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Original Articles

THE THERAPEUTICS OF RADIUM*

BY DR. ROBERT ABBE, NEW YORK.

On Tuesday, March 3rd, 1914, Dr. Robert Abbe of New York discussed at the Toronto Academy of Medicine the therapeutics of radium. He showed many plaster casts and lantern slides of cases he had treated.

Dr. Abbe said that a certain lecturer at Yale had told him some ten years ago that he had got all there was out of the physics of radium and said to Dr. Abbe, "Now it is up to you to learn something new." But this professor is still learning and writing books on radium.

EXHIBITION OF PLASTER CASTS.

Dr. Abbe passed round some plaster casts, a few picked out from the thousands he had made. These were records of the appearance of cases before and after treatment by radium.

The first was that of a simple case of ordinary rodent ulcer in which the wing of the nose was destroyed. Twenty minutes of radium treatment cured the condition, as was well shown by the second cast that was exhibited, and this patient has remained well.

The second case showed a similar condition but more advanced. Here the wing of the nose was eaten away entirely, also part of the lip. A little radium tube was put in three or four times and in five weeks the ulcer was perfectly cured. The casts of this case showed the condition of the patient nine years ago, immediately before treatment, and also the present con-

* Address delivered at the Academy of Medicine Reported by Dr. J. F. Goodchild.

dition. In the second cast there was no return of the disease. The patient has remained perfectly cured for nine years. This is an illustration of the fact that radium does what surgery has never been able to do. Surgery sometimes cures the patient but never cures the disease, whereas radium puts an end to the disease itself.

The third pair of casts exhibited another case of the same type, an epithelioma of the corner of the eye and including both eyelids. After radium treatment and some weeks in the hospital while treatment was applied this patient became perfectly well.

The fourth cast was one of a case of cancer behind the ear. This growth had been burned out, frozen out and cut out, but always came back. In June some seven or eight years ago, when the patient came to consult Dr. Abbe, eroded tissue extended down the side of the neck. Two or three radium tubes were applied for an hour at one time on four different occasions, and in October the patient was perfectly well. A cast taken six years afterwards showed the condition to be still perfectly healed.

Another cast was that of an eyelid case. The lower lid was the site of a tumor involving some three-fourths of the lid. It was sent to Dr. Abbe for a plastic operation. This round-celled sarcoma was cured by four one-hour applications of radium. This case illustrated a result so good that it was not possible to tell from the plaster casts which one was taken before treatment and which after treatment. The condition was perfectly cured. A photograph taken of this case lately made it plain that it is impossible to tell upon which eyelid the tumor grew. Here there was a mass of cells which had engulfed practically all the tissue of this eyelid. Radium was laid upon it and there was a reassemblage of the normal cells of the lid. The mucous membrane again took on its normal appearance, the edge of the lid its normal shape, and the whole lid became restored. Radium had reassembled the cells which, though not destroyed by disease, were engulfed. This case was treated just in time—that is, before necrosis had set in. This case, called a round-celled sarcoma, was probably a basal-celled type of epithelioma. All sorts of tumors which are of a basal-celled type are cured by radium if they have not gone too far. The simplest type of tumor is the ordinary wart, the non-malignant papilloma. Hundreds of these have been cured completely by fifteen to thirty-minute applications of 10 milligrams of radium.

Another interesting type of tumor which had been treated with success was that of epithelioma of the nipple, commencing

cancer of the breast. He reported many of these cases which he had treated with satisfactory results. Every one of these cases had been cured by simply placing a piece of radium over the diseased area. Photