

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF
MEDICINE AND SURGERY

VOL. XIII.

TCRONTO, JANUARY, 1903.

NO. 1.

Original Contributions.

THE ETHICAL VALUE OF EDUCATION IN PREVENTIVE MEDICINE.

BY PETER H. BRYCE, M.A., M.D.

Mr. President, Ladies and Gentlemen,—I have thought it worth while to attempt to present a phase of preventive medicine which, though playing an important part in our social welfare, is often not consciously realized by us. We are so occupied with the practical concerns of our intense, everyday life, and so often fail to recognize those influences which direct and govern our acts, that in a certain sense we are automata, dependent upon our sensations and impulses.

Now, none who realizes man as a highly organized member of the animal kingdom can fail to see that, as Carlyle remarks of the peptic countryman who did not know he had a stomach, the very perfection of health is, where the several elements of life are so harmoniously adjusted that, like a perfect machine, "life, from its mysterious fountains flows out as in celestial music and diapason, while it is only discord that loudly proclaims itself." Hence it is apparent that, if man were but the perfect animal, his life, in harmony with its environment, would begin, develop, and perform its destined purpose and functions, and as gradually and quietly proceed to its euthanasia. But he who gives even the most superficial thought to the problem of human life, and especially to that of modern civilized life, must recognize that the very conditions of human progress which have made society so complex, indeed so artificial, compared to that of man in a primitive state, have created problems which demand their solution, whether we attempt them or not; and it will be he who, realizing this, and

other methods of treatment also, that I feel justified in asking your attention whilst I consider, briefly, the value of the X-rays as compared with that of other methods of treatment, and particularly with that by caustics.

Two years ago I addressed this Association on the use of caustics in cutaneous cancers, and I then maintained that *the greater majority of all cases* of cutaneous cancer could be removed with very slight, if any, apparent deformity, if seen early, diagnosed correctly and treated with the proper caustic on definite lines such as were laid down by me at that time; and that, furthermore, with some exceptions, this surgical method of treatment is superior to an operation with the knife.

A plea most strongly urged in favor of the X-rays is that it does away with the necessity of using the knife in the majority of cases, and that the deformity following the treatment is so slight comparatively with that after excision.

These same arguments were employed by me in advising the use of caustics instead of the knife in suitable cases (and these were the majority of all cases), and that advice was based on the careful observation of nearly twenty years on the results of the two methods of treatment.

It will be my task at this time to describe what, with our present knowledge of the subject, can be accomplished with the Roentgen rays in cases of cancer, and, by comparing the results obtained with those gained by other methods of treatment, give it the proper place, and it has an important place, in our *armamentarium* against the disease.

We will first consider the action of the rays on *external* cancers, and afterward on the *internal* ones.

For the intelligent treatment of any given case of cutaneous epithelioma by either knife, caustic, or X-rays, it is absolutely necessary to recognize not only the form of cancer present, and its tendencies as regards rapidity of growth and the direction of extension, but also the probable extent of the cancerous infiltration into the neighboring tissues.

It is also necessary to know not only what I have just stated as regards the kind of cancer present, but also the proper technique as regards the use of the X-ray apparatus employed, *and very especially also to be able to judge what changes in the tissue, both normal and pathological, are being produced by the rays*, in order to give the proper treatment as far as the character of the exposures and the proper interval of time between the exposures is concerned. The treatment of cases, therefore, cannot be entrusted to one who is purely an electrician, it makes no difference how much he may know about an X-ray machine.

Clinical experience, microscopical studies, and our knowledge of X-rays as regards amount of rays produced and penetration

qualities, teach that for the superficial forms of cancer a low vacuum tube giving much Roentgen light and slight penetration should be employed, while for the deeper seated forms of the disease there is wanted a medium or high vacuum tube giving less light but more penetration; the use of the one or of the other depending upon the depth of the cancerous infiltration and form of cancer.

I do not intend to describe the technique of the treatment by X-rays, but simply to consider what can be accomplished by them in any given case of the disease when used in the proper manner, according to our present limited knowledge as to the kind of tube to be employed, the duration of application at the different times of treatment, and the distance from the target, etc., etc., and thus endeavor to estimate correctly the absolute and comparative value of the rays in the disease.

Let us suppose the mode of treatment in all cases is correct according to our present ideas, what results then can be obtained by the Roentgen rays? It is probable that the majority, perhaps a large majority, of the cases of superficial epithelioma of the skin can be removed by X-ray treatment when seen early and before they have invaded the deeper tissue. In eighty cases of rodent ulcer treated by Dr. Sequira, of London, thirty-four were cured. The majority of the remaining ones were still under treatment at the time of the report, and probably a considerable number of those were also cured in due time.

The most superficial form of epithelioma, sometimes, although incorrectly, called the eczematous form, as it commences objectively as a superficial dermatitis condition, and later shows epithelial proliferation, a form that is so often multiple and frequently occupying areas of considerable extent, has, in cases which I have treated, yielded very satisfactorily to the ray treatment.

If the disease is not multiple and the lesion a small one, not larger than a twenty-five cent piece, other agents, such as pyrogallie acid, and acid nitrate of mercury, or arsenious acid, are, I believe, preferable, as the removal by those agents is positive, quickly performed, and leaves a very satisfactory scar. The saving in time and expense is an item of much importance to many patients, and should be duly considered in every case. Some patients from the country, and city also, cannot afford the expense incidental to the long treatment usually required when X-rays are employed.

If the lesions are multiple, showing a predisposition on the part of the tissues to the disease, the X-rays should be used, not merely for the purpose of removing the existing lesions, as that can be done by other means, but with the object of influencing the nutrition of the skin in such a manner as to prevent a recurrence of the disease.

A combination of treatment by caustics, X-rays and internal medication gives the best result in these cases. The internal treat-

ment consists in securing the proper degree of alkalinity of the system, the avoidance of a meat diet, and the administration of either arsenic or thyroid extract, or of both.

When the disease is present in the form of a papule or tubercle, with an unbroken surface, the lesion can be destroyed by the rays alone. The treatment, however, would require several weeks, perhaps more than two months' time, with exposures two or three times weekly. With exceptions to be noted directly, I believe that in these cases a caustic is much to be preferred, as the destruction can be completed in a few minutes if caustic potash or the Paquelin cautery be used, and in a few hours, by the use of an arsenious acid paste. Failures to cure are rare, and the resulting scar deformity very slight, or perhaps not recognizable except upon close inspection. Freezing the part with ethyl chloride, and removal of the lesion by excision, is also preferable to the rays in these cases. Cocaine injection can be used instead of freezing the part.

If the lesion is on the eyelids, and the invasion into the sub-epithelial tissues is considerable, the rays should be used, as with them the disease can be removed with less destruction of normal tissue than by any other method. I have not seen any ill results to the eyeball from the rays, although I would advise that it be protected from penetration by them.

When the papule or tubercle is on that part of the nose near the inner canthus, and covered with apparently normal epidermis, the use of caustic potash or acid nitrate of mercury is the better treatment, as it is effective, the deformity resulting is too slight to be considered, and the lesion is quickly removed. The rays do not act so favorably or so promptly when the lesion is covered with normal epidermis as it does when an erosive or ulcerative condition is present. In the former case, if the operator desires to rely principally upon the X-rays, it is advisable to first remove the healthy epidermis by curettage, or by a caustic, before employing the rays. As the majority of these cases are of the rodent ulcer type, this injuring action on the epidermis is not followed by secondary lymph gland infection; but in the other forms of epithelioma such partial removal and mutilation might have serious consequences.

In some cases a combination of treatments is advisable in these cases of rodent ulcer; first a caustic to remove the macroscopical part, and afterwards the rays for the microscopical portion, to prevent if possible a reappearance of the disease. I have, however, treated so many cases of epithelioma of this form in this location so successfully, both as regards removal of the lesion and scar formation, that in my opinion the cases are rare in which the operator should subject the patient to a method that requires so much time, and if he be an out-of-town patient, to so much expense also.

When the lesions are upon other portions of the nose, and especially upon the alæ, situations where, as in the case of the eyelids, it is necessary to save as much normal tissue as possible, the X-rays give the best results as regards subsequent scar tissue formation, especially if the lesion is not a very superficial one. All these lesions, however, are curable by caustics, and the scar following the use of the proper caustic will differ but little from that following the use of the rays, except in advanced lesions situated on the alæ.

If the nodule, say, of the size of a pea or bean, exists in connection with an area of a warty or eczematous form of the disease, the nodule should be destroyed by a caustic, and the rays used upon the remainder of the lesion. Such lesions are not infrequent upon the nose, and especially in persons with a seborrhic condition of the skin.

If the disease has invaded the bony structures, the rays may give better results than any other method; at least the results in cases I have seen treated by knife or caustic have been very unfavorable. According to Startin, the outlook for X-ray treatment in these cases is not flattering, but some other writers report favorable results.

The comparative value of the rays, the knife, and caustics, in cases of epithelioma of the penis, must be decided by future observation on a sufficient number of cases for forming a judgment.

When the disease has existed some time, and, remaining superficial, has covered an area of some extent, say, from half an inch to two or more inches in diameter, with a raw surface over the greater part, the rays are a valuable agent, and probably effective in the greater majority of cases. The most favorable cases, the ones most quickly curable, are the very superficial ones having an erosive or ulcerative surface and only a narrow hard rolled-up edge. I treated one situated in the temporal region, a lesion circular in shape and one and a half inches in diameter with a very slight elevated margin, that appeared to be removed after seven exposures in a period within three weeks. Such cases, however, can be as satisfactorily cured by an arsenious acid paste, the actual treatment, the application of the paste requiring from six to eight or ten hours. Therefore, in all cases of lesions not larger than from one to one and a half inches in diameter, when situated on parts of the body favorable for treatment by caustics, if time is an important item, the rays are of less value than a suitable caustic.

If the lesion be upon the scrotum, the knife is the quickest and probably the best form of treatment, as few scroti are not improved by excision of a part; at least excision is not usually a cause of deformity.

If these superficial lesions—I am still confining my remarks to the superficial serpiginous form of epithelioma—occupy the eyelids or external or inner canthus and neighboring integument,

the X-ray treatment gives a very gratifying result; in these cases it is decidedly the best method of treatment to be employed, and here I should say the X-ray is a great and valuable addition to our armamentarium. I have seen lesions of considerable extent in these regions removed without any noticeable injury to the tissues of the eyelids.

The X-rays can be considered superior to caustics or the knife in all cases of superficial epithelioma covering a large area of two or more inches in diameter, with the exception of lesions on the scrotum. In the case of smaller lesions the location should determine the method of treatment. (I am supposing, of course, that the patient has the time and money for any method of treatment considered the best for him as regards removal of the disease.) If the lesion is around the eye, occupying a part of the lid, the rays give the best result, but on all other parts of the body a proper caustic gives results in a few minutes or hours equally as good as those obtained by the rays, and in some cases excision is a very satisfactory method of removal.

In each individual case, the decision as to the form of treatment to be adopted should be made from the standpoint of the patient, and not of the operator.

There are many cases of epithelioma of the superficial form in which there is a great tendency to reappearance or recurrence after apparent cure. The normal relationship between the epithelium and the connective tissue is changed, or there is a rebellious nature in the epithelial cells, or there may be other underlying causes of epithelioma, at any rate new lesions continue to appear. Such cases should be treated with the rays, with or without other local agents, and with such drugs internally as thyroid extract, and possibly also arsenic, with the object of changing the nutritive condition of the part. In this case treatment by the rays gives better results than by caustics or excision.

I have had under my care for one year a case of that rare disease, xeroderma pigmentosum. There were about fifteen carcinomatous growths varying in size from that of a large filbert to that of a pea, situated upon different parts of the face, one occupying the greater part of the left upper eyelid. All the lesions except two large ones disappeared after a few months' treatment by thyroid extract; at the same time there was very marked diminution in the pigmentation and angiomatous condition on the face, neck, forearms and hands. To remove the two remaining lesions that by the thyroid extract had been reduced to about half the size they were when first observed, I have used the X-rays, but the result has not been satisfactory. Five minutes' treatment with a low tube ten inches from the target would be followed by considerable erythema and tenderness. A more resistant tube would also produce unpleasant conditions in nearly the same length of time.

After two months' experiment improvement has not been satisfactory, and I have again prescribed thyroid extract. Probably these cases differ in the character of the factors causing epithelioma as compared with those concerned in ordinary cases of cancer.

When cases of epithelioma are neglected, a something that is the rule and not the exception, and the process has extended deep into the corium or subcutaneous tissue, as well as along the general surface, and especially if the infiltration has reached the neighborhood of large blood vessels, in particular those of the face or neck, the rays may often be regarded as the only agent which gives hope for successful treatment, and, as shown by the reports of careful observers, curative results by their assistance have been obtained in some of these inoperable cases.

These results are an additional proof that the rays are a very valuable addition to our armamentarium against cancer.

When the epithelioma is situated upon an extremity and about large blood vessels it still remains to be shown whether it were better to use the rays or whether it would be advisable to amputate the limb at the proper place. If there is any invasion of the glands no reliance should be, in my opinion, placed on the rays. At the present time I have in an old lady a case of papillomatous epithelioma occupying the entire back of the hand from wrist to fingers; a case that is slowly but surely improving under treatment by the rays. The slow improvement is probably partly to be attributed to her very irregular attendance for treatment. Amputation in such a case would not be justifiable before treatment by the rays were tried.

When, as in some cases of the pearly form of epithelioma, there is a formation of new lesions in the scar area, curettage and subsequent treatment by pyrogallic acid or arsenious acid or acid nitrate of mercury is much to be preferred to treatment by X-rays, as from the latter the exposures necessary to destroy the lesions are very liable to produce a serious burn on account of the greater vulnerability of the scar tissue in these cases, at least that is my experience.

An important point to be considered in choosing between the X-rays and other methods of treatment in all cases of epithelioma is the danger of producing by the rays either a serious burn or a permanent alopecia. It is admitted that an epithelioma always occupies a much larger area than appears to be the case to the naked eye, and in using the rays this area must be exposed to their influence, and on account of the repeated exposures necessary for removal of the disease, if seated on a hairy part of the body, an alopecia is, in my experience, the invariable result, whereas after the use of selective caustics the greater part of this cancerous area is not denuded of hair. Whether also the long treatment required by the rays has or has not an injuring action on internal

viscera is a subject for careful investigation. I have had several patients complain of unpleasant sensations in the hand after a few exposures, and it is quite conceivable that serious nutritive changes within the cranium or abdominal cavity may in some cases result. I raise the question as one worthy of future observation.

The cases of deep nodular and infiltrating epithelioma reported as treated by the rays are too few in number to enable one to form an opinion as to the comparative value of the agent in such a form of the disease. To rely upon the rays alone would seem to me to be not justifiable if the lesions are still recent and covered with apparently normal epithelium. Such cases should be treated in the manner already advised in similar cases of superficial epithelioma. I doubt, however, if anything can stop the course of some of the severe cases of rapidly infiltrating epithelioma—*épithéliome térébrant*, *épithéliome foudroyant*—unless situated upon a part of the body where an incision wide of the apparent limit of the disease can be made. It is true, as stated by Williams, that the rays act best as a rule when the disease is rather active, but that, I believe, refers only to the ordinary superficial forms of the disease. I have not had an opportunity to treat a case of the rapidly infiltrating form, nor has any treatment of such a case been reported.

In that form of epithelioma called rodent ulcer, in which the disease extends downward into the deeper tissues even more than along the general surface, destroying all the tissues of the part as it extends, producing in time a deep ulcer with, as a rule, only comparatively slightly infiltrated walls; if the disease has reached this advanced stage when treatment is requested by patients, and especially if the lesion is situated near the eye, as is usually the case, the rays offer about our only hope. Removal by incision or by caustic is, in such advanced cases, very rarely indeed successful, and should not be attempted if treatment by the rays can be had.

It is possibly too soon to form a definite opinion as to the curative power of the X-rays in the advanced cases of the deeply destroying rodent ulcers, but from my own experience and that of others it appears that a certain percentage of these hitherto hopeless cases can be cured. The X-rays therefore are an absolutely necessary agent to an operator who treats all cases of cutaneous cancer.

I beg, however, to remind the medical profession that all these cases commence as a lesion that, in the great majority of instances, if not in all, can be easily and quickly cured by the previous methods in use, if early diagnosed and properly treated. Sometimes it is the fault of the patient, but it is also often the fault of the physician that these cases are allowed to proceed in their destructive courses until the almost, if not quite, hopeless condi-

tion is reached. I have seen many such cases, and it is "up" to the profession to recognize their moral responsibility towards these patients. An X-ray apparatus is not at all necessary for these cases when seen early; a proper caustic, or excision will be effective if properly used.

In cancer of the breast only a few cases, as yet, have been reported as probably cured, and those reported have been reappearance after amputation. It is impossible at the present time to account for the great differences in the results of treatment as reported by different writers. It is to be feared that the brilliant results announced by some operators will be things hoped for but not always realized. In seven inoperable cases following operation, reported by Johnson and Merrill, no improvement was produced by the rays. Williams thinks the rays would probably be of benefit in some cases. He also finds that the more slowly growing tumors, the so-called schirrhous, offers greater resistance to the action of the rays than do the more rapidly growing cancers. Some writers report almost all their cases as improved or apparently cured by the rays. As stated above, the number so far reported is too limited to permit the forming of an absolute conclusion as to what can be accomplished in any given case by the rays in mammary cancer when used alone, or for reappearances after operation. For post-operative cases, it is evidently better than the knife or other agent, but that is not saying much. It does, however, seem that some of these cases can be cured, and that is an advance over past methods.

I have at present four cases under treatment. In one of these we will call the diagnosis doubtful, although the case was sent to me by a gynecologist of experience as a case of mammary cancer, and a similar diagnosis was made by another physician before I saw the patient. The woman is forty-six years of age, married, but had no children. The symptoms were those of the early stage of carcinoma,—a hard, irregular mass connected with the gland and involving the connective tissue sufficiently to interfere with elevation of the skin by the fingers and cause some retraction of the nipple. After six weeks' treatment the improvement is so marked that no one would now make a diagnosis of cancer. It is too soon, however, to give a positive prognosis as to the final result.

The second case was one of well marked carcinoma the size of a hen egg, with an ulcerated fungating surface. After four months' treatment the ulcerated surface is replaced by a smooth scar surface and the disease is apparently removed.

The third case is one of advanced schirrhous cancer in a woman of sixty-seven years of age. The entire mammary gland of the right side, including the nipple, was destroyed; there was an ulcerating surface about three inches in length and half an inch in diameter, situated near the ribs as the patient was thin of person,

and there was some infiltration of the tissues between the ribs. Such a case could, and should, be regarded as inoperable either by caustics or knife. After three months' treatment scar tissue occupied the part where the ulcerating area was, and no evidence of the existence of a cancerous affection could be detected. I have since that time given three months more of treatment at intervals of two weeks, as a precautionary measure, although no signs of the disease existed. Such a result is very encouraging for future treatment of the hitherto hopeless cases. I might state also that seven years ago I successfully amputated the breast for carcinoma in a niece of this patient; I say successfully, as there has been no reappearance of the disease. Microscopical examination verified the diagnosis.

A fourth case showed a pea-sized nodule in the skin at the scar line three weeks after amputation of the breast. This disappeared under treatment. I have continued exposing the whole of the anterior surface of the chest area of the affected side for six weeks and no new nodules have made their appearance as far as my observation can judge.

From the foregoing results in conjunction with the result in cases reported by others, I believe with those who maintain that every person who has been operated upon by the knife for mammary cancer should be treated by the X-rays for a few months after the operation; such treatment commencing two or three weeks after the operation, with the object of destroying any pathological epithelia that may have been left in the tissue. Also, if the cases are inoperable when first seen, the patient should be given the benefit of the possibility that the rays may effect a cure. Considering the very unfavorable result, the few cases permanently cured by excision, I believe with Morton that every case of mammary cancer except those seen in a very early stage should be first treated by the rays, and their action on the disease studied before resorting to amputation. The cases published justify the above opinion.

In cancer of the lip, according to Williams, all cases when seen early do well, but I prefer other methods to precede the use of the rays, at least until more cases with favorable results have been noted. The superficial forms are too easily cured by caustic potash, and for the deeper lesions the Paquelin cautery or the knife may be used, but unfortunately reappearances are very frequent. These cases of pure epithelioma with prickle cell structure and tendency to lymphatic gland infection seem not to be influenced by the rays like the rodent ulcer forms of cancer or gland carcinomata. I saw a case of epithelioma of the upper lip that had been treated several times a week, for two months, by a physician accustomed to using the X-rays without any improvement

whatever, although the disease was superficial and could have been and was successfully and quickly removed by caustic.

In reappearances in these cases after operation, or when there is already invasion of the lymph glands, the curative value of the rays has not been demonstrated. It is still to be shown that deep-seated epitheliomatous growths of the skin or mucous membrane, not rodent ulcer in character, can be cured by the rays. Personally, I believe that whilst the progress of the disease may always be checked, a cure is not probable.

I am not aware of the successful treatment of any case of cancer of the jaw by the rays, although usually the disease can be checked and the growth reduced in size.

I have failed to obtain any benefit from the rays in a case of epithelioma of the inner surface of the cheek, although the rays were applied both through the mouth and externally, in the latter region even to the production of a burn by a hard tube after two months' unsuccessful treatment according to rule. According to Scholtz there should have been an absorption of rays on the mucous surface from the use of a hard or medium tube on the cutaneous surface, but I have not noticed such action in this or other cases. The Paquelin cautery is preferable to the rays or other methods in such cases as the above, although the prognosis is always grave.

Startin has reported a favorable result in a case of epithelioma of the tongue. I am afraid his success will not be duplicated by others. I have at present a case of cancer of the whole end of the tongue, and also of the arch of the fauces, that has been under treatment six months by the X-rays. At the commencement of the treatment there was already secondary infection of a lymph gland of the neck; the enlargement seemed to be about half the size of a hen egg. At present only a small nodule is to be found; the disease in the fauces has been checked and the end of the tongue is not worse than it was six months ago. Although I do not expect to cure this case, yet it shows how the disease can be influenced by the rays and that life can be prolonged, if that is any favor to a person with such a misery-producing disease.

What has been said about cancer of the throat is also true of cancer of the larynx. I am not aware that there is a report of a case completely cured by the rays, although the morbid process can be favorably influenced and retarded. I have at present a case of branchiogenic carcinoma with secondary growth following operation for removal, and after three months' X-ray treatment no improvement is observed. The case will evidently terminate fatally. Here the rays have the same value for such cases as the former methods of treatment: they are of more value to the operator than to the patient.

Perhaps in the future some case of cancer of the stomach may be cured by the rays, but if the observation of Scholtz be correct

that the rays pass through and do not injure the visceral organs, as the stomach, liver, intestines, brain, etc., I fail to see grounds for hope in these cases. I think, however, that these observations may possibly be considered as not to be depended upon, otherwise how can we explain the disappearance of secondary growths in mammary cancer, or of growths in lymphatic glands such as I have reported above and as have been reported by all writers on the subject? Personally, I will continue to experiment on other lines for the treatment of these cases of internal cancer with the hope of finding something more valuable.

What is true of cancer of the stomach is also true of cancer of the uterus, and so need not be further discussed at present. If a cancer of the mouth cannot be cured, what hope can there be for one of the uterus?

What I have said of cancer of the stomach and of the uterus holds good as regards any internal cancer. The disease may be retarded and the pain lessened, but that is the limit of usefulness obtained up to the present time.

I have not taken up your time with the relation of a list of personal cases of cutaneous cancer, as my experience coincides with that of such excellent and reliable observers as Sequira, of London; Williams, of Boston, and others who have published upon the subject, and I have taken it for granted that you are familiar with their writings and that you rely upon them and not upon the "articles" and interviews in "yellow journals."

CONCLUSIONS.

1. The Roentgen ray is a very valuable addition to our armamentarium for the treatment of cancer.
2. Some cases of advanced epithelioma are incurable except by the rays.
3. Many of the cases cured and regarded as inoperable by other means could have been quickly cured in an early stage of the disease, hence physicians should devote proper attention to this serious disease, much more attention than they have as yet given it.
4. The majority of the cases so far reported as cured, have been cases that could have been cured much more quickly by the knife or caustics, especially by the latter.
5. In cutaneous cancer the scar is sometimes better after the ray treatment than after the use of caustics, but for the majority of cases caustics are preferable, as their action is definite and there is a great saving of time to the patient.
6. In many cases of cutaneous cancer the ray is a valuable agent in combination with other methods, and when the disease is situated around the important blood vessels it is the only proper

agent to employ, except in some cases on the extremities, where amputation would be advisable.

7. All cases of carcinoma of the breast, except those seen in a very early stage, should be treated by the rays before resorting to the knife. The rays should also be used in all inoperable cases and in all cases after amputation has taken place.

8. According to our present knowledge, the X-ray treatment is not curative in internal cancer of any part of the body—mouth, larynx, stomach, uterus, etc.

9. To obtain the best results there must be no fault in the technique of the operation, in order to avoid a serious burn and to get the desired action on the cancer tissue.

248 West 42nd Street, New York City.

NEUROSES AS SEEN IN ORTHOPEDIC PRACTICE.*

BY B. E. MCKENZIE, B.A., M.D.

Senior Surgeon to Toronto Orthopedic Hospital, Orthopedic Surgeon to Grace Hospital, Associate Professor of Clinical Surgery in Ontario College for Women, Toronto.

THE term neuroses here employed is intended to have a generic significance. It includes the more specific expressions, which, with more or less definiteness, have been employed; for example, hysteria, neurasthenia, nervous prostration, etc. There are a number of such ill-defined affections having symptoms referable chiefly to the nervous system, which may be conveniently grouped together as neuroses. They manifest a disturbance of functional control, but are not marked by recognizable changes in the central or peripheral nerve tissues.

Because of the disability so constantly accompanying neurotic states, the orthopedic surgeon is frequently consulted, and the duty of deciding whether or not any organic disease be present, and if so, what it is, or whether the case is simply a psychosis, is one which implies a serious responsibility.

In the fact that it is the orthopedic surgeon who is consulted, and not the neurologist, is found some indication of the general characteristics of the particular patients whom he is called to see. Frequently it is a patient who is suffering from traumatism—more frequently slight than severe—and the doubt existing regarding recovery has given rise to nervous symptoms. Sometimes it is found that disease has been present in some bone or joint, and a feeling of disability remaining after recovery gives rise to a condition of chronic invalidism. Most frequently there is found some form of so-called "spinal disease" marked by much suffering or disability, or both.

The so-called "spinal irritation" is often spoken of and treated as if it were a lesion of the spinal cord or its meninges, and it was so classified by Rosenthal and others. That such a classification is erroneous has been ably contended, and cases here reported will serve to uphold this contention. Instead of the irritation being due to changes in the cord, its membranes or other parts of the spine, it is due to unhealthy and abnormal functioning of the higher centres.

It will appear from reports of cases following, that patients who had at one time been affected by some well-recognized disease, but had really recovered, were allowed to continue in the belief that recovery from the disease or from the injury had not taken place.

* Read at the annual meeting of the American Orthopedic Association, Philadelphia, June, 1902.

Of the various causes operating to produce this state of continued invalidism, suggestion, arising from many different sources, is the chief. Suggestion is a potent influence in the life of all persons, but especially so during the formative period. In childhood and youth the faculties of memory and imitation are at the time of their greatest activity, and in later years the individual, as we find him, is the ego made up of the original self as pre-determined by heredity and modified by education.

Every physician must be able to recall many occasions when the difficulties attending his relationship to his patient have resulted not from real ills, but from hurtful impressions arising from unwise suggestions having their origin in ill-timed and meddling inquiries made by professed well-wishers.

From the time that a child cries for food and gets it, up to the time when the same child, grown larger, complains of pain or sickness to elicit sympathy, or craves for notice or notoriety and gets it, the influence of suggestion is ever operative for good or ill. "Whipping a child for a confessed fault imparts a strong suggestion that falsehood is better than truth, with the result, that the next transgression is denied and punishment is escaped, and the child soon learns that lying is better than the truth." On the other hand, the suggestion to a child that it is manly and heroic to endure pain without complaining begets a spirit of endurance and self-control. "As the twig is bent the tree's inclined," and in early life much of the seed-sowing is done which brings forth the harvest of neurotics who are but too well known in their protean aspects to every medical practitioner.

All-powerful as suggestion is as an active agent in education and in the production of disease, it may be employed also for beneficent ends in the treatment of many of the nervous diseases, and of the psychic phases which manifest themselves in the course of ordinary diseases.

Heredity is an important element which should receive careful consideration. Some of the cases to be reported, which have been most obstinate, show marked neurotic tendencies in both the father and the mother.

In the case of those whose personality is warped by heredity, and trammelled by a training which trusts to feelings and whims rather than to reason and reality, mere suggestion that there is some ground for supposing organic disease to be present, is often quite enough to nullify feeble attempts at self-government.

Probably the most baleful influence in the production of the neurotic state is found in the home, whether it be in the house of the poor or of the wealthy. Friends and members of the family magnify each complaint of pain and attach to it an undue importance, not knowing that while, on the one hand, pain rightly interpreted is a valuable guide to lead to the discovery and loca-

tion of organic disease, yet, on the other, when not carefully questioned and scrutinized, it may run riot with the patient and become a veritable will-o'-the-wisp, leading astray the unwary and uncritical physician.

Sometimes there is a failure on the part of the medical attendant to analyze his case, to apprehend clearly its various elements and to assign to each phase of the departure from normal health its proper value and true significance.

It is by no means uncommon that organic disease is present, but that the psychic aspect of the case assumes an undue prominence. Under such circumstances it may be peculiarly difficult to distinguish between the true and the false, and even if the distinction be clear in the mind of the medical attendant it may be impossible to imbue others with confidence in his opinions and judgment. Vacillation at this time is ruinous. Error in arriving at his conclusions may be harmful, but not more disastrous in its effects upon the patient than to waver and show an unsteady hand after he has assumed control. Certainty and exactness of diagnosis are important, but an unflinching course of procedure afterward is not less essential to success. Vacillation but adds to influences already at work, dragging the storm-tossed neurotic from the paths of self-government and sanity.

Under these conditions and in a multitude of others arising from an unfavorable environment, harmful suggestions arise which keep the patient from regaining the confidence so essential to a satisfactory recovery, and thus a state of chronic invalidism may be continued for many years, all virility being sapped from men and all feminine qualities which characterize true womanhood being blotted out or cast into the mists and shadows.

Though these patients are likely to become self-centred, and selfishly, though unconsciously, to magnify their ills because so doing makes them the object of sympathetic attention; yet parents and friends are likely to welcome the coming of a deliverer.

Neither these unfortunate patients nor the friends are really fond of their bondage, and though sometimes they may seem to hug their chains, yet it is because the prospect of deliverance is not made clear to them. At first it may not be wise to explain fully one's opinion. This is not equivalent to deception; to practise deceit is the surest road to failure. It is most essential that the one upon whom falls the responsibility of making a diagnosis and upon whom falls the duty of treatment shall reach a very absolute and positive conclusion, that he shall fortify himself for speaking to the patient and the friends in terms of encouragement and confidence. It is often found that these patients have been wandering long in the mazes of uncertainty; and when they have become fully convinced that some one understands them and appreciates their afflictions, they often give a most loyal co-

operation, and the time soon comes when the attendant can take them fully into his confidence.

Perplexed by the often seemingly anomalous train of symptoms manifested by the patient, hampered by the great solicitude and the unwisely exhibited sympathy of the friends, and harassed with doubt as to the extent to which organic disease or pathological conditions resulting from traumatism may account for the illness, the medical man's pathway is often strewn with thorns and his steps endangered by pit-falls. Both for his own peace of mind and for the liberation of his patient clearness of mental vision is now essential.

CASE 1.—G. H. P., aged 27, at one time a school-teacher, had studied dentistry for two years prior to the commencement of his present illness. In March, 1896, he walked about fifteen miles and was somewhat exposed in the snow, and his feet and legs became wet. This was an amount of exertion and exposure unusual to him. The next day there was numbness in the feet when the head was lowered, disappearing when the head was raised. On the second day the numbness was permanent. This disturbance of sensation continued to ascend until it reached a line about two inches below the nipples, and increased in amount until all sensation was lost. Accompanying the numbness there was a loss of muscular power, manifested at first by clumsiness; the paralysis of the lower extremities in a short time became complete. Power over the sphincters of the bladder and rectum was lost. This condition remained constant for about a week, after which sensation improved, first in the vicinity of the right hip, until at the end of six weeks sensation was normal. About a fortnight after sensation began to improve, power began to return. Control of the sphincters was largely but not entirely regained. Improvement continued until the end of June. At one time during this primary illness the temperature was elevated for two or three weeks, but never rose above 102 degs. F., and was first noticed about two weeks after the commencement of his illness. At about the end of June a stranger was helping him in some way in bed and hurt his back. This caused a return of the numbness and of the other symptoms, though they were less marked than before, and were accompanied by no elevation of temperature. At the end of another month there was considerable improvement, which continued until the spring of 1897. In the meantime he suffered from a severe attack of la grippe with elevated temperature. During the summer of 1897 he frequently sat up in bed, but had another set-back attributed to not being sufficiently careful while moving in bed. In the spring of 1898 electricity was employed, but he claims that the current was too strong and again he had a relapse. In the fall of '99 he had some apparatus to assist him in sitting up and to bring him to

the sitting posture very gradually. At one time he succeeded in getting out upon the floor, and could stand by a table placed beside the bed, and even move about with crutches, but again had a relapse caused by over-exertion. This record of "ups and downs" has continued until recently. During these years he has been in various hospitals and sanitarium under treatment. He was twelve months in the Toronto General Hospital, for a considerable length of time in the General Hospital at London, in a sanitarium at Battle Creek, Michigan, and finally in the Home for Incurables, London.

This patient came to Toronto Orthopedic Hospital, October 31st, 1901, and remained until May, 1902. He was unable to walk, and had not done more than walk about the ward with crutches for several years. He lay or sat up in bed nearly all the time, had no motion of the bowels without an injection, did not empty the bladder at any time but kept a urinal in bed constantly, allowing the urine to dribble away without making any effort at any time to complete the act of micturition.

When I directed him to dress and come with me to the gymnasium he asked to be allowed crutches, but having found by previous examination that there was fairly good power in all his muscles I positively refused to allow any aid except the guidance of my hand directing him as he came down the stairs and through two rooms to the gymnasium. He remarked that he had done nothing like it for five and a half years.

Seeing that he was unable to keep his balance when attempting to walk, a trolley was arranged with a car running on a track about six feet above his head, from which a rope extended downwards to straps under the chin and occiput such as are usually employed while applying a plaster-of-Paris jacket. This prevented him from falling while learning to walk. At first it was with considerable difficulty that he was able to use enough force to propel the little car. He made gradual but continued improvement, and within a few weeks could walk rapidly to and fro across the gymnasium floor. So soon as he was able to balance he was gradually inducted into the ordinary gymnasium work, until at present he is able to do a large part of the exercises which are usually done. (February, 1902.)

The nurse was instructed to allow him the urinal once in two hours, at which time he was to make a definite effort to empty the bladder. Each day a rectal injection was prepared for him, and he was allowed to go to the closet and use it himself. After a short time he was refused the use of the urinal entirely, and soon he showed his ability to go back and forth to the closet as circumstances required. For a long time he remained pale, walked with a stiff gait, and showed but little comparative interest in his own welfare and progress. His urine is alkaline, loaded

with pus, and he is now taking a mixture of benzoic acid and salol. As soon as the fine weather came he was urged to go out of doors and virtually compelled to adopt active habits, such as to practise running, etc. Early in May he went to the country to work upon a farm, and writes me that he is still improving. (June, 1902.)

I would not presume to have an opinion as to the amount of real disability present at the commencement of his illness, due possibly to congestion of the cord, but I think it is safe to say that the first link of his vicious chain was forged when, early signs of recovery having appeared, he was put back to bed again at the slightest professed indication of numbness, pain or disability.

Although this man is working up to a sense of his condition, and shows an increasing interest in, and appreciation of, his duties and relationships as a citizen and as a responsible member of society, yet there is no probability of his ever regaining his normal health and manhood. Irremediable injury has been done him, the best elements of character have been sapped, and he will bear with him through life burdens which have accrued during years of needless invalidism.

CASE 2.—E. D., aged 27. In June, 1901, this young woman sprained her knee slightly stepping off a street car, and the next day felt a pain in the same knee. Still finding discomfort in the knee at the end of two weeks, she consulted her medical adviser. For several months afterward the knee was treated by rest in bed for a number of weeks, by having a plaster-of-Paris protecting splint, by counter-irritation, etc. Some time during the winter the conclusion was reached that the knee was tubercular.

Being consulted in February, I found the knee slightly smaller than its fellow; no local elevation of temperature; a moderate degree of atrophy of calf and thigh; no elevation of body temperature. The knee had not been swollen at any time; motion was not limited. No infiltration or effusion in or about the joint was manifested to eye or fingers. A skiagram revealed nothing differing from the other knee. I could not learn that there had been any other signs or symptoms to arouse suspicion besides pain and a vague feeling of disability and discomfort. An older sister had fallen some years previously and suffered a fracture of the neck of the femur, and is lame. A great fear of permanent lameness possessed the minds of the family and the patient. I thought the conclusion justifiable that there was neither fracture, displacement nor disease of any of the structures entering into the formation of the knee-joint nor of the extremity. The patient came to Toronto and directly under my supervision. I advised gradually increasing use of the limb. Some difficulty was experienced in getting her entire confidence, as frequently

there was some complaint of pain. Daily massage and active systematic work for three months has almost completely overcome all doubt in the mind of the patient, and all feeling of disability and discomfort in the knee.

