines with the receptors, and the combination is thrown off into the blood as antitoxin. New receptors are formed in large quantity, but they are capable of seizing not only the turtle tubercle bacilli, with which they have been hitherto dealing, but also human bacilli, and thus render them harmless. If there is a profuse formation of new receptors, and if the human tubercle bacilli have increased unduly, complete recovery may be affected. The rationale of the cure is along these lines. There is also the additional advantage that turtle tubercle bacilli are innocuous and harmless, and therefore this method is especially well adapted for protecting inoculation.

Recent investigations with turtle tuberculin, in Prof. Piorkowski's laboratories, made by the authors show that tubercle bacilli, when grown in the blood serum of (cold blooded animals) turtles change quite distinctively its bacteriological characteristics, particularly in lessening its virulence and at the same time increasing its power to form antibodies in the blood of tuberculous patients. This turtle tuberculin acts as a direct stimulant to the antibodies of tuberculosis, exerting far greater beneficial effects than human tuberculin, even when the latter is given in the most carefully graded and guarded doses. Furthermore, turtle tuberculin produces only a very slight reaction, besides it possesses far greater immunizing properties than does human tuberculin with none of the latter's untoward effects.

According to the author's experience, the smallest immunizing dose was one minim of turtle tuberculin administered in 16 minims of normal salt solution. The interval between doses depends upon the recurrence or exacerbation of original symptoms, which is usually about seven days. Very slight reactions, such as a rise of temperature to 100° F., and more or less languor for about 24 hours following the injection are the only reactions which occur even with a maximum dose.

The best site for injection of turtle tuberculin is in the fold of the gluteal region between the glutens maximus and minimus muscles, which location facilitates absorption.

In closing, the authors make the following comparisons:

#### LOCAL REACTION.

##### *Human Tuberculin.*

Redness and infiltration begin in area of injection in from four to eight hours.  
No thickening of the skin.  
Area of infiltration usually very tender.  
Abscess sometimes follows injection.  
Adjacent lymph glands swollen.

##### *Human Tuberculin.*

Doses smaller.  
Effect slower.  
Reaction marked.  
Length of treatment prolonged.

##### *Hygienic Treatment.*

Not always feasible.  
Treatment prolonged.  
Necessitating interference with daily vocation.  
Results not always satisfactory.  
Recurrence frequent.

##### *Turtle Tuberculin.*

Redness and infiltration begin in area of an injection in twelve hours.  
Slight elevation and thickening of skin.  
Area of infiltration is not tender.  
No abscess follows at point where needle pierces skin.  
Lymph glands not swollen.

##### *Turtle Tuberculin.*

Dosage greater.  
Effect more rapid.  
Reaction slight.  
Length of treatment short.

##### *Turtle Tuberculin Treatment.*

Always feasible.  
Treatment shortened.  
Does not interfere with daily vocation.  
Results very encouraging.  
Recurrence improbable.

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### CANADIAN MEDICAL ASSOCIATION

The next annual meeting of the Canadian Medical Association will be held in St. John, N.B., July 7th-10th, 1914.

## News Items

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Victoria, B.C., has plans issued for a new general hospital.

Dr. John Fry, Selkirk, Ontario, is dead. He was born in 1836.

Dr. H. H. Chown, Winnipeg, has gone for an extended trip abroad.

The Manitoba Medical Council has reduced its registration fee from \$125 to \$100.

The death of Dr. J. D. Stevenson, Toronto, occurred on the 8th of October. He was eighty-six years of age.

Dr. Chas. Doherty, Superintendent of the Hospital for the Insane, New Westminister, B.C., has been visiting in Toronto.

The Manitoba Medical Council reports that so far it has been able to prevent legal status being given to osteopaths and chiropractors.

Toronto had 133 cases of typhoid fever in September, twice as many as in the corresponding month of 1912. Fully fifty per cent. of the cases were contracted in outside points.

Dr. Fred Montizambert, Director-General of Public Health, whilst on his annual western tour of inspection selected a site for a new quarantine building at William Head Station.

Montreal has had a small epidemic of infantile paralysis. There were about twenty-five cases with six deaths. Prompt notification to the health officer no doubt saved the city from a more serious epidemic.

Dr. W. H. B. Aikins, Toronto, attended the Seventeenth International Medical Congress, and spent some time in London and Paris investigating the recent advances in radium therapy at the laboratories there. He returned home the end of September.

Dr. Maude Abbott has returned to Montreal after attending the International Medical Congress and spending some months on the continent. In Italy, Dr. Abbott established a branch museum of the International Association of Medical Museums of which she is permanent secretary.

Dr. G. A. Kennedy, Macleod, Alberta, died in the Winnipeg General Hospital, on the morning of the 8th of October. Dr. Kennedy who was well-known in Eastern Canada, was born in the town of Dundas in 1847. He was a Surgeon-Captain in the N. W. M. P., and surgeon to the Canadian Pacific Railway.

The late James Ross, Montreal, left \$400,000 in public benefactions. Some of these items are as follows: McGill University, \$100,000; Montreal Art Association, \$100,000; Royal Victoria Hospital, \$50,000; Montreal General Hospital, \$50,000; Montreal Maternity Hospital, \$50,000; Royal Alexandra Hospital, \$25,000; Ross Memorial Hospital, Lindsay, Ontario, \$25,000.

The new wings of the Winnipeg General Hospital which, exclusive of furnishings and equipment, cost \$650,000, were formally opened by Mayor Deacon on the 29th of September. The accommodation in the Winnipeg Hospital is now 478 beds.

The third annual congress of the Canadian Public Health Association met in Regina, Sask., the 18th, 19th and 20th September, under the presidency of Dr. J. W. S. McCullough, Toronto. A resolution was adopted favoring the admission of advanced cases of tuberculosis into all general hospitals receiving governmental grants. Copies of this resolution are to be forwarded to the provincial authorities. Another resolution urgently requests the Dominion Government to take into consideration the danger to the public health through the increasing number of immigrants coming into Canada. The following officers were elected: President, Dr. M. M. Seymour, Regina; Secretary, Major Lorne Drum, Ottawa; Treasurer, Dr. Geo. D. Porter, Toronto; Vice-Presidents, Dr. J. D. Page, Quebec; T. Aird Murray, Toronto; Dr. Duncan Anderson, Toronto; Prof. J. A. Amyot, Toronto; Dr. A. R. Whitla, Edmonton. Port Arthur and Fort William were selected for the places of meeting in 1914.