CASE 3.—W. D., aged 22. About two years ago her wrist was scratched with a pin, and after becoming septic it was found impossible to heal the wound. Gangrene occurred, and after amputation of the forearm gangrene appeared in the stump and a secondary amputation was necessary. The extremity of the stump is now found about the junction of the upper and middle thirds of the upper arm. Having complained much after this of pain in one side of the abdomen an intrapelvic operation was performed through the vaginal canal. Just what was done in this operation I do not know. This was performed in the spring of 1901. In July it was noticed that the left hip was very prominent, and she soon began to walk with a very marked limp. She consulted Dr. Galloway in January, 1902, because of the very marked lateral curvature which was present. Ascertaining that the curvature had come on very rapidly and finding that the shoulder was drawn down very close to the hip upon the same side that had been operated upon, it was thought possible that some morbid intrapelvic condition accounted for the deformity. Careful examination by Dr. S. M. Hay afforded no information, as the parts were declared to be normal. While under anesthesia it was found that the trunk was easily straightened. She seemed much pleased to report that she had undergone nine operations.

It was advised that she come into the Orthopedic Hospital and be constantly under supervision for some time. Her chapter of mishaps seemed to continue, and a very short time after admission she spilt very hot water upon her foot, causing a troublesome scald. She has been kept daily, except while laid up because of accident, at work in the gymnasium. Suspension of her weight through the spine has been made a prominent feature of her work, while heavy dumb-bells have been attached to the leg, shortened by tilting of the pelvis.

Early opportunity was taken to tell her candidly about her condition and the necessity of assuming self-control and ridding herself of various habits, which were standing in the way of her best welfare. She has proved a docile patient. Such training during five months has resulted in very marked improvement; the curvature of the spine having almost entirely disappeared leaving her with a scarcely noticeable limp, and greatly improved health and appearance. When she came to the hospital her appearance was that of debility; she had lost all self-confidence, and yielded herself a ready victim to her real or supposed misfortunes. Only two days ago she came to me and said that she was desirous of returning home, because that her mother and

sister were ill, and that she felt it her duty to return and take care of them and assume charge of the work needed by the family. She is self-confident and firmly believes that she will be able to bear well her part.

CASE 4.—L. P., aged 17. I saw her first in October, 1900. Her spine was very tender, especially in the lumbar and sacral regions; she could not lie down because of the pain experienced in so doing; walked with a peculiar limp, turning the right foot over upon its outer border at each step; complained of weak eyes, which condition was said to be due to "disease of the spine;" gave a rather vague history of having sprained both knee and ankle. Her mother was greatly surprised at being told that both joints were in a healthy condition.

Examination of the trunk showed perfect mobility of the spine, but great "spinal irritation." Examination of the right foot and leg showed that the peronei muscles were active and possessed a fair degree of strength, although she had been told that the turning of the foot was due to paralysis of these muscles.

This girl's mother had a worn and worried appearance and a very nervous manner. While in my office she talked incessantly of the girl's illness and great suffering and of her husband's "nervous prostration." He was then in a sanitarium under treatment, his nerves having given away under the pressure of business. Up to the present he continues to be an invalid. The mother arranged to bring the girl to me for treatment and then changed her plans, wrote me, inquiring about many points, came to consult me again, and again delayed. Finally she brought her daughter to the hospital to leave her with me in October last.

Notwithstanding that I had had plenty of opportunity to make observations, yet in a moment of weakness I consented to the mother remaining in the city for a week, and allowed her full liberty in calling upon her daughter and in taking her out to visit friends. Throughout the girl's stay with me, I realize now, a mistake was made in allowing too great laxity of discipline. She remained during six months; but owing to the interference of many incidental things, such as a long period of attendance by a dentist for the care of her teeth and visits to friends in the city, her progress has not been satisfactory. She has returned home very greatly improved, but in a condition which will permit, I fear, of speedy relapse because of her home environment.

CASE 5.—N. M., aged 19. Dr. Galloway was consulted by her in the summer of 1901. She was one of a number of girls in the family and was said to have been an invalid for a number of years, receiving constantly the sympathy and attention of her mother and sisters. On inquiry it was found that one of her most prominent characteristics was her being subject to a form of "spasm." Careful inquiry into this showed that they were not

epileptoid in character but cataleptic. For months previous to the time of consultation she had been confined to bed during a considerable portion of the time without being able to assign any definite cause for her condition, and the family seemed convinced that she was quite a confirmed invalid.

A request to treat this girl in her home was met by a prompt refusal. The family was informed that no responsibility would be assumed for her treatment, unless she came to the hospital; and that she must not receive visits from her family or friends, and would not be allowed to go out without special permission. She was assigned the regular work in the gymnasium as a means of engaging her attention and exercising discipline. A few days after her admission, and while engaged in the gymnasium, she became cataleptic; direction was given to carry her into the next room and to leave her there. Having assured ourselves that she was in no danger she was left unmolested for a couple of hours. At the usual time for the next meal she was roused up brusquely, and asked to go to the ward as it was time for supper. Only once afterwards did she allow herself to fall into a similar condition. She soon adapted herself to the regular hospital and gymnasium *regime*, increased in health, strength, color and vivacity, and at the end of three months she returned home convalescent.

CASE 6.—L. D., aged 22, a farmer's daughter, said that she had been unable to work for six years, that she suffered with pain in the back and head and inability to exert herself, that for three months previous to consulting me she had been unable to help herself, and that her mother had been an invalid for ten years and was said to be suffering from "spinal disease." This young woman was brought to my office in the ambulance, having been brought from her home to the railway station in the country on a stretcher. Upon my requesting her to disrobe that I might examine her spine, her aunt said that she was unable to stand or even to hold up her head. By insisting upon her doing as I requested, she did stand up for examination. I was unable to find any evidence of organic disease. She was of good color, though perhaps rather pale; muscles well developed; a fair amount of adipose tissue. She was symmetrically built and her heart and lungs were normal and acting slowly. I assured her father and aunt that she had no serious illness, but that I could not consent to take her under my care except on the condition that she be left in the hospital absolutely under my direction, and that I could not allow her to make or receive visits. These conditions were at once agreed to, and within an hour of the time when she came into my office she walked up two flights of stairs to a ward in the hospital. A few days afterward she was taken into the gymnasium an hour each day, and work at first light, but

increasingly difficult, was given until she was able, with other patients, to do all that was required of her. Treatment was continued for a period of six weeks, care being taken to increase constantly the amount and the difficulty of the work done. At the end of the time she was spoken to very plainly regarding her condition and tendencies. She returned home and has now for more than a year and a half continued well and is working hard.

CASE 7.—E. G., aged 18, rather anæmic and of nervous manner. At fourteen years of age she complained much of headache, backache, and general lassitude, so that she was kept from school most of the time. During the four years that have elapsed both she and her family have considered her unable to work; and during this time she has been examined by a gynecologist, who removed one ovary; an orthopedic surgeon, because she was lame and believed to present symptoms of hip disease, who assured the family that she had no joint affection; and a neurologist, who said he believed her condition was one of hysteria.

At the time of examination, in April, 1900, I found her very lame. Her limp, however, was very different from any that I had observed. Though she had walked with marked lameness for some years, yet there was no evidence of any inflammatory condition of any joint or of other lesion, and but very trifling atrophy. The only possible organic cause which could be found upon examination was a foot considerably pronated. Whenever any part of the leg or foot was touched, however lightly, the entire limb was thrown into violent and erratic convulsions (I do not know what better term to use, so irregular and so extreme were the excursions of the limb). She had a systolic murmur; otherwise there was no evidence of organic disease. I expressed the opinion that the case was one of hysteria and advised that she come to the Orthopedic Hospital in order that she might be completely under control. Very definite and precise instructions were given to the directress of the gymnasium to the effect that whatever work was assigned must be done with great care, beginning with the simplest forms and movements, calling gradually into exercise each individual extremity, and seeing that excuses were not accepted in place of work. This course was pursued during the month of June, frequent observations being made, but disclosing no real cause for her lameness except the undue pronation of the foot. This, I am disposed to think, was acquired, having arisen from her manner of walking for so long a time. She proved a very docile girl, but was ready on the slightest provocation to burst into hysterical weeping. At the end of the month her limp had almost disappeared, her health and color had greatly improved, and she had been taught to place the unduly pronated foot and walk with it in a correct position. As she was to return home to

her mother at this time, I entertained fears that she would relapse during the two months which must pass by before she could come back to her work in the gymnasium. Careful instructions were given to her mother and to her medical attendant, which were scrupulously carried out, in consequence of which she returned in September, showing that improvement had continued. The instructions were to the effect that the girl's attention must not be allowed to centre upon her own troubles, but that she must be assured that her complete and permanent recovery was in certain prospect and that she must learn to rely upon herself.

On her return to the hospital, in September, she was subjected to the same discipline as formerly for four months, at which time she had very greatly improved, and could receive ordinary massage without manifesting any reflex movement in the limb which formerly could not be touched even with a feather without manifesting the most exaggerated reflex movements. In her gymnasium work special care was taken to have her take exercises demanding the balancing upon each limb alternately, also the alighting upon the feet from a height, as in vaulting, and in suspension by the arms, etc. These she soon learned to do without experiencing any inconvenience and without the appearance of reflex movements in the affected limb. Considerable difficulty, however, was found in teaching her to run. She was taken out upon the lawn, and with her classmates was engaged in various games. Considerable ingenuity was required to get over the apparently insuperable obstacle presented by running. The quick movement from the sound limb to the affected one appeared to give her a sudden spasm and to block for the moment any further progression. Perseverance along this line and the full engagement of her attention and the arousing of interest in the games finally overcame even this difficulty. Her color and general health were much better, and since her return home she has assumed the duties and responsibilities of the household. Only a few days ago her medical attendant wrote me saying that her condition had continued to improve. It is now about six months since she left the hospital. Her lameness has almost entirely disappeared. There is simply a noticeable lack of symmetry in walking, so slight that an ordinary observer would scarcely perceive the defect.

CASE 8.—M. D., aged 29, who three years ago had a carbuncle situated near the coccyx. In giving her history she spoke of "abscess of the spine," and said that some bone came away after the incision. The patient is tall, has very slight muscles and a poorly developed chest, but is of good color and presents no evidence of tuberculous disease. The cicatrix shown upon the spine does not indicate that there was anything more than a small carbuncle. During three years, however, she has

worn jackets and braces, has been advised change of residence for her health, etc. She was referred to me in order to have a brace applied before leaving for travel abroad on account of her health. Her invalidism continued up to the time when I saw her, in May, 1900. She then complained greatly of pain in the spine and said that she was unable to work. She was immediately subjected to the usual discipline of the gymnasium, with results as gratifying as in the former cases.

CASE 9.—B. W., aged 18. Had typhoid fever in January and February of 1898. On her recovery from the fever it was found that she was unable to walk or even to stand; consequently she was taken about in a wheeled chair, from which she was carried again to her couch or bed. This condition continued until I saw her, in June, 1899. At that time she presented the following conditions: A rather tall and obtuse-looking girl; knees flexed and could not be extended to more than 120 degrees; feet in a condition of equinus, the plantar surface being at an angle of 120 degrees with the axis of the leg; muscles symmetrically atrophied; slight disturbance of sensation. The case was believed to be one of multiple neuritis following typhoid fever. The recovery from this condition is generally satisfactory; hence, a favorable prognosis was given. The deformities were easily corrected. During the subsequent months much difficulty was experienced in re-educating the patient to walk. She had already been informed by a number of physicians that she would be a cripple throughout life, and was so fully convinced of this that her lack of co-operation in the efforts made proved quite an obstacle in the way of progress. She was at first held up by the arms and her feet and limbs were moved for her. This exercise was frequently repeated until she began to put forth some voluntary effort. Subsequently she reached a point where she could walk by the aid of crutches. She was then subjected to regular class work in the gymnasium, being allowed to stand supporting herself against the wainscoting, which extended as high as the window-sill. Gradually she was led on from one point to another, it being necessary at every step to direct her will and to urge her forward to renewed effort. It was only after she had acquired the power of moving about independently with considerable security that she seemed to recover some brightness and to manifest willingness to co-operate in the efforts being made. When she had regained the power of moving about so as to take care of herself, she was not allowed to return to her father and mother, who were aged and unwisely sympathetic, but was sent to live with a brother, who was carefully instructed how to deal with her. He found her employment in a factory, in which she continued to work, making her own living and making constant improvement until her recovery has become complete.

CASE 10.—N. M., aged 21. For some years she has been a source of anxiety to her family because of ill-health, which, upon cross-questioning, seemed but indefinite in character. She had been subject to various spells and spasms. Upon physical examination, no organic disease was found. She was brought to the hospital with the understanding that she was not to be visited by her friends or allowed to return home. Subjected to the usual discipline, she became unconscious on one occasion in the gymnasium, but without using any efforts to restore her to consciousness she was ordered to be carried into the adjoining room, where she was left for about two hours without any attention being paid to her further than sufficient to satisfy ourselves that she was in no danger. At the end of that time she was spoken to sharply and told that, as it was tea-time, she must at once get up and have supper. She responded to this. Only once subsequently was there any manifestation of this kind. While under treatment she improved in general health, became very robust, athletic and cheerful, and returned home in good health and spirits and has so remained.

CASE 11.—F. S., aged 23.. This girl presented a slight lateral curvature of the spine, also round shoulders, and complained of pain in the back and side. She had been unable to work for some years and had been the subject of considerable anxiety to her family. She, too, was subjected to the usual discipline in the hospital. On one occasion, while participating in the regular work, she was seized with a trembling fit, and word was sent to me that she was having spasms. Instead of going to her, I sent word that her work must be continued, that the spasms would do her no harm. Once subsequently, under somewhat similar conditions, she was treated in a similar way by the director who had charge of the gymnasium work. The improvement in her general health and the disappearance of the pain in the back and side were accompanied by an increased alertness and willingness to participate in all the general exercises and games. She returned home, having entirely regained her physical vigor, and from a recent letter we learn that her favorable condition continues.

CASE 12.—H. J., aged 18, had a sprained ankle several years previously and was laid up for some weeks from that cause. A history was given of indefinite pains in the knee suffered at various times; she had had plaster-of-Paris applied and had kept the leg bandaged much of the time. For several years past she had never been entirely free from lameness. When first seen, she could walk only a short distance, using crutches sometimes.

Examination revealed no organic disease in the limb, but there was considerable atrophy. She was allowed to use a light brace for a short time, but was assured that she suffered only

from weakness, which could be cured so that she could leave off her brace. All bandages were removed, massage was given daily, and also, in gradually increasing amount, exercise was given in the gymnasium. The limb rapidly increased in size, the lameness disappeared, and recovery was complete and permanent.

CASE 13.—B. H., a girl aged 15, whom I found in bed looking healthy, bright and well developed. She was the daughter of comparatively wealthy parents, and her mother evidently was over-indulgent. For an indefinite period, probably two years previously, she had been unable to make any considerable exertion, and for some months had not been able to walk more than one block without having pain in her hip and back. On examination, I found no evidence of disease in any joint. There was a very slight postural lateral curvature of the spine. She said that she was free from pain when lying down, and that it was only upon exertion that pain came on. In consequence of this very definite history, which had extended over a long period of time, I refused to make a positive diagnosis on my first visit. Examining on a second occasion, several weeks later, I found the same conditions present. I then made the diagnosis with a good deal of confidence which I had been disposed to make in the first instance—namely, that it was simply a neurosis.

In September last, several months subsequent to my first examination, the girl came into our gymnasium and has remained with us during the year. The time not necessary to be spent with us is spent at a young ladies' college. For several weeks after going there she made a good deal of complaint and had the meddlesome sympathy of the teachers and principal. I found it necessary to speak in very positive terms concerning this matter, assuring them that, so far as her physical well-being was concerned, she was entirely under my charge, that I held myself responsible, and that I must insist upon their carrying out the regulations which I laid down for her if she was to remain in the college. The lady to whom the authorities of the college looked in regard to matters of the girls' health came to see me personally, and finding her a very intelligent and reasonable woman, I had little difficulty in securing her intelligent and hearty co-operation. Since that time we have had clear sailing, and the girl has, during the year, developed into quite a vigorous athlete. She is in the best of health and has unbounded confidence in her own ability to take part in any game or to do any work. No complaints are heard from her regarding pain or disability.

Those who have given most attention to these patients, and have sought to alleviate their ills, will be most ready to admit that great injustice is often done them. When once the conclusion is reached that the train of signs and symptoms manifested is not due to organic disease, but rather due to the psychic attitude of

the patient toward herself, there seems to be a strong tendency to under-estimate the suffering endured and the disability experienced, and in consequence to deal with the patient harshly as if intentional fraud were being practised upon the friends and the medical attendant. On the other hand, the error most commonly made, especially by the friends, is to lay too much stress upon pain and to express an unwise and a misplaced sympathy, which but confirms the unfortunate patient in her wrong course and strengthens the chain of circumstances which make up the vicious circle in which she is moving.

In this connection it would be wrong to free the practitioner from the blame which frequently attends his vacillating course. If uncertain of the exact diagnosis he should have a consultation, or otherwise so strengthen himself as to be able to pursue a course having a definite end in view.

It is unwise and unfair at this point to place too much blame upon those attending directly upon the patient; the difficulties which present themselves, in the effort to sift the true from the false, are so great that it would be unreasonable to expect the family and friends to be able to make the distinction; and the experienced medical man may be taxed to the utmost. When treatment, however, is to be undertaken, this distinction must be clearly made. Exactness of diagnosis is essential and must be the first step in treatment. Next the causes operating to produce a continuance of the disease,—among the most important will be:

(1) Injury to some part generally slight in itself but magnified in importance by some attendant circumstances;

(2) Disease, recovery from which is not recognized, or a consequent disability which is greatly magnified, attended by a fear that the natural use of the part may be harmful.

A large number of the cases seen had their starting point in either of these ways. It is a crucial point to be able to distinguish sharply and to estimate correctly how far we may go in restoring the suspected joint or member to its normal function. I am convinced that the orthopedic surgeon frequently falls into the temptation to continue, to the detriment of his patient, protection of a joint by means of braces much longer than necessary. When it is safe to restore any part to its intended use, it should be done not only in the interest of the part but because of its general effect upon the patient.

(3) *The Home Environment.*—Separation from the surrounding circumstances to which the patient has been accustomed must be practised in the majority of cases. I have not said isolation; for I am convinced that such a course is seldom wise. There may be patients whom it is wise to separate from all the world except the trained nurse and the medical attendant, to be kept in bed, to have massage, and to be dieted in order to increase "fat

and blood," but they are not the cases that the orthopedic surgeon is called to advise.

It is not so much a cessation of activity—mental and physical—that these unfortunates need as it is that their energies shall be directed in right channels, that they shall be led not to think so much of themselves, but to centre their attention upon interests and aims outside of their own personality, in a word to beget in them and to cultivate a true altruism and to suppress a corresponding, a debilitating egotism. The surroundings should be such as to arouse interest, new if possible, cheerful always, having an evident useful purpose, calculated to inspire self-confidence and to suggest personal responsibility. The course adopted should be marked by regularity and system, should not be hap-hazard on the one hand nor fall into mere routine on the other.

It may be that the patient by long continuance has fallen into a state nearly approaching physical and mental imbecility. If so, some one must do the initiatory thinking and assume a control that is akin to hypnotic control, must exert a force of manner and action which will be substitutionary; but at every step of the way the patient must be shown that personal effort is called for and is quite possible and practicable.

"The Weir Mitchell system of treatment marked a great advance in the management of such cases, but it is essentially passive; the active element is wanting. The patient is acted upon by drugs, diet and massage, by the will power and force of character of other persons; but little is done to call out, to educate the volition of the patient. She is kept in bed, secluded from friends who would show an unwise sympathy, fed well, and given massage and rest. In fact, rest is made such a prominent feature of the treatment that his plan is almost always spoken of as the 'rest cure.' It falls short, inasmuch as it is but negative in character. Systematic training to self-reliance and renewed confidence are needed to render the cure effective. Though the patient should seemingly regain health, it is soon found that life is not a negation, but that its problems must be grappled with in a positive manner and solved. Massage, good diet, etc., are important, but in order to establish permanent results the volition must be called into exercise."

Frequent mention made in this paper to the orthopedic gymnasium calls for some explanation as to the place and importance assigned it in the management of these patients. While the general work done is in itself helpful as a means of obtaining exercise, yet it is not chiefly for that reason that it is employed. It has been said that the chief desideratum is discipline and the creation of an ideal toward which the patients may reach, the establishing in each one of a clear conception of personal duty and responsibility, and the confidence that application will reach the ideal

and will insure that the responsibilities imposed by society will be creditably borne. I do not know any means more ready to hand and more efficient as an aid to discipline, more helpful to free, genial, wholesome association with one's peers, than is offered in a properly conducted gymnasium. It is not held that any special movements performed have a specific influence in their treatment, but while these in themselves are helpful, there is a power far beyond this. A successful, tactful director has an opportunity to cultivate an *esprit de corps*, and a concentration of attention upon something outside of self that is not easily secured otherwise. It requires knowledge, good judgment, tact, firmness, and a manifest devotion to the interests of others, to direct this work successfully.

Class work has marked advantages over individual work, as it insures the greatly desired association with other persons, and affords the director the opportunity to bring into full play the pedagogic practices based on emulation.

"Every one who is concerned in directing the treatment of the patient should be imbued with the most implicit confidence that the course pursued is a wise one, and must be followed out with regularity and system. The lives of these patients must be brought very fully under control; no trifling matter must be allowed to stand in the way of carrying out whatever regulations are deemed important. By such influences they must be helped to act with good common sense until they have been enabled to see the folly of their former course, and become inspired with confidence that they can conduct themselves in a rational manner. Gymnasium training continued every day affords an opportunity to exercise the necessary discipline to bring into exercise and co-ordination the faculties and powers tending to produce rational behavior in a healthy individual."

"The principles of treatment employed are not new; the means used in applying these principles have not received much attention. In order to succeed in the management of these cases a prime requisite is a positive diagnosis. A line of conduct which evinces uncertainty and vacillation is fatal to success. The line of treatment to be adopted should be well defined in the mind of the surgeon; his instructions to assistants should be definite, and no trifle should induce him to allow any departure from the prescribed regimen. While the nature of the work to be done and the mode of life to be followed are very important, yet the spirit in which these directions are enforced is of still greater importance. It is essential that the patient form the impression and attain to the firm belief that the surgeon is master of the situation. It is not sufficient to accomplish this to use strong words and confident assertions. His conduct must bear out his professions."

(4) *Heredity*.—Heredity is frequently both a direct and an

indirect cause, first, on account of the natural legacy which it implies, and then because such parents constitute a hurtful environment. This should receive careful consideration in giving a prognosis.

Actual disease or disability should be remedied as far as possible by surgical or other means. The neurosis may not be the only, and possibly not the chief, disease present. If there is cardiac disease, indigestion, flat-foot, curvature of the spine or any other abnormal condition, it should receive the most careful attention, and its removal or improvement will do much to further the attainment of the end desired.

In Case 9 marked contractures of the muscles controlling feet and knees had occurred, and it was impossible to make any progress until this condition was remedied. When there is actual cause present to account for loss of function, it is quite as much an error in treatment to overlook or under-estimate it as it is to exaggerate slight or imaginary ills.

The general physical conditions present should receive attention; for example, the habits as affecting the action of the bowels and the bladder, occupation, diet, exercise, etc. Most erroneous and ruinous practices will often be discovered. In Case 1 reported here a natural motion of the bowels had not taken place for years; the bladder was never empty and no effort was made to empty it, but a urinal was kept constantly in bed with the patient, and the urine was allowed to dribble away. All such conditions must be grappled with by a strong hand and regularity restored.

Nutrition should be carefully considered; such food should be supplied and such regulation of diet should be secured as will insure good nourishment.

In all that pertains to the life of the patient a strict regimen should be maintained. If home influences have been hurtful, friends and relations should not be allowed to visit or correspond with the patient. Association with other patients similarly affected may be injurious, unless it come directly under the eye of a competent attendant. Frivolous and foolish reading and conversation, the officious interference of an indiscreet nurse, or the well intended but meddling attentions of other patients may be a source of much harm. The manner of life of the patient for every hour of the day should be known and should be guarded from every harmful influence. Discipline, always kind, but clear-cut and unwavering, must be maintained. "The one word which expresses more than any other the dictum of treatment, is discipline; not only the discipline which calls for submission, but that which succeeds in educating the patient to be self-reliant, not simply to follow directions given by another, but to exercise her own judgment and to become possessed of the conviction that

her powers are subject to her own will, and may be made to yield not an erratic, but an intelligent obedience."

Omission of the advocacy of treatment by drugs, baths, electricity, etc., does not mean that the writer undervalues these aids; they have received ample consideration elsewhere.

Education in its widest sense and properly understood as applied to them, contains the greatest hope for these patients; it has within it the germ of all the harvest of good which they may reap. It implies, after the confidence of the patient has been secured, instruction as to the harmful influences which have been at work whether in the home or elsewhere, the formation of habits of diligence, the avoidance of gloominess and moodiness, on the one hand, and of frivolity and sentimentality on the other, an earnest outlook upon a society, appreciation of the fact that there is work for each one to do, and victories to be achieved which can be accomplished by application and intelligent, purposeful exercise of the individual will.

**THE TELEPHONIC PROPERTIES OF THE INFLAMED
ABDOMEN: A SIGN NOT HITHERTO DESCRIBED,
DUE TO PARALYSIS OF THE BOWEL
IN PERITONITIS.***

BY GEORGE A. PETERS, M.B. (TOR.), F.R.C.S. (ENG.),

Associate Professor of Surgery and Clinical Surgery University of Toronto, Surgeon Toronto General Hospital, Surgeon Victoria Hospital for Sick Children.

THE sign to which I invite your attention is, in brief, the prominence with which the heart and breath sounds are heard over the tense, distended abdomen of peritonitis. In auscultating the abdomen with a view to ascertaining whether there were paralysis of the bowel in cases of appendicitis, typhoid perforations, traumatism, and other conditions which stand in a causative relation to peritonitis, I have observed that where the gurgling sounds due to the passage of gas and liquid feces from loop to loop of the bowel by peristaltic action, are absent, the heart sounds are invariably very plainly to be heard over the whole abdomen, from the ensiform cartilage to the pubes, as well as from flank to flank. The breath-sounds are also sometimes audible, and in intense cases, particularly in children, both inspiratory and expiratory sounds may be heard, and while the first sound of the heart is most distinctly audible, the second sound may also frequently be plainly detected. I have made some observations upon the audibility of the voice sounds under the same circumstances, but am not prepared

*Read before the Dominion Medical Association, Montreal, September 17th, 1902.

at present to make any statement thereon, beyond remarking that in one case at least any unusual accentuation was conspicuous by its absence.

It was further observed that in distension of the abdomen, unassociated with inflammatory conditions, such as in flatulence due to indigestion, and in chronic obstruction with great distension of the abdomen, but without inflammation or paralysis of the bowel, the heart and breath sounds are not heard. Neither are they heard in cases of distension due to the collection of ascitic fluid or tubercular fluid unassociated with acute inflammatory conditions.

The facts of the problem under consideration seem to be (1) that the heart and breath sounds are not heard over the abdomen in health—at all events, not below the area of the stomach; (2) that they are not heard in the non-inflammatory conditions of distension above mentioned; and (3) that their prominence in inflammatory conditions is greatest when the gurgling sounds of peristalsis are entirely absent.

The inference from these facts very obviously is, that the condition responsible for the phenomenon is the paresis or paralysis of the musculature of the bowel wall due to the inflammatory disturbance. It is, therefore, submitted that if these observations are verified, the audibility of the heart and breath sounds over the abdominal areas is a sign of value in the diagnosis of paralysis of the muscular coats of the intestine, and also that it has some useful prognostic significance.

EXPLANATION OF THE PHENOMENON.

In an endeavor to arrive at an explanation of the phenomenon under consideration, one may attempt to contrast the intra-abdominal conditions in health with those of disease. It may be taken as true that under no circumstances does the gas contained in the intestine form a continuous column from end to end of the bowel. In health its disposition is governed by the weight of the fluid in each coil, and also by the different degrees of peristaltic contraction in different areas of the bowel wall. Thus, in a healthy condition of the bowel, the gas therein is disposed in certain well-defined and circumscribed compartments, each constituting for the time a complete retainer in itself, with vital walls possessing a muscular tonicity which varies widely in response to impulses from the nerves of the splanchnic plexus. Thus, though adjacent coils necessarily exercise mutual compression on one another, and as a result become so disposed anatomically that the general pressure within the abdomen is equal in all directions, the autonomy of each section or enteromere makes it possible that the bubbles of gas in one coil may be under a degree of pressure quite different from that in any of its neighbors, and thus the total

amount of intra-abdominal gas is subdivided into moieties, chemically similar, perhaps, but heterogeneous in character as regards degrees of tension. For example, if the tension in one coil be x units of pressure, that in its neighbors may be a , b , γ , or z . This fact, as evidenced by the difference in the pitch and quality of the percussion note in different areas, is demonstrated daily in percussion of the abdomen, and is within the experience of every physician and surgeon. No argument is needed to demonstrate that the sound-carrying power of gas so disposed is reduced to an inconsiderable minimum.

But when there is paralysis of the walls of the intestine, the resulting flaccid and atonic condition of the coils permits, by mutual compression, an entire change in the pressure conditions of the total amount of gas contained within the abdomen. Under these circumstances, all tonicity is lost, and the disposition of the gas is controlled solely by mechanical aërostatic laws. The result is that the coils of intestine containing the gas, instead of being more or less cylindrical, independent, vital containers, become quadrilateral, hexagonal, or octagonal, etc., their shapes depending entirely upon the effects of mutual compression, and the tension of the gas in each coil is precisely the same as that in its neighbors. Thus the entire distended abdomen, from the pericardium and diaphragm to the remotest confines of the cavity becomes, practically and acoustically considered, a continuous column or compartment of air or gas of uniform tension, interrupted merely by flaccid and inert partitions, which, when the tension is uniform on both sides, offer a minimum of obstruction to the passage of sound waves. The result is that every respiratory and cardiac sound is conveyed through this column or layer of air to the ear of the auscultator, or to the mouth of the stethoscope. In fact, the gas so contained constitutes a conductor of sound on the precise principle of the stethoscope. Moreover, its capability of transmitting sound is doubtless enormously accentuated and amplified by the dense board-like condition of the musculature of the abdominal wall, which is almost always present in these circumstances. Also the amount of gas is generally greatly increased as the result of intra-enteric decomposition. The expression, "tight as a drum," is often applied to the abdominal wall in peritonitis, and this no doubt well expresses the condition, for the abdominal wall becomes under such circumstances an exceptionally efficient sounding-board, of the same nature as the drum-head, viz., of a tightly stretched animal membrane.

PROGNOSTIC SIGNIFICANCE.

When first the sign intruded itself upon my observation, I was disposed to think that the prognosis in cases where the symp-

tom was well marked was almost necessarily fatal. But further observation has shown that the symptom may be present even in cases of localized peritonitis, as in the more acute forms of localized appendicitis, in pelvic cellulitis, etc., and that recovery very frequently follows, even though the above-described symptom may be well marked. Sometimes also when the cardiac and respiratory sounds are heard, with considerable distinctness, an occasional peristaltic gurgle may be heard.

Moreover, it has been observed that in cases of temporary paralysis of a non-septic character, such as sometimes follows prolonged aseptic abdominal operations with exposure of the bowels, the sign described is sometimes present for a short period of time. In all these cases, as the sounds produced by peristalsis reappear, the heart and breath sounds progressively recede in prominence. These considerations lead one to infer that the paralysis is probably due to interference with the function of the splanchnic plexus and the nerves distributed from it, rather than to a local effect of sepsis or traumatism upon the musculature of the bowel itself. It would appear that the absorption of septic matter from even a localized peritonitis, such as in appendicitis, or traumatism of the peripheral filaments of the splanchnic area, as in handling or exposure of the bowels to the air during operation, must produce a profound and incapacitating effect upon the splanchnic plexus itself, thus producing the paralysis which leads to the development of the sign described.

In conclusion I would say that after a pretty extended period of observation and study of the sign under consideration, it is my opinion that the distinctness with which the heart and breath sounds are heard over the abdomen bears a direct relation to the degree of paralysis present, and if the paralysis be due to sepsis, as is usually the case, the prominence of the symptom has high prognostic significance.

102 College Street, Toronto.

**CAESARIAN SECTION TEN MINUTES AFTER DEATH
OF THE MOTHER—CHILD ALIVE.**

BY W. J. FLETCHER, M.D., T. S. WEBSTER, M.D. AND W. J. WILSON, M.D.

Mrs. T., aged 35. As a child had measles, but none of the other diseases of childhood. All her life was subject to sick headache and dizzy spells, but considered herself healthy. Had a great deal of indigestion, and was always constipated. Had hemorrhoids. Has been married twice, in all fourteen years. Pregnant for the third time, about eight months. Previous pregnancies normal. For first three or four months of last pregnancy vomited a good deal, but had no treatment for it. On October 16th last had an unusually severe attack of headache and sick stomach, which lasted, with short intermissions, for four days. After this felt well with the exception of dizzy spells more or less every day.

Nov. 11th, at 4.30 p.m., while engaged cooking supper, was seized with vomiting. Her dinner came up undigested. She lay down on a lounge and became unconscious, and Dr. W. J. Fletcher, of Euclid Avenue, her family physician, was called. He found patient unconscious and pupils very widely dilated. After about five minutes she recognized doctor and friends, and complained of severe pain in her head and sick stomach. She then lapsed into a deep coma. Some urine was drawn by catheter, and found Sp. Gr. 1020 acid, and no albumin. This was the same as on several previous examinations.

Dr. T. S. Webster was called at 9.15 p.m. in consultation, when cerebral hemorrhage was diagnosed and emptying the uterus suggested. Preparations were being made for this, and Dr. W. J. Wilson was telephoned for by Dr. Webster, who had gone over to the Western Hospital. On his return with Dr. Wilson, Dr. Fletcher said patient had been dead about ten minutes. On examination the fetal heart could be heard.

Cæsarian section was rapidly performed. The Patient died at 10.35 p.m. The child was removed from the uterus at 10.45. The cord was cut and let bleed for a while. The blood from it was very dark. Artificial respiration was resorted to and the lungs inflated by blowing in the mouth. For the first five minutes the only improvement was a better heart-beat as heard by the stethoscope, then a faint effort at respiration, and after forty minutes' steady work the child was breathing freely and was handed over to the nurse.

The child lived twelve hours. The result might have been better for child if delivered sooner, as suggested by Dr. Fletcher, but the friends would not at that time consent to the section.

Selected Articles.

A BRIEF REVIEW OF SOME OF THE TUMORS OF THE PERIPHERY OF THE BODY, THEIR PATHOLOGICAL CHARACTERS AND TREATMENT.*

BY THOMAS H. MANLEY, M.D., PH.D., NEW YORK CITY.

Professor of Surgery, New York School of Clinical Medicine; Visiting Surgeon to the Harlem and Metropolitan Hospitals, New York.

My aim in the present undertaking is not so ambitious as the title implies, since this would in a large measure embrace the whole field of oncology. My purpose is rather to consider briefly some of the dominant characters of a few new formations which originate in the integument or lie in close relation with it; some of an ordinary benign, and those of a malignant type. Their finer morphological or mixed characters will be passed over, nor will that controversial aspect of the subject, their causation, be entered upon. Deep visceral and very rare growths will not be considered, and no attempt will be made in the matter of classification.

Regionally, these neoplasms may be divided into those of the *head, neck, trunk, and extremities.*

THE HEAD.

New growths over the cranial walls, of any description, are comparatively rare; malignant tumors are almost never seen here; wens, sebaceous or serous cysts are, however, not very frequent. But even these seldom occur except in those past middle life as a rule; nor am I aware that they ever undergo malignant changes. One case of a large fungous fibro-cystic tumor of the scalp has come under my care in an aged, retired clergyman. It was destitute of a hairy covering, and was so eroded on the surface that it bled freely on the least friction. On excision the parts healed kindly.

Gummatous tumors of the scalp, or those lodged in the diploic spaces, are not infrequent in specific disease. The scalp is a very highly vascular structure and prone to erysipelalous invasion, in wounds and operations on diabetic patients.

Nevoid tumors of the scalp are not very infrequently seen in infants. This form of angioma tends towards spontaneous dispersion in nearly all cases.

* Read before New York State Medical Society, at Albany, January 23th, 1902.

Although *lipoma* is almost invariably a *subcutaneous* growth, one rarely or never encounters it in any part of the scalp; possibly the general absence of fat in the connective tissue elements may explain this circumstance.

THE FACE.

Small, non-malignant growths involving the glandular elements of the cutaneous envelope of the face are quite common; they are mostly congenital moles, papillomata, or sebaceous cysts. The latter, under the designation of chalazia, often involve the Meibomian glands in the subconjunctival tissues of the upper eyelids. These diminutive nodules scattered over various areas of the face are obnoxious, rather as a cosmetic blemish, than for ever being a source of inconvenience, except occasionally after middle life, when the papillomata may degenerate into malignancy. Angiomata of the various types may occupy any area of the face, and unlike those of the scalp, they tend with age to augment in area and never undergo spontaneous dispersion. Lipoma, teratoma, and cystic neoplasms are uncommon over these exposed parts, at least, in early life.

Malignant growths of the facial structures are clinically of three varieties: (1) those invading integumental structures; (2) those occupying the lower lip, and (3) those forcing their way through from the underlying osseous parts. In periosteal sarcoma of the facial structures a tumor may attain enormous dimensions without inducing gangrene or ulceration of the integument.

Labial epithelioma presents some remarkable peculiarities. I have never seen a case in which this type of epithelial hyperplasia involved the upper lip. It is quite invariably restricted to the male sex, as is esophageal cancer. Its *permanent* destruction in the early stages is simple and certain, in nearly all instances, without any description of cutting operation. The simultaneous turgescence or infiltration of the submaxillary glands present in many of the cases, arises rather from a transmitted irritation by the absorbent vessels than by a consecutive epithelial dissemination, as is commonly thought, because when the local ulceration is once soundly healed this adenoid tumefaction promptly vanishes.

Lupoid growths present many of the clinical aspects of malignancy.

THE NECK.

We may define the neck as that isthmus which connects the head with the trunk; bounded anteriorly by the upper border of the sternum and the lower border of the chin; laterally by the lower border of the inferior maxilla and upper border of the clavicle; posteriorly by the occipital protuberance above, and the first dorsal vertebra below.

In no other region of the body will we find new growths so numerous and so various, except the female pelvis, congenital, inflammatory, or neoplastic. Sarcoma is not very uncommon here, but primary cancerous growths very seldom bud forth from any of the epithelial elements of the neck.

The *cervical tumors* may be clinically and pathologically divided, in a general way, into three classes. First, the infective adenomata of infancy and childhood; second, the cystic formations, branchial and other varieties of adult and middle life; and third, the malignant, or those of advancing years.

Scrofulous tumors.—These are tumefactions of early life lodged in any of the cervical triangles, and are superficial and deep. A large proportion of them spontaneously disperse; others go on to suppuration with more or less destruction of the lymph nodes; while in some caseation or calcification occurs, with ultimate death of the infectious bacteria and resorption of the residue of suppuration. When these tumors are permitted to go on to suppuration they sometimes break through the integument with very disfiguring effects. Whether these processes ensue from infection primarily through a mucous ulcer, or through hematogenous contamination, is yet uncertain. It is, however, altogether probable that the predisposing cause is a cachexia, inherited or acquired. In any event, they rarely, if ever, imperil life from a dissemination of their morbid elements by way of the circulation.

Branchial, thyroid, retention or other cysts usually appear after adult years are attained. The mucous cysts of a branchial origin usually leading into the pharynx, or the colloid variety so common in the thyroid body, for some unknown reason occur with rare exceptions in the female sex. We may usually recognize the true character of a branchial cleft giving rise to a tumor by its tendency to periodically open and close; moreover, its discharges, besides corpuscles, contain pavement epithelia and mucous globules. The cysts may open through any of the cervical areas as low down as the sternum. Branchial passages may originate from the pharyngeal vault, pursuing a most tortuous course, and open through the integument; they may be incomplete, *i.e.*, closed at the inner or at the outer orifice, or both openings may be closed and the secretions confined, as in a retention cyst.

Thyroid cysts.—Serous or colloid cysts of the thyroid are generally unilateral. They vary in volume, are commonly single, and sometimes exercise so much pressure as to lead to the complete absorption of the lobe involved. They may displace the trachea and impede respiration, but seldom, if ever, lead to dangerous tracheal stenosis; nor does it appear from the literature of the subject that cystic disease of the thyroid ever so impairs the function of the gland as to lead to myxedema, so commonly noted where there is parenchymatous degeneration. When these cysts attain consider-

able volume, very large arterial trunks penetrate their thick investing membrane. Several of these cases have come under my notice which underwent marked retrogressive changes. This was most noteworthy at the menopause. They rarely took on purulent or inflammatory changes. Various types of cystic disease may occupy any of the antero-lateral areas of the neck. One of the most noteworthy is the remarkable form of congenital cysts which is situated at the inner aspect of the sterno-mastoid, at its sternal head, and is an infective factor in producing wry-neck in infancy. Fibrous, fibrocystic and fatty tumors abound in these areas. I have encountered a peculiar type of rapidly recurring fibroid tumors, sometimes arising in the periosteum of the lower jaw or in close proximity to the parotid gland. In one case, operated on by me, the growth very rapidly recurred, and attained the size of a large California orange. On section it was found to consist mainly of smooth muscle fibre, in a coarse fibrous reticulum. It had a thick capsule without any very intimate adhesions. An experienced microscopist assured me that it had the common characters of a uterine myoma. It may be added that now, after an interval of five years, there has been no recurrence.

The greater number of benign neoplasms of the neck take their origin from beneath the deep cervical fascia, under the thinnest part of the integument and over the course of the larger blood trunks.

Malignant growths.—Malignant formations, exclusive of lympho-sarcoma, are rarely encountered in any area of the neck, except as a consecutive invasion.

Periosteal and fibroid sarcomata are not very infrequent in the submaxillary areas. These masses may attain considerable volume and impede respiration or deglutition.

Lympho-sarcoma is diffuse, always attended by a widespread infiltrate of round cells into every kind of tissue contiguous with it. It begins in an isolated lymph ganglion and rapidly extends into the whole superficial and deep chain. The skin overlying these masses is tawny, thickened, and so infiltrated as to constitute an essential part of the hyperplasia. The tumor is fixed, hard and indolent. Pain and distress only result from the pressure on nerve trunks and on the tubular structures passing through the neck. In all cases of this character coming under my observation the new growth was unilateral; in all but one the tumor was anterior to the mastoid process, some of them involving the parotid or the sublingual gland. In one case, an aged French Canadian lady from Troy, the growth was in the posterior cervical triangle, freely involving the trapezius muscle and extending under the cerebellar fossa of the base of the skull. In another case of a man of sixty-five, an adeno-sarcoma in the anterior triangle was so widely infil-

trated that in its incision the greater part of the sterno-mastoid muscle had to be taken away with the growth.

Carbuncle.—New growths rarely appear on the posterior aspect of the neck, but it is a favorite site for a very dangerous and destructive form of furuncle. This lesion, though infective and suppurative, should most certainly be included with neoplasms. It is true that it is essentially inflammatory; but so are lupoid and actinomycotic formations, and some believe that cancerous are also. Moreover, carbuncles may assume many of the physical characters of malignant action; they tend toward widespread diffusion and gangrene; they are accompanied with profound constitutional disturbances and excruciating pain. Like cancer, their local action is undoubtedly predisposed by a vice of the constitution; glycosuria usually co-exists.

Carbuncle begins as a minute papule which, if not destroyed early, soon attains to large dimensions, its base and borders being of the hard, cartilaginous consistence of true scirrhus. Pus burrows largely under the very thick and dense integumental investment.

THE THORAX.

Lipoma, keloid and epithelioma appear with greater frequency over the thoracic surface areas than elsewhere. The special sites of tumefactions and new growths are the axilla and mammary glands in women. The lymph ganglia become very commonly tumefied without any definite cause, without any apparent focus of local infection, within the radius of the lymph vessels converging here. Sometimes they break down and suppurate, and, again, undergo spontaneous resolution. In cases of phlegmon, felon, or infected sores of the upper extremities, these nodes may become markedly swollen, to resolve and vanish with the subsidence of inflammation in the distant parts. Tumefaction of these nodes is quite invariable in all neoplasmata of the mammary gland, whether they be malignant or not. After the destruction or avulsion of the mammary tumor they again frequently subside to their normal contour. On the recurrence of the disease these glands again enlarge, assume a stony hardness, and often break down. Just what role these ganglia in the axilla play in the progress of cancerous disease of the breast is by no means clear, although it was recently supposed that they acted as depots for suffusion, and were early infiltrated by specific cancer cells; hence, with the ablation of the mammary gland, the axilla and supra-clavicular spaces were cleared of these.

Observations have, however, demonstrated that the procedure in no manner whatever influences the recurrence of malignancy or prolongs life.

THE RESECTION OF THE AXILLARY AND SUPRA-CLAVICULAR
LYMPHATIC NODES A USELESS MUTILATION IN
OPERATION FOR MAMMARY CANCER.

M. Paul Raymond, Desnos and Condry (*Revue Des Maladies Cancereuses*, Nov. 20, 1901), all unite in declaring the removal of tumefied absorbents in cancer as a needless and often harmful procedure. Raymond well observes, that the mere tumefaction of the gland by no means implies that it is the seat of cancerous infection: First, because cancer is certainly not an infectious disease. Second, because the ganglia are a defence against the passage of lethal elements into the circulation. Third, that since the teaching of Metchnikoff, it is well known that cancer cells, as well as others, secrete a toxic substance arrested by the lymph-glands.

Hence, the rational inference is, that we should leave these nodular structures undisturbed. Remove the cause, says this author—the site of active malignant action—and the intumescence will promptly disappear. Moreover, he adds that a critical study of metastatic invasion will readily demonstrate that the general channel of diffusion is the circulation. In the epitheliomatose melanotic, a type we regard as the most malignant and infectious, we note no implication of the lymph-nodules; and “perhaps,” adds M. Raymond, “because of this loss of defence action of the absorbents, we observe the disastrous course of this form of the disease.”

Dr. E. Desnos records an example of not only wide-spread tumefaction, but suppuration and sloughing in the inguinal lymphatics, in a case of cancer of the verge of the penis, in a man of 47, in which, after excision of the ulcerated verge, the disease action in the groin promptly cleared up. The author says, that the disease appeared six months previously in the form of vegetations; pain was atrocious with erections. Cautery aggravated the trouble. A vast adenopathy widely occupied both inguinal regions, extended into the thighs, the lower part of the abdomen and prepubian regions. Desnos says, “I did not touch the ganglia, as I knew it would be impossible to enucleate so wide-spread and deeply infiltrated a mass.”

After excision of the verge, the specimen was examined by M. Brault, who pronounced it epithelioma. The patient, who survived six years, had no relapse.

In fact, adenopathic tumefaction conveys no more significance in a cancerous than a chancreous ulcer. Remove the source of irritation and tox-irritation. The glands will subside of themselves.

Mammary tumors contribute a large share to operative surgery. The benign type of mammary tumor is varied and numerous, the most dominant being dermoid or fibro-serous cysts, or intumescence from deep-seated tubercular infiltration. The latter is commonly entirely without marked constitutional disturbance.

I have seen both of these simple lesions treated on the lines of malignancy, with the dreadful mutilation of modern operations for malignant disease of the lacteal gland. Diagnosis is sometimes attended with difficulty here, but time and patient study of the case will generally dispel doubt. The symptoms may deceive the careless and inexperienced, and no one will abide by the microscopical examination of sections without the confirmation of the clinical history.

*Malignant disease or fatal tumors of the breast are, unhappily, only too common, and it is hard to conceive of a more dreadful affliction. The sufferer is entirely doomed, absolutely no hope remains of complete recovery from the disease, though fortunately, in a considerable number, a few years' grace is permitted, or recrudescence may only light up after a very long period of latency, meanwhile an intermittent disease may carry the patient away. No single instance of permanent recovery has ever come under my notice in mammary cancer, however treated; the nearest to it was an old lady of seventy-six years, who had an atrophic scirrhus of the left breast of twenty-three years' duration; it yet presented an open ulcer, discharging an odorless, serous fluid, but of the gland only a small nodule remained. In only one patient, a woman of thirty-six, who had borne six children, have I seen simultaneous scirrhus of both breasts; here the disease ran a very acute course, taking on the form of cancer *en cuirasse*.*

Keloid, or so-called "spurious fibrous tumor," is sometimes seen over the superior areas of the thorax. It appears in welts or large, hard, raised ridges, at times covering a large area. This curious lesion is most frequently noted in scars after wounds or burns, and is said to rapidly recur; but one of the largest keloids I ever saw, lying over the right subclavian region of a young man, was entirely spontaneous and after its excision never recurred.

THE ABDOMEN.

Growths which appear over any of the areas of the lower segment of the trunk are almost invariably of an intrinsic origin, *i.e.*, they spring from some intra-abdominal organ or structure, or, perchance, are largely made up of the organ itself. External to, and independent of the aponeurosis, growths very rarely occur. Lipoma is the most common tumor found here, though even this often presents a most delusive superficiality, as on dissection we will discover in very many that it is lodged deeply in the inter-muscular planes, or even extends into the subperitoneal space.

Cancerous growths rarely appear over the abdominal surfaces, However; a year ago a case came under my care of colloid cancer in the integument just above and to the right of the umbilicus. It consisted of a hard node which had projected through the skin, presenting a granular, highly vascular surface, bleeding on the

least friction. Surrounding it was a zone of purpuric papules deeply discolored by a dark pigment. On excision the parts were divided wide of the growth, which infiltrated not only into the parietal peritoneum, but also into the underlying omentum as well. The parts united promptly; signs of generalization and metastatic invasion of the liver and stomach were in evidence. Three months after the operation she died.

THE TESTES.

The testes and spermatic cords are appendages of the abdomen. Neoplasms of the most diverse forms abound here. Several of them present the histological characters of those arising within the ovary and broad ligaments of the female. The most frequent and notable enlargements in the scrotum, not of an acute inflammatory form, are from *serous formation*, and *serous cysts*. The former may occur as an effusion into the infundibular fascia of the cord or into the tunica vaginalis; the latter occur most commonly in early infancy and late in life. The cysts most numerous begin in the epididymis, in the hydatids of Gerales, or the Wolffian bodies. They present many of the general characters of a hydrocele, but as their effective treatment differs widely from that called for in serous effusions, their correct diagnosis is of great importance.

One of the most common and serious enlargements of the testes arises in consequence of tubercular suppuration. After it breaks its way through the overlying investments, and the ruptured fibrous envelope of the glands permits its pulpy parenchymatous substance to escape, a large, vascular, fungating surface presents, very similar to the cauliflower excrescence of cancer. In the greatest number of this class, the primary infection is in the epididymis. Cases of tubercular testis are very frequently purely local affections, though we will occasionally encounter them when the lungs are involved.

Dermoid Cysts of the Scrotum and Testis. Dermoid cysts of various types are found in the scrotum. They are said to most usually spring from the base of the spermatic cord where the epididymis joined the testis, in the vestigial relics of the Wolffian bodies.

They may have very thick capsules, are indolent and grow slowly, being composed of highly organized structures. They seldom take on purulent changes, though we have reason to believe that in early life very many of them undergo atrophic interstitial changes and disappear by resorption.

A most remarkable case of a vast dermoid cyst springing from the epididymis came under my care, four years ago, in a man of sixty-three years. The mass weighed over four pounds, and was accompanied by an inguinal hernia of the same side. The vast

mass was supported and borne about by a leather sling suspended from the shoulders.

Funiculocele, lipoma, bubo and abscess in the inguinal regions in the male may present so many and complex features in common with hernia that none but the most cautious and experienced can differentiate one from the other; again, any one of these tumefactions may coexist with hernia.

THE FEMALE ABDOMEN.

When a woman speaks of having a lump over any of the ventral areas, we almost instinctively suspect either a hernia or a tumor of pelvic origin; but there are masses presenting at her abdominal outlets which are neither. The most important and interesting are those which appear at the outer aperture of the canal of Nuck, those thick-walled serous cysts which are often trussed for years under the assumption that they are "ruptures." They appear most frequently in those who have never borne children, and are commonly found on the right side. They are diminutive in volume, very sensitive, and more or less painful at menstruation. They may appear alone or may be complicated with an epiplocele. An early recognition of these cysts will lead to a permanent and effective cure.

VAGINAL OUTLET.

Growths of the vaginal outlet are not numerous. Of the benign, one of the most frequent is a small, papillary, highly vascular tumor about the size of a small pea, situated in the vestibule at the margin of the meatus urinarius. This fleshy excrescence, or *caruncle*, may be the cause of great distress in urination, and the signs of its presence may be misinterpreted for those of vesical disease.

Venercal condylomata sometimes sprout out in great cauliflower masses from the labium majus. In a young woman of twenty years, I have seen one of these masses as large as the two fists.

In the submucosa of the labia various cysts occur. A most remarkable example of a branchial cyst came under my care several years ago, appearing near the fourchette, its canal extending far up the inner wall of the vagina.

Primary cancer may invade any area of the vulvar outlet.

VERGE OF THE ANUS.

At the anal outlet, and the tissues contiguous thereto, but few new growths occur, exclusive of hemorrhoids or condylomata. Some few remarkable examples of branchial clefts appear there. In one of my own cases the enclosed Wolffian duct was large enough to admit the little finger, and extended up along the pos-

terior wall of the rectum six inches, but had no communication with the intestine. It freely secreted an opaline, glairy substance devoid of any fecal admixture. These are known as sacro-coccygeal, tubular, dermoid cysts, or post-anal gut. There can be but little doubt that no inconsiderable number of cases of so-called "fistula in ano" in vigorous young subjects belong to this class of pathological conditions.

THE MEMBERS.

These appendages of the trunk, the upper and lower extremities, are rarely the site of any kind of large benign growths. The most notable examples of large neoplasms encountered at the articulations or in the bone shafts are large gummatous nodes, or osteo-sarcoma in the cancellous tissue of the heads of the large bones. Osteo-chondroma most frequently seizes on the phalanges, sometimes attaining very large dimensions and occupying more than one finger simultaneously. They are invested by cartilage and lie deeply in the same substance.

Bursae mucosae. Among the many benign formations seen on the surface areas of the limbs those connected with the synovial structures are the most numerous. These are the housemaid's knee and the bursae mucosa, so commonly seen along the course of the flexor and extensor tendons at the wrist. They may occur at the elbow or even the trochanter major. The distended, inflamed bursa over the patella may occur in the male as well as in the "housemaid." The etiology of these pouches is somewhat obscure, though they rarely appear except among working people. Ganglia at the wrist or dorsum of the hand are seen with equal frequency in both sexes. They are usually freely movable, and lie superficially in their external aspect. They sometimes provoke troublesome neuralgic pains in the fingers with weakness and stiffness in the wrist or fingers. Many of these ganglia disappear spontaneously, others persist for years. Some of these result from a rupture of the tendon sheath or spring from the carpal or wrist-joint.

After about twenty-seven years' experience in practice, private and public, I cannot recall ever having seen an example of primary cancer involving any of the tissues of the members. Gummatous tumors here are frequent in those suffering from specific disease, most commonly, however, in the lower extremity.

The heads of the larger bone shafts are at times the seat of diverse neoplastic or hyperplastic changes which greatly augment their volume and tumefy the overlying soft parts. To readily differentiate one condition from the other is often a task of great difficulty, but it must be accomplished in order to make room for rational therapeutics. These pathological conditions comprise: First, *tubercular infection*, so frequently seen in chil-

dren; second, *suppurative osteo-myelitis*, consecutive to the infliction of trauma. This is seen to best advantage in the head of the tibia, not infrequently after so-called injury to the knee-joint; third, *malignant disease*. Under an erroneous impression as to the pathological processes in a case of this class, I have known a surgeon of experience condemn such a limb to amputation. He assumed that the case was one of osteo-sarcoma, the most destructive malady of the osseous system known. It is peculiarly a disease of early life, in the young child appearing in the distal head of the tibia. In former times this was designated "spina ventosa." Later in life its favorite site is the femoral shaft. This type of neoplasm, when it attacks the bones of the extremities, is quite inevitably mortal, though an early amputation will, in general, prolong life.

TREATMENT.

A very great aid in the therapy of tumors is an intimate acquaintance with their natural history, the influences of heredity, the effects of local and constitutional conditions, and their pathological characters. Very many surface growths disappear of themselves; others remain throughout life unchanged; some vanish after acute local changes involving the parts where they are lodged; others again, after varying periods of quiescence, undergo malignant changes of great augmentation in volume.

Professional aid is never sought for in this class of cases, unless the excrescence constitutes a blemish in exposed parts, unless it becomes a source of discomfort, or apprehension is excited by a notable increase in size.

Treatment is *constitutional* or *local*, or both combined, in various types of *non-malignant*. In others the resources of surgery are invoked. The aim in view is to destroy the tumor by the *safest* and *simplest* means. In the hands of an experienced operator, with all the modern accessories of surgery, immediate excision is the ideal treatment for those growths which resist constitutional measures. But there are many who have an instinctive dread of any sanguineous procedure, however trivial. The prejudices of the individual must be respected; besides, we should never overlook the possible danger attendant on anesthesia.

In those refusing excision by the scalpel, we may often resort, with signal advantage, to sclerogenesis, or parenchymatous injections, which will provoke suppuration, or, on the other hand, promote absorption. Many small, papillomatous, cystic or vascular growths may easily be destroyed by corrosive acids or the thermo-cautery. Electrolysis, or the alternating faradic current serves an admirable purpose in a large group of cases.

In operation on *exposed parts*, as the face or neck, it is highly important, especially in the female, to leave the smallest possible

scar. When the growths are diminutive and lie near the surface, local anesthetics, eucaine, cocaine, or chloride of ethyl spray, will quite completely supersede pulmonary anesthesia.

In labial epithelioma my preference in nearly all cases is for the *escharotics*, the acid nitrate of mercury being the most satisfactory. It may be repeatedly applied with a glass rod. It acts with special energy upon the neoplastic elements, and is followed by a scabbing over of the ulcer. This mode of treatment is more or less painful and may be tedious, but in my hands in cases of early lip-cancer it has never failed.

Excision is a much simpler and more prompt mode of treatment, but it always involves the removal of more or less healthy tissue, leaving a deformed and tightly-drawn lip. I am confident that if the profession would more frequently avail itself of the chemical caustics in cutaneous neoplasms we would greatly narrow the field of cancer quacks, and induce many to submit to treatment who will otherwise refuse any cutting operation.

From the neck we come to the thorax, to parts concealed by garments, and where we are less influenced by cosmetic effects than durable results. For this very reason, in parts that are covered we are seldom called upon to remove growths unless they are a source of suffering or have attained a large volume.

The first and fundamental step in the operative technique in the excision of tumors in covered parts, is a large incision through the skin and fascia. Effective hemostasis is second; the remainder of the procedure is a matter of detail.

In operations on the breast we must have a care that we do not mutilate our patient, and should not forget that this gland is an integral part of the generative system. Hence, we should not hasten to cleave it from the body until we are assured, beyond all possible doubt, that it is the seat of malignant disease; for a large proportion of new growths in the breast or at its periphery are benign, and should be enucleated without sacrifice of the gland. In the observance of the new propaganda of "cutting early and cutting wide," in tumor excision, there is great danger when we essay to operate on neoplasms of dubious origin, as so very many are in their early stages.

In malignant growths of the mamma, I have not yet been able to convince myself of the justifiability of those enormous sacrifices of tissues and structures made necessary by a theory which is based chiefly upon unsupported speculation; particularly when I notice recurrence equally early in these cases as when the chest wall is spared. The displaced shoulder, the neuralgic, heavy, bloated, nearly useless arm, left after these wide dissections, present a gruesome spectacle in all, but is the more melancholy in the wage-earner or the mother of a family.

Tumors of the abdomen are treated on the same general lines

as those of the upper trunk. But, in the groin or scrotal cases, rational therapy rests almost wholly on the differential diagnosis between hydrocele of the infundibular fascia or the tunica vaginalis, cystic disease or hernia.

I have found cysts of the scrotum to occur very much more frequently than is generally thought. Very often they are tapped under the assumption that they are hydroceles; several of such cases have come under my care in which the cysts were enucleated entirely free from the tunica vaginalis.

In the enucleation of these cysts we will frequently discover various elements of the cord, so intimately blended with the thick capsule that a very delicate dissection is necessary in order to safely isolate them.

Tumors involving the members are dealt with on general principles. Here one may simply induce artificial ischemia and operate in a bloodless field; moreover, we may largely dispense with pulmonary anesthetics. If we begin with a safe groundwork of *accurate* diagnosis and observe to the utmost the principles of modern osteo-plastic methods in dealing with diseased bone elements, the best possible results will be obtained.

The correct management of thecal ganglia, or bursa mucosa, calls for more than passing notice. The opening of a synovial membrane by accident or art is never a trivial matter, and all these bursæ open either directly into a tendon sheath or directly into the capsule of a joint. This explains why we should endeavor in all these ganglia at or near the wrist to rupture them by concussion force rather than attempt to dissect them out. When their investing capsule is thin, a moderate blow will rupture them, and there is little more to do; but sometimes their capsule is very thick and resistant, and these simple means will not avail. Then we must treat them by free incision. Enucleation of them is difficult and is usually followed by widespread inflammation, sometimes of a grave character. Aspiration or injection is neither safe nor satisfactory. In my experience, in this class nothing answers so well as a free incision and evacuation of the contents. After evacuation under rigid asepsis, a simple moist dressing is applied, and the wrist fixed in a splint and kept severely quiet until repair is well advanced.

In housemaid's knee, on the contrary, complete excision, with simple dressings and rest to the joint, offers the best possible mode of treatment.

Removal of tumors of the neck is always a procedure not to be lightly undertaken. Their surface characters, their apparent superficial location, and their free mobility are most delusive features to the inexperienced. Quite invariably they maintain close connections with the large, deep blood trunks, with highly important nerves and other structures. In all these cases it is well

to make a free incision through the integument and deep fascia, so that vital parts be laid bare under the naked eye.

The formidable danger here is *large hemorrhage*, something which can never occur in experienced hands, and under proper provisions.

Inoperable tumors. In this situation, as elsewhere, there are at times *inoperable tumors*; "when fools rush in where angels fear to tread;" wherein the conscientious and experienced decline to participate in a tragedy, or rob the afflicted of her few remaining days. Operating in this sad class brings more discredit and contempt on legitimate surgery than are compensated for by its many brilliant triumphs.

Carbuncle, always a painful lesion and sometimes dangerous to life, may be nipped in the bud, so to speak, or arrested in its early ravages, by a simple and never-failing remedy, displacing altogether deep bisection or the more formidable procedure of excision. The hypodermic employment of pure carbolic acid here is a specific. In the papillary stage the deep injection of one or two drops of carbolic acid will at once abort any further advances, but even though the purulent stage is reached, multipuncture and injection will instantly annul the excruciating pain and arrest further spread of the infection. Its action is escharotic, coagulating the albuminous elements of suppuration, and inhibiting any further microbic action. After its employment in advanced cases, we employ emollients until the necrotic tissue is thrown off and the ulcer has healed.

DR. J. ASSHETON FLETCHER has removed to 1215 College Street.

DR. and MRS. W. A. YOUNG returned a week ago from New York City, where they spent ten days most pleasantly.

WE are pleased to know that Dr. L. L. Palmer is recovering from his recent prolonged illness.

DR. D. BROCHU, Professor of Internal Pathology at Laval University, has been appointed a member of the French Academy of Medicine by the French Government. Dr. Brochu is the chief editor of *Le Bulletin Medical de Quebec*, and an able writer.

WE notice with satisfaction that at the International Congress of Gynecology and Obstetrics, held at Rome 15th to 21st of September, 1902, Dr. M. T. Brennan, of Montreal, was nominated Honorary President of the Congress for Canada. Dr. Brennan is chief editor of our Montreal contemporary, *La Revue Medicale*.

THE *Detroit Medical Journal* November, 1902, abstracts our November article "The Proportion of Doctors to Population in Canada and Canadian Cities, and in Certain Countries and Cities of Europe", but wrongly quotes the number of doctors practising in Canada. They number 5,417, and not 1,417 as stated by our contemporary. It is doubtless a typographical error.

The Canadian Journal of Medicine and Surgery

J. J. CASSIDY, M.D.,
EDITOR,

69 BLOOR STREET EAST, TORONTO.

Surgery—BRUCE L. RORDAN, M.D., C.M., McGill University, M.D. University of Toronto, Surgeon Toronto General Hospital; Surgeon Grand Trunk R.R.; Consulting Surgeon Toronto Home for Incurables; Pension Examiner United States Government, and F. N. G. STARR, M.B., Toronto, Associate Professor of Clinical Surgery, Lecturer and Demonstrator in Anatomy, Toronto University. Surgeon to the Outdoor Department Toronto General Hospital and Hospital for Sick Children.

Clinical Surgery—ALEX. FRIMROSE, M.B., C.M. Edinburgh University; Professor of Anatomy and Director of the Anatomical Department, Toronto University. Associate Professor of Clinical Surgery, Toronto University; Secretary Medical Faculty, Toronto University.

Orthopedic Surgery—B. E. MCKENZIE, B.A., M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Surgeon to the Out-Patient Department, Toronto General Hospital; Assistant Professor of Clinical Surgery, Ontario Medical College for Women; Member of the American Orthopedic Association; and H. P. L. GALLOWAY, M.D., Toronto, Surgeon to the Toronto Orthopedic Hospital; Orthopedic Surgeon, Toronto Western Hospital; Member of the American Orthopedic Association.

Oral Surgery—E. H. ADAMS, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Visiting Surgeon to Harlem Hospital, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Gynecology and Obstetrics—GEO. T. MCKEUGHAN, M.D., M.R.C.S. Eng., Chatham, Ont., and J. H. LOWE, M.D., Newmarket, Ont.

Medical Jurisprudence and Toxicology—ARTHUR J. K. F. JOHNSON, M.D., M.R.C.S. Eng.; Coroner County of York; Surgeon Toronto Railway Co., Toronto. W. A. YOUNG, M.D., L.R.C.P. Lond., Coroner County of York, Toronto.

W. A. YOUNG, M.D., L.R.C.P. LOND.,
GENERAL MANAGER,

145 COLLEGE STREET, TORONTO.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S. Eng., Toronto.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Clinical Medicine—ALEXANDER MCPHERSON, M.D., Professor of Medicine and Clinical Medicine Toronto University, Physician Toronto General Hospital, St. Michael's Hospital, and Victoria Hospital for Sick Children.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, and N. H. BEEBET, M.D., Mimico Insane Asylum.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children Woman's Medical College, Toronto. A. R. JORDON, M.D., Toronto.

Pathology—W. H. PEPLER, M.D., C.M., Trinity University; Pathologist Hospital for Sick Children, Toronto; Demonstrator of Pathology Trinity Medical College; Physician to Outdoor Department Toronto General Hospital; Surgeon Canadian Pacific R.R., Toronto; and J. J. MACKENZIE, B.A., M.B., Professor of Pathology and Bacteriology, Toronto University Medical Faculty.

Ophthalmology and Otolaryngology—J. M. MACCALLUM, M.D., Oculist and Aurist Victoria Hospital for Sick Children, Toronto.

Laryngology and Rhinology—J. D. THORBUEN, M.D., Toronto, Laryngologist and Rhinologist, Toronto General Hospital.

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post-office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited. Contributors must kindly remember that all papers, reports, correspondence, etc., must be in our hands by the fifteenth of the month previous to publication.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the tenth of the preceding month.

VOL. XII.

TORONTO, DECEMBER, 1902.

NO. 6.

Editorials.

LAVAL UNIVERSITY AND THE RODDICK BILL.

A LENGTHY article in the September issue of *L. Bulletin Médical de Quebec* voices the uncompromising hostility of Laval University to the Roddick Bill. The gist of the article may be summed up in a few words: If the Roddick Bill becomes law, the matriculation examination in the Department of Medicine of McGill University will be recognized as the standard for candidates presenting themselves before the Dominion Medical Board. Being a low one, this standard will attract all the would-be medical students of Quebec,

and Laval University would have to console herself with students of theology. Therefore, the Roddick Bill must be opposed. The editor's closing remarks are suggestive :

"The conclusion to draw from an examination of the Roddick Bill is that the petty advantages it promises are no compensation for the inconveniences and disorder which it would cause, and still less, for the renunciation of the privileges conceded us by the Federal Act, and for these reasons it cannot be accepted. We may argue about this or that particular clause of the bill—a matter of slight importance ; its principle, which is centralization of instruction—medical federalism, is brought forward in contempt of our educational privileges, of the autonomy of the Provinces, of the free expansion of the French Canadian minority, and everyone should bring to bear every influence to prevent its sanction by the Provincial Legislature."

After the tocsin has been rung, in this decided manner, from the summit of the citadel, we may expect to see the Roddick Bill received by the Legislature of Quebec, at its approaching session, with frigid courtesy, and, after a brief discussion, hurled into exterior darkness.

Logically, however, French Canada should not, in the light of her recognized advantages for a superior collegiate education, place herself in a reactionary position on this question. The Roddick Bill, supported by the French Canadian minority, as well as by their English-speaking countrymen, and adopted by each, and every Province of the Dominion, would confer notable advantages on all Canadian physicians, (1) Freedom to practice in any part of the Dominion. (2) The probability of obtaining recognition for a Canadian medical diploma in the United Kingdom, Australia, etc. These boons are worth striving for, why reject them ?

One reason given for rejection is : That the regulations relative to matriculation and professional examinations in medicine to be enacted under the Dominion Medical Act would be framed by a Council composed of 35 English and 4 or 5 French-Canadian physicians, so that the latter would have no influence in the preparation or regulation of these standards.

We do not concede this point. Our French Canadian friends are not in general remarkable for an excessive modesty, when privileges are to be obtained, and, even though in a minority on the contemplated Dominion Medical Board, their influence in the regulation of medical standards of education would certainly obtain

a cordial recognition. If the editor of *Le Bulletin Médical* would only read the discussion on the report of the educational committee of the Ontario Medical Council (*vide* Announcement of the College of Physicians and Surgeons of Ontario, 1902-3, page 30) he would see that the high matriculation standard of the College of Physicians and Surgeons of Quebec in medicine was approved of, and furthermore, that the existence of that high standard was used as an argument to raise the matriculation examination of the Ontario Medical Council from a pass matriculation examination to a much more difficult honor matriculation examination.

We do not accept as trustworthy the argument, that McGill University is striving to introduce federalism into Canadian educational affairs, and will become, eventually, the University of the State. McGill University is a strong, very enterprising, and well governed educational institution. Not content with her earnings in Quebec, she strives to win all the students she can in the other provinces, and is, to-day, a most formidable rival to the universities of Ontario. But, even though McGill should take the scalps of more than one Canadian university, she cannot dictate the academic qualifications of candidates for matriculation in medicine who may appear before the Dominion Medical Board, because Laval now holds the key of that position, and can impose her own standard of medical matriculation, which, it may be said without detracting from McGill, would place the medical students of Laval, McGill and Bishop's College on the same academic plane. In fact, the French-Canadian medical profession, through their representatives, the Governors of the Quebec College of Physicians and Surgeons, have an excellent opportunity of imposing their wishes not only on the universities of the Province of Quebec, but also on the rest of their countrymen, who are interested in the success of the Roddick Bill, and it would be most regrettable that they should stand aloof, instead of joining the procession and helping to roll along the chariot of medical progress. The Roddick Bill cannot become law unless adopted by each of the Provinces. Let French-Canadians lay it down as a *sine qua non* that they will give their adhesion to the Roddick Bill on the following conditions: (1) That every candidate presenting himself for examination before the Dominion Medical Council shall have an academic B.A. degree, or as a minimum qualification a certificate that he has passed the first year examination in the Department of Arts of a recognized university; (2) shall have studied four years in a recog-

nized medical school; (3) shall have passed one year as an assistant to a practitioner or as an attendant in a recognized hospital. Is that standard high enough?

Will the editor of *Le Bulletin Medical* go a step further? Will he propose to make it obligatory that, to obtain the diploma of the Dominion Medical Board, a candidate must obtain fifty per cent. of the marks on each paper or subject of examination? If he and his friends will go so far, we do not think that the French-Canadian members of the Dominion Medical Board will lack influence on that Board, and we are satisfied that they will possess a very great influence, indeed, with the 5,417 doctors of Canada.

In one respect the agitation against the adoption of the Roddick Bill by the Quebec Legislature may be beneficial. If it should cause the members of the Council of the College of Physicians and Surgeons of Ontario to demand that a candidate beginning the study of medicine in Ontario shall be a B.A. of a recognized university, then the discussion on the Roddick Bill will have done good to this Province, even though the Bill itself should never become law in Canada.

We cannot close this article without giving the editor-in-chief of *Le Bulletin Medical* a little brotherly advice. It is to the effect that would-be critics should be sure of their ground. The following extract from his article (p. 57, 9th line from the bottom) is unique: "A Bachelor of Arts leaves Toronto University at the age of fifteen or sixteen years, after having obtained one-third of the necessary marks. The course of studies in that institution is incomplete. Very little Latin, little or no Greek, superficial acquirements in Literature, English History, Elementary Science for the senior B.A., and scarcely a glimpse for the junior B.A., and naturally no Moral and Intellectual Philosophy, but a good deal of Mathematics. Needless to say, this is the programme of the High Schools, which everyone knows." To say that a B.A. of Toronto University finishes his Arts course at fifteen or sixteen years is a ludicrous mistake. He may matriculate about that age, but cannot obtain a B.A. degree until he is twenty-one years of age. The editor of *Le Bulletin Medical* probably means to say that the pass matriculation examination of the Arts Department of the University of Toronto, which, for some years, has been accepted as the matriculation examination for candidates desiring to obtain the license of the Ontario College of Physicians and Surgeons, is too low an academic standard for individuals whose subsequent studies are to be purely professional. If

this be a correct expression of his view, then we quite concur in the soundness of his criticism, and as we have already indicated, would join with him in making the first step to the portals of the Canadian temple of Esculapius a B.A. degree. We fear, however, that, even with that concession, Laval University will be irreconcilable.

J. J. C.

ADVANCE, HAMILTON.

HAMILTON is the first municipality in Ontario to take action in the matter of the compulsory notification of cases of tuberculosis to the medical health officer by the practitioners of a city. The Hamilton Medical Society, the Local Board of Health, Dr. Walter F. Langrill, the Medical Health Officer, and the Mayor, Mr. Hendrie, were all in favor of this action being taken. Therefore the Local Board of Health of Hamilton, at its meeting November 3rd, 1902, having duly considered the matter, reported in favor of the passage of the by-law. The by-law was adopted at a meeting of the Hamilton Council, held on November 24th.

It is pleasing to see that the practice of the compulsory notification of tuberculosis is beginning to obtain recognition in Canada. To be successful in a municipality such a reform must first obtain the cordial support of the local medical society. Much, no doubt, depends upon the medical health officer of a local board of health. If, in addition to the love of science and professional ability, he possesses a knowledge of men, and a fair share of the *suaviter in modo*, his influence in assisting the growth of hygiene in his own municipality, and even elsewhere, will be great indeed.

There can be no doubt that hygiene requires the notification of tuberculous cases to the medical health officer if preventive measures are to be effective. Good sense and good feeling must naturally go together in carrying out any rules adopted by the local board of health, after information has been obtained from practitioners about such cases. A sanitary policy, which consists in acknowledging the scientific truth that tuberculosis is a communicable disease, while at the same time neglecting to urge the local board of health to establish and publish regulations for the protection of the well from the sick, either means that the scientific faith of the medical health officer is founded on flimsy speculations, or that, fearing to excite the opposition of interested persons, he deems

it more prudent for his own interests to compromise with his conscience, and, in either case, he neglects his duty.

We congratulate Hamilton on having a medical officer who knows his duty and does not fear to give effect to his convictions. To strengthen the body against tuberculosis in every judicious way—regular exercise, or work, fresh air, nutritious food, moral living—is well, because the power of resistance to the disease is thereby increased. To destroy the seed of tuberculosis in the homes of patients who are dying of it and especially in the houses of persons who have died of it, is equally important for obvious reasons.

Medical science, in so doing, enlightens and leads public opinion, instead of burning incense to expediency. We congratulate Dr. Langrill on the happy results of his energetic and intelligent application of hygienic rules, and we confidently expect that he will be in a position to recount, at a later day, the advantages which have accrued to Hamilton from the beneficent action which he has inspired.

J. J. C.

EDITORIAL NOTES.

The Treatment of Gout.—Through disinclination or necessity, gouty patients do not take enough exercise to produce an active condition of the skin, and the purification of the body through that great cleansing surface is neglected. When a patient cannot take exercise, the hot air apparatus or the Turkish bath may be used with advantage to produce the necessary sweating. Moderation in, or total abstinence from, sexual congress should also be practised by a gouty patient. *Omne animal post coitum triste.* Anything which, by weakening the bodily powers, slows his overslow processes of nutrition, should be avoided by the gouty patient. Of the first importance to a gouty patient is the dietetic treatment of his complaint. In this connection, a paper published in the *British Medical Journal*, June 14th, 1902, by J. Walker Hall gives important information. As a result of his experiments this author concludes that milk, butter, eggs and cheese, as animal foods, “form together our most valuable means of withholding purin substances from the body, and yet allow the provision of a diet at once digestible, easily absorbed, and capable of maintaining nitrogenous equilibrium.” The following table shows the quantities of undried purins as grains per pound in meats, vegetables, and beverages:

	Undried Purins Grains per lb.
Cod.....	4.08
Plaice.....	5.57
Halibut.....	7.14
Salmon.....	3.16
Tripe.....	4.01
Mutton.....	6.76
Veal.....	8.14
Pork (Loin).....	8.49
Pork (Neck).....	3.50
Ham (Fat).....	8.09
Beef (Ribs).....	7.96
" (Sirloin).....	9.14
" (Steak).....	14.46
Liver.....	19.27
Sweetbread (Thymus).....	70.43
Chicken.....	9.07
Turkey.....	8.82
Rabbit.....	6.31

VEGETABLES.

Bread (White).....	0.00
Oatmeal.....	3.46
Rice.....	0.00
Peameal.....	2.54
Beans (Haricot).....	4.17
Potatoes.....	0.14
Onions.....	0.06
Tapioca.....	0.00
Cabbage (Green).....	}.....
Lettuce.....	
Cauliflower.....	
Asparagus (Cooked).....	1.51

BEVERAGES.

	Grains per pint.
Lager Beer.....	1.10
" Drink.....	0.16
Pale Ale.....	1.27
Porter.....	1.36
Claret.....	}.....
Volnay.....	
Sherry.....	
Port.....	

No mention is made of tea and coffee, but the use of either of them causes an increase in the purins.

The Value of Buttermilk in Infant Feeding.—Dr. Baginsky, Professor of Children's Diseases at the University of Berlin, read a paper at the Seventieth Annual Meeting of the British Medical Association at Manchester, July 30th, 1902, highly approving of the feeding of infants with prepared buttermilk. In this author's opinion the great value of buttermilk is revealed in *the acute cases of dyspepsia up to the severe grades of enteritis, with vomiting and diarrhoea.* It should not be given at the height of an attack when

temperature is high, vomiting severe, and prostration great. After giving the intestinal tract a rest prepared buttermilk is well borne, even in severe cases. Baginsky cannot explain the cause of the healing properties of buttermilk. He testifies that it is well taken and well borne by children of all ages, from birth to the end of the second year, and that the youngest take it as well as the oldest. The improvement in sick infants from the use of buttermilk is noticed in the stools, which become pasty and lose their odor; secondly by the gain in the weight of the children; and thirdly in their general appearance, for they become good-natured, smiling, and friendly. Baginsky offers a tentative explanation of the increase of weight in the children as being due to: (1) A large absorption of water; (2) a probable increase in tissue weight. He uses buttermilk made from pure cream, which is soured by means of bacteria producing a lactic acid fermentation. The fat is extracted to a minimum (0.3 to 0.5 per cent.). This product is delivered as soon as it is finished. The buttermilk thus obtained is treated as follows: To one litre, 15 to 25 grams of wheat flour, and 35 to 50 grams of cane sugar are added. With constant stirring it is allowed to boil for at least two minutes. The milk is then poured into sterilized bottles, stoppered by means of cotton, and kept in an ice-box till required. At the time of feeding they are placed in water at the body temperature. The following analyses, made in Baginsky's laboratory, show that prepared buttermilk is, *a priori* far from resembling the ideal infant food:

	Fat. Per cent.	Albumen. Per cent.	Sugar. Per cent.	Starch.	Acidity.	Calories.
Woman's Milk.....	3.5	1.02	7	655
Prepared Buttermilk	0.35	3.4	*4.2 to †5.78	0.26	60 to 80	597
Cow's Milk.....	3.4	3.0	4.5	625
		* Milk.	† Cane.			

Massive Doses of Mercury Introduced Hypodermically in Syphilis.—At the Congress of French-speaking physicians, held at Quebec last June, Dr. Leredde, Paris, read a paper on the hypodermic use of different mercurial salts in syphilis (*vide Le Bulletin Medical de Quebec*, October, 1902). He thought that the efficiency of a mercurial salt in syphilis depended on the proportion of mercury contained in it. Mercuric cyanide contains 79 per cent. of mercury; mercuric chloride 73 per cent.; biniodide of mercury 44 per cent.; benzoate of mercury 45 per cent. He favored larger doses of these salts than those which are generally

used by practitioners in treating syphilis by the hypodermic method. Thus he had injected 3 centigrammes of mercuric cyanide per diem, in a case of syphilis of the nervous system instead of the usual dose, one centigramme (about .46 of a grain of mercuric cyanide instead of .15 of a grain). The same energetic method he thought applied equally to forms of syphilis, other than those affecting the nervous system. The practitioner should push the remedy, the largest possible dose of mercury being introduced into the organism at each injection. Calomel contains 84.9 per cent. of mercury. Dr. Leredde had used calomel subcutaneously in doses of 10 centigrammes (about 1 1-2 grains), giving the second injection sixteen days after the first, the third six days after the second, and the fourth five days after the third. Calomel injections are followed by severe local and general symptoms, showing that the drug is rapidly absorbed. During this treatment the state of the patient's kidneys requires to be inquired into. He thought that the method prescribed was the best possible. Intravenous hypodermic injection of mercury was yet on trial. Dr. Leredde does not mention the necessity of attending to the condition of the patient's oral cavity during treatment; but, doubtless, this is an oversight. The principal value attached to Dr. Leredde's utterances is due to the fact that curative results have been obtained by his method in locomotor ataxia, and also in general paralysis. Dr. Leredde asks if Professor Fournier's doctrine, that these diseases, though para-syphilitic are incurable, is not due to the fact that they have been inefficiently treated. "In general paralysis, as in locomotor ataxia, a history of syphilitic infection is obtained in a large majority of all cases" (Anders). Should a thorough application of Leredde's treatment prove curative in these diseases, some important changes and corrections will be required in modern text-books on the Practice of Medicine.

J. J. C.

Migraine or Megrim.—Both migraine and megrim, the one a French, the other an English word, are derived from Low Latin *hemigran̄is*, Latin *hemicrania*, Greek *ἡμικρανία*—*ἡμι*, *half*, and *κρανιον*, *skull*, and mean the same thing, *i.e.*, paroxysmal circumscribed headache, associated with visual, vaso-motor and gastric disturbances. As any one can see, megrim has about as clear a title to a Greek derivation as migraine; and, as it has long enjoyed a recognized place in English literature, it should be preferred to migraine by those who use the English tongue.

Items of Interest.

Polk's Medical Register.—The eighth revised edition of this well-known work is now under way, and will appear in due time. Send for descriptive circulars, and do not be deceived by imitators. Polk's Medical Register and Directory has been established sixteen years. R. L. Polk and Co., Publishers, Detroit, Mich.

A New Nursing Mission House.—A house at 55 Beverley Street, has been given by Mr. Goldwin Smith to the Nursing Mission, and was taken possession of on the 4th ult. The superintendent, three nurses, and a servant went from the Hayter Street house. The Mission Union purposes conducting the nursing at the old quarters on Hayter Street.

Medical Council Elections.—The elections to the Ontario Medical Council will take place on December 2nd, but some of the interest is eliminated by the fact that out of seventeen divisions representatives have been elected for thirteen. The following delegates will represent their districts, in the Council: No. 1, Dr. Bray, Chatham; No. 3, Dr. McArthur, London; No. 4, Dr. Robertson, Stratford; No. 5, Dr. Brock, Guelph; No. 6, Dr. Henry, Orangeville; No. 7, Dr. Stuart, Milton; No. 8, Dr. Glasgow, Welland; No. 11, Dr. Macdonald, Toronto; No. 12, Dr. Sangster, Bowmanville; No. 13, Dr. Hillier, Port Perry; No. 14, Dr. Thornton, Consecon; No. 15, Dr. Spankie, Wolfe Island; No. 16, Dr. Lane, Mallorytown. The remaining four districts in which a contest takes place on December 2nd, are: No. 2, Drs. Williams and Mearns; No. 9, Drs. Aylesworth, Gibson, and Hanly; No. 10, Drs. E. E. King and C. J. Hastings; No. 17, Drs. R. W. Powell and Dr. M. Klotz.

New Appointments at Toronto University and School of Practical Science.—The Provincial Cabinet met on the 4th ultimo, and made the appointments for the Toronto University for the ensuing year. Those marked with an asterisk are new appointments: Demonstrator in Anatomy, F. N. G. Starr, M.B.; Assistant Demonstrators in Anatomy, C. L. Starr, M.B., W. J.

McCallum, M.B., W. J. O. Malloch, B.A., M.B., S. H. Westman, M.B., G. R. Hooper, B.A., M.B., W. H. Pierson, B.A., M.B., *A. C. Hendrick, B.A., M.B., *A. J. Mackenzie, B.A., M.B., W. J. Wilson, M.B., *D. McGillivray, M.B. Demonstrators in Pathology: *G. Silverthorn, M.B., *C. J. Wagner, M.B. Assistant Demonstrators in Pathology: *T. D. Archibald, B.A., M.B., *F. A. Clarkson, M.B., *M. M. Crawford, M.B. School of Practical Science—Demonstrator in Mechanical Engineering: *Harold G. McVean; Fellow in Mining Engineering, *Jas. G. McMillan; Fellow in Electrical Engineering, *Max V. Sauer; Fellow in Mechanical Engineering, John A. Craig; Fellow in Civil Engineering, *W. C. Tennant; Fellow in Surveying, *E. V. Neelands; Fellow in Chemistry, Edward G. R. Ardagh; Fellow in Drawing, *Albert H. McBride; Lecturer in Applied Mechanics, *J. McGowan; Lecture Assistant in Chemistry, *Maitland C. Boswell.

A Dangerous Swindler.—For nearly a year past, many of the doctors and dentists of this country have been victimized by a very clever swindler, who has passed under several aliases among them—R. G. Stearns, R. L. Nelson, and others. He claims to represent The Success Company, publishers of the Success Magazine, and takes orders for numerous magazines comprised in the Success Clubbing Offers. He works very rapidly, jumping from town to town, and always among doctors and dentists. All the money he obtains is appropriated, and the magazines are never ordered or received. Every effort has been made by the Success Company to apprehend this swindler, but so far without success. The Success Company requests us to notify all doctors and dentists that its representatives always bear a special dated card of introduction, and to patronize no others. It also offers a reward of \$50.00 for any information which will lead to the apprehension of this swindler. He is described as follows:

From 23 to 25 years old; 5 ft. 9 in. in height; medium build; weight about 150 lbs.; dark hair (almost black) of medium length, very curly about the temples; dark gray eyes (almost hazel); rather sallow complexion, with scattered dark brown freckles; face unusually round for man of so light build; clothes not shabby, but far from new, and much worn. Black coat and vest, gray trousers (hard twisted goods), with small stripe; black Derby hat, much worn; old style turn-down collar, with made tie. General untidy appearance for a man in the soliciting business.

Obituary

DEATH OF DR. D. McLARTY.

On the 7th ult. the town of St. Thomas lost, by the death of Dr. D. McLarty, one of the best known and most highly respected citizens. Dr. McLarty had been for a year suffering from an ailment which the best medical skill advised could only be successfully healed by a surgical operation. The operation was thought to have been successfully performed at the Buffalo General Hospital the previous week, but unfortunately the strains of a year's illness had told too heavily upon his system, and he passed away a little after noon on November 7th. He was born in 1839, graduated in London and Edinburgh in 1867, and began the practice of his profession here in the latter year. He was twice Mayor of St. Thomas, and the only reason he was not elected to Parliament was that he would not accept a nomination, although again and again urged by his Liberal friends to do so. He was a director of the Atlas Loan Co., was one of the provisional directors of the Elgin Loan Co., when it was established twenty-three years ago, and nine years ago was elected president of the company, a position he held with honor to himself and advantage to the company ever since. He leaves a widow, one daughter, and two sons.

THE SUDDEN DEATH OF DR. J. MOORE HART, OF TORONTO.

Word came from Huntsville on November 11th of the death from paralysis of Dr. J. Moore Hart, 232 Shaw Street, who was a member of a hunting party along with Dr. Chas. Trow and Mr. E. E. Trow, barrister, of Toronto.

Two weeks previously the party set out for the north. They encamped some twelve miles overland from Dorset, and had some excellent sport. On Monday evening, twenty-four hours before

he died, Dr. Hart's companions were jocularly censuring him for burning so much dry wood, and he explained that green wood should be burned, and volunteered to cut down a green tree.

The exertion of chopping the tree made him feel dizzy, and Dr. Trow had some difficulty in getting him back to camp. He shortly afterward became unconscious, and later in the evening died. The bursting of a blood-vessel in the brain resulted in paralysis, which caused death. Last spring Dr. Hart had a very severe hemorrhage.

He was fifty-two years of age, the son of the late Robert Hart, of Wilfrid. He graduated in 1871 from the Trinity Medical College before he had yet attained his majority. He had been in practice for thirty-one years, twenty-two of which were spent in Cannington and nine in Toronto. Dr. J. S. Hart, of Parkdale, is a cousin of the deceased, and Rev. Dr. A. B. Chambers a brother-in-law. The deceased leaves a widow and one son, Garnett, aged ten. A brother, Robert, is the sole surviving member of a large family, and lives at the old homestead at Wilfrid.

Dr. Hart was a member of the Chalmers' Presbyterian Church. He was a Liberal in politics, and a Past Master of Brock Lodge of Masons in Cannington. Dr. Hart had a large practice, and was highly esteemed. He was a member of the staff of the Western Hospital.

The funeral took place at the homestead at Wilfrid, on Friday morning, November 14th.

DEATH OF MR. GEORGE BRYCE.

MR. GEORGE BRYCE, of Mount Pleasant, Brant County, died Monday November 17, 1902, in his eighty-sixth year. The funeral, which took place on the following Thursday (20th ult.), was largely attended. Mr. Bryce was the father of Dr. P. H. Bryce, Secretary of the Provincial Board of Health, Toronto; of Rev. Dr. Bryce, Moderator of the Presbyterian General Assembly of Canada, and Founder and Principal of Manitoba Presbyterian College, Winnipeg; of Mr. Alexander Bryce, of the Hygienic Dairy, Toronto; of Dr. John Bryce, of Erie, Penna., and of Mrs. (Dr.) Marquis, of Brantford. He came to Canada from Doune, Scotland, when quite young, and had resided near Brantford ever since. We extend our sympathies to the bereaved family.

The Physician's Library.

BOOK REVIEWS.

Human Anatomy. A Complete, Systematic Treatise by Various Authors, including a Special Section on Surgical and Typographical Anatomy, edited by Henry Morris, M.A., M.B. London; F.R.C.S. England; Member of the Council (lately Vice-President) of the Royal College of Surgeons of England; Chairman of the Court of Examiners of the Royal College of Surgeons of England; Senior Surgeon to the Middlesex Hospital, London; Hon. Member of the Medical Society of the County of New York; Hon. Member of the American Urological Society; late Lecturer on Anatomy and Lecturer on Surgery at the Middlesex Hospital, London; late Examiner in Anatomy in the University of Durham; Examiner in Surgery in the University of London. Illustrated by 846 wood cuts, the greater part of which are original and made expressly for this work by special artists; 266 printed in colors. Third edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler Massey Co., Limited, Toronto and Montreal.

It is frequently the case that authors, when getting out a new edition of their work, make a claim that they have carefully revised what had previously been written (besides making many additions); whereas, in reality, they have only revised some of the chapters, leaving the remaining ones as they were. In the third edition of Morris' Anatomy, this is not the case, as the author has revised his volume practically from cover to cover, besides adding a great deal of new material, both in the text and illustrations, many of the latter being in colors, and thus adding immensely to the value of the work. In comparing some of the drawings with those in the second edition, we find that the author has very wisely had them re-drawn by the artist, so as to make them even more strictly correct than before. The feature, which was also found in the last edition, viz., the paragraphs dealing with variations and abnormalities, also applies to the third edition, and has been extended at greater length. One point about this splendid volume (it cannot be otherwise termed) is that the author has all through the different sections borne in mind the important relation between descriptive anatomy and the practice of surgery, especially in the

section on typographical anatomy, so that the book is, besides being suitable to the needs of the medical student in his work on the cadaver, an ideal one for reference by him in later years, when engaged in the active work of his profession as a surgeon.

W. A. Y.

A Dictionary of Medical Science. Containing a full explanation of the various subjects and terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Bacteriology, Surgery, Ophthalmology, Otology, Laryngology, Dermatology, Gynecology, Obstetrics, Pediatrics, Medical Jurisprudence, Dentistry, Veterinary Science, etc. By ROBLEY DUNGLISON, M.D., LL.D., late Prof. of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia, etc. Twenty-second edition, with appendix. Thoroughly revised and greatly enlarged, and with the pronunciation, accentuation, and derivation of the terms, by RICHARD J. DUNGLISON, A.M., M.D. Philadelphia and New York: Lea Brothers & Co. 1900.

The twenty-second edition of this world-famed work will be received with pleasure by those who are familiar with the previous editions, and this pleasure will be magnified when they note the thorough revision and many additions which this reissue contains. It needs very little recommendation from us, as it has been recognized for many years as a dictionary of the highest order. But we wish to take this opportunity to note that this edition, containing about 15,000 new words, has kept pace with the rapid strides of medicine. It is so broad in its object that the dentist and veterinarian can refer to it with confidence. The author has indeed made it an epitome of the existing conditions of medical science by combining the pronunciation, accentuation, and derivation of each word. We can assure the editor that the trust confided in him by the author has not been misplaced, and we compliment him on the result of his labors; nor must we forget the publishers, Lea Brothers & Co., of Philadelphia and New York, who have succeeded in giving to the medical world such a finished and indispensable addition to their libraries.

W. H. P.

Anatomy and Histology of the Mouth and Teeth. By I. NORMAN BROMMELL, D.D.S., Professor of Dental Anatomy, Dental Histology, and Prosthetic Technics in the Pennsylvania College of Dental Surgery, Philadelphia. Second edition, revised and enlarged, with 337 illustrations. Philadelphia: P. Blakiston's Son & Co., 101½ Walnut Street. 1902. Canadian Agents: Chandler Masse, Limited, Toronto and Montreal.

The first edition of this book was published about four years ago, while the latest edition bears the date of August, 1902. Fifty-three new illustrations have been added, all of which are

the original work of the author. A chapter dealing with "Embryology of the Mouth" has been added, as has also a short chapter on the Anomalies of Tooth-Form and Structure. Some slight changes have been made in the description of the teeth. The terms "Superior and Inferior" having been changed to "Upper and Lower," and the term "Palatal," as applied to one of the tooth surfaces, has been discarded, and the word "Lingual" has been substituted.

So much progress in nearly every branch of dental education has been made of late years that it is necessary for a work of this kind to be thoroughly up-to-date, and this book of 450 pages certainly presents systematically a comprehensive knowledge of the part of the human anatomy which comes directly under the care of the stomatologist. Much space has been devoted to surface anatomy of the individual teeth. Thirteen chapters are devoted to anatomy of the mouth and teeth, half as many more to histology, including embryology. The paper and illustrations are excellent. The work is well bound, and is published at \$4.50. Those who know Professor C. N. Peirce, of the Pennsylvania Dental College, Philadelphia, will be pleased to know that this handsome work is dedicated to him as a souvenir of long and valued friendship, and a testimony of esteem for his professional and private worth.

E. H. A.

A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., assisted by H. R. M. LANDIS, M.D., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. Volume III., 1902: Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood Vessels; Dermatology and Syphilis; Diseases of the Nervous System; Obstetrics. Philadelphia and New York: Lea Brothers & Co. 1902.

Dr. Ewart devotes 122 pages to the presentation of recent views on diseases of the thorax and its viscera. He makes a good presentation of the views, sometimes conflicting, of physicians as to the management of severe forms of pneumonia. Differences among experts are, of course, permissible; but, as the writer shows, current opinion points to the support of the patient's strength during the three stages, and the combating of dangerous symptoms, which arise with the complications.

Advances in the ever-widening field of tuberculosis are noted. Something that will please the older practitioners is a reference to Dr. H. W. Syers' views on the faults of the binaural stethoscope, preference being given to the old-fashioned, rigid, perforated article. Dr. Gortheil's article on Dermatology and Syphilis con-

tains a number of matters of considerable interest to general practitioners, among which may be mentioned Griffith's treatment of burns.

Dr. Spiller devotes 107 pages to the Diseases of the Nervous System. Physicians interested in that class of disease will find references to important advances and findings noted and recorded.

Dr. Norris devotes 92 pages to Obstetrics. Among other important subjects treated we notice a full reference to eclampsia. This article will be useful to obstetricians who wish to know the latest views on so important a subject.

J. J. C.

The Artificial Feeding of Infants: Including a Critical Review of the Recent Literature of the subject. By CHARLES F. JUDSON, M.D., Physician to the Medical Dispensary of the Children's Hospital, and I. CLAXTON GITTINGS, M.D., Assistant Physician to the Children's Hospital. Philadelphia: J. B. Lippincott & Co. 1902. Canadian Agent: Chas. B. Roberts, 593a Cadieux Street, Montreal.

This handsome and readable little volume purports to contain gleanings from the best periodicals, monographs, and text-books, published between 1894 and 1901, and contains, therefore, the substance of a very large number of valuable articles. It goes thoroughly into the "milk and artificial food" question, and gives the reader a very good idea of the reasons why certain foods should be used under certain conditions. Much of the material is new, and of undoubted value. The book is one that should be read by every general practitioner and pediatricist, as it contains, in addition to the material above mentioned, a very valuable article descriptive of the constituents of the various artificial foods on the market

A. J. J.

The Practitioner's Guide. By J. WALTER CARR, M.D., London, F.R.C.P. Physician Royal Free Hospital; Physician Victoria Hospital for Children; Joint Lecturer on Medicine London (Royal Free Hospital) School of Medicine for Women. T. PICKERING PICK, F.R.C.S., Consulting Surgeon St. George's Hospital and Victoria Hospital for Children; ALBAN H. G. DORAN, F.R.C.S., Surgeon to the Samaritan Free Hospital; and ANDREW DUNCAN, M.D., B.S. London; F.R.C.S. and M.R.C.P.; Physician Branch Hospital Seaman's Hospital Society; Joint Lecturer on Tropical Medicine at London School of Tropical Medicine; Physician Westminster Dispensary; Fellow of King's College, London. London, New York, and Bombay: Longmans, Green, & Co., 39 Paternoster Row, London. 1902. Canadian Agents: J. A. Carveth & Co., Toronto.

The purpose served by a work of this character is a most important one. A busy practitioner has frequently too little time to consult a text-book, especially when all he may wish to do is to refresh

his memory on one or two points. The Practitioner's Guide, as its name would indicate, is a book of reference, and should be found most useful as such, and might almost be termed a *vade mecum*. It is practical, and, without going into the pathology or etiology of the different diseases, gives the reader in a short space just what he wants to assist him in his active work. Diseases of women are dealt with at some length, as also Tropical diseases. Surgery has not been by any means overlooked; but, on the other hand, has been gone into only so far as the general practitioner is interested. The volume covers about 1,100 pages. It is arranged alphabetically and in double column. We think it would have been wiser, however, had the publishers used larger type, even had the book been a little more bulky.

Manual of Gynecology. By HENRY T. BYFORD, M.D., Professor of Gynecology and Clinical Gynecology in the College of Physicians and Surgeons of Chicago; Professor of Gynecology in the Post-Graduate Medical School of Chicago, and in the Chicago Clinical School, etc. Third revised edition, containing 363 illustrations, many of which are original. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1902. Canadian Agents: The Chandler Massey Co., Limited, Toronto.

The objection to by far the larger percentage of medical works published nowadays is that the authors forget that they are compiling facts not by any means solely for specialists, but more for general practitioners who desire a book that is not too cumbersome, and yet at the same time suited to their purpose, one that does not go into too great detail, with long descriptions and cuts of operations which they might not perform once in half a lifetime; but, on the other hand, a work that gives accurate and concise facts of every-day experience. Such a volume, it may fairly be said, is Dr. Byford's *Manual of Gynecology*. At the top of every second page will be found, for instance, the part and chapter to which the page belongs. The marginal notes, too, are full and explicit, and will be found to considerably aid the reader in his study. The author has carefully revised each chapter, so that the volume as a whole is a very considerable improvement on that of seven years ago.

Donovan Pasha. By GILBERT PARKER. Toronto: The Copp, Clark Company, Limited.

We almost begrudge the pen of Gilbert Parker to be put to the task of describing "Donovan Pasha and Some People of Egypt." He seems to us to belong, soul and pen, to the *habitants* of Lower Canada, and in his keen insight into their character, and his facile and marvellous power of making them live and speak in page and story, he stands without a peer. In his new work he has done well, the chapter entitled, "On the Reef of Norman's Woe,"

in which he describes the awful scourge of cholera, the wily fight against the plague by the three Englishmen, and the sullen, devilish opposition of the natives against the enforcement of sanitary regulations, is a masterpiece in its way. Kipling, of course, has been the lord paramount of the tellers of the story of Egypt, consequently the venture of Gilbert Parker seems a bit audacious, as he speaks also of soon publishing a longer Egyptian story, so it seems to be between Kipling the inimitable and Parker the courageous, like the old Scotch song, "I'll take the high road and you'll take the low road, and I'll be in Scotland afore ye," if the race to Sphinx-land is to the swift.

W. A. Y.

Atlas and Epitome of Traumatic Fractures and Dislocations.

By PROFESSOR DR. H. HELFERICH, Professor of Surgery at the Royal University, Greifswald, Prussia. Edited, with additions, by JOSEPH C. BLOODGOOD, M.D., Associate in Surgery, Johns Hopkins University, Baltimore. From the fifth revised and enlarged German edition. With 216 colored illustrations on 64 lithographic plates, 190 text-cuts, and 353 pages of text. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$3.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

During past years we have taken the opportunity of expressing our approval of publishers giving the profession, to as great an extent as possible, the benefit of illustrations in large numbers in order to elucidate the text of any particular work. The Atlas idea cannot be improved upon, and is a splendid addition to medical literature. One of the best of Saunders' Medical Hand Atlases is Dr. Helferich's Atlas of Traumatic Fractures. The colored plates are really splendid, and in themselves impress upon the reader exactly what is meant, and in a manner that the mere reading of the text cannot convey. An atlas of this kind often proves invaluable to the practitioner as a ready reference book, and at a glance serves to show the anatomic relations of fractured parts, and consequently the diagnosis and necessary treatment. We congratulate the author upon his labors, as also Mr. Saunders on this added laurel.

Surgical Principles and Diseases of the Face, Mouth, and Jaws.

A Text-Book of the Surgical Principles and Surgical Diseases of the Face, Mouth, and Jaws. For Dental Students. By H. HORACE GRANT, A.M., M.D., Professor of Surgery and of Clinical Surgery, Louisville College of Dentistry, Louisville. Octavo volume of 231 pages, with 68 illustrations. Philadelphia and London: W. B. Saunders & Co. 1902. Canadian Agents: J. A. Carveth & Co., Toronto.

This book is specially designed by the author for dental students, and is well calculated to fulfil this object, as it is not so prolific in detail as to be too comprehensive and extensive for the

student during his college course. While this applies more particularly to the Dental student, it is an almost equally useful work to the medical student, and indeed also for the general practitioner both of dentistry and medicine who is interested in such surgical lesions as are likely to require diagnosis and perhaps treatment by the dentist, as well as the physician. The illustrations are numerous, and especially those relating to tumors of the head and face. Emergency work is treated rather briefly, and there are short chapters on Bacteriology and Surgical Principles, Inflammation, Ulcerations, Gangrene, Pyemia, Surgical Diagnosis, Anesthesia, Wounds, Hemorrhage, Syphilis.

E. H. A.

General Paresis: Practical and Clinical. By ROBERT HOWLAND CHASE, A.M., M.D., Physician-in-Chief Friends' Asylum for the Insane; late Resident Physician State Hospital, Norristown, Pa.; Member of the American Psychological Association; Fellow of the College of Physicians, Philadelphia. Illustrated. Cloth, \$1.75. Philadelphia: P. Blakiston's Son & Co. 1902. Canadian Agents: Chandler Massey, Limited, Montreal and Toronto.

Since Dr. Mickle wrote his classic work, there has perhaps been no other which so fully and at the same time entertainingly depicts the multiform morbid manifestations of both body and mind in general paresis as this handsome little book by Dr. Chase. He treats the whole subject in a clear and comprehensive way, and succeeds admirably in bringing out all the facts. He also takes great care to present the relative importance of the various symptoms described, and throughout the whole work he maintains such an excellent sense of proportion in everything that at the end the reader feels he has, without much effort, acquired a fair acquaintance with this most interesting subject.

N. H. B.

The Treatment of Fractures. By CHAS. L. SCUDDER, M.D., Assistant in Clinical and Operative Surgery, Harvard Medical School. Third edition, revised and enlarged. Octavo, 480 pages, with 645 original illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Polished Buckram, \$4.50 net; half Morocco, \$5.50 net. Canadian Agents: J. A. Carveth & Co., Toronto, Ont.

Dr. Scudder's work on fractures is already well known to the profession, the present being the third edition. As there are formidable rivals in the field this fact is another indication of the value of his book. Perhaps its most noticeable feature is the large use of illustration in showing injuries to bones and different methods of treating the same. There can be no doubt that this lavish use of illustration is helpful and efficient. To see in such cases is to understand. There are 645 illustrations in this work.

In this edition full reference is also made to gun-shot fractures

of the long bones. The experience of army surgeons has been drawn upon, and the reports of their cases exhibiting the effects of small calibre bullets in causing fractures of bones digested and presented to the reader.

J. J. C.

The Medical Record Visiting List and Physicians' Diary for 1903.
New Revised Edition. New York: William Wood & Company, Publishers.

This is a most useful List, a veritable *multum in parvo*. It contains a Calendar, Table for Estimation of Pregnancy, Equivalents of Temperature, Weights and Measures, etc. A table of maximum adult doses by the mouth, in both English and metric systems. Table of drops in a drachm. Solutions for hypodermic injection, and also for atomization and inhalation. Treatment of poisoning, signs of death, and hints on making wills. Besides the daily list and special memoranda, there are spaces for obstetric engagements, consultations, vaccinations, death register, addresses of nurses and others, and at the back a space for cash accounts. The List is handsomely bound in red Morocco leather, is gilt edged, and contains a pocket and pencil. It is the smallest and most convenient List we have seen.

W. J. W.

A Magazine Thirty Years Old. The Christmas (December) number of *The Delineator* is also the Thirtieth Anniversary Number.

To do justice to this number, which for beauty and utility touches the highest mark, it would be necessary to print the entire list of contents. It is sufficient to state that in it the best modern writers and artists are generously represented. The book contains over 230 pages, with 34 full-page illustrations, of which 20 are in two or more colors. The magnitude of this December number, for which 728 tons of paper and six tons of ink have been used, may be understood from the fact that 91 presses running 14 hours a day, have been required to print it; the binding alone of the edition of 915,000 copies, representing over 20,000,000 sections which had to be gathered individually by human hands.

Saunders' Question Compend, No. 24. Essentials of the Diseases of the Ear, prepared especially for Students of Medicine and Post-Graduate Students. By E. B. GLEASON, M.D., Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia. Third edition. Philadelphia and London: W. B. Saunders & Company. 1902. Price, \$1.00. Canadian Agents: J. A. Carveth & Co., Toronto.

While not an ardent admirer of question compends, the reviewer must confess to having been pleasantly surprised in this one. Brevity is not the only feature—accuracy has not been sacrificed to it. One finds out-of-the-way information not expected in works of this kind. It is distinctly superior to most of this class.

J. M. M.

Merck's Index. Second edition. E. MERCK, Darmstadt, Germany.

It is now five years since Herr Merck issued the first edition of his reference book. It has been appreciated by the profession, and found quite helpful, being adapted to the requirements of medical men. The book gives concise yet exhaustive information on modern *materia medica*. Doses, latest indications for the administration of different remedies, and etymological notes are given considerable space. The volume also contains information as to special test solutions, solutions for clearing, fixing, hardening, staining, embedding, and mounting microscopical specimens, as well as stains and dyes for microscopic work. It is probable that an English translation will be issued in the course of 1903.

The Medical News Visiting List, 1903. Thirty patients per week. Philadelphia and New York: Lea Brothers & Co. 1902.

It is now some years since Lea Brothers & Co. commenced to issue their Visiting List; but it is safe to say that none that has reached the profession so "fills the bill" as that for 1903. A practitioner must of necessity have something of this kind in which to record his work as he "goes his rounds," and we feel that the majority of medical men will find the Medical News Visiting List in every way up to date, containing in addition a great deal of information as to urine examination, artificial respiration, table of doses, important incompatibles; how to find the day of confinement, table of eruptive fevers, signs of dentition.

W. A. Y.

"Home Nursing."

We have recently received a book entitled "Home Nursing," published by the Davis & Lawrence Co. (Limited), Montreal. This publication contains practical instructions for the performance of all offices pertaining to the sick. It tells what to do in case of accidents, treats with nearly all the diseases to which human flesh is heir, as well as containing many recipes for preparing solid and liquid food for the sick. No home should be without a copy of it. It is a very attractive book, about fifty pages, and can be obtained upon application to the publishers, Davis & Lawrence Co. (Limited), Montreal, enclosing to them 5c in stamps to cover the expense of mailing, etc.

The Physician's Visiting List (Lindsay & Blakiston's) for 1903. Fifty-second year of its publication. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street.

This Visiting List is a small, well-bound pocket-book, with leather cover, gilt edges, tuck, pocket, and rubber-tipped pencil, made up to hold twenty-five patients' records per day, week, or month, dated, with pages for memoranda and tables for reference. It is a simple statement of a year's work. A useful book for the physician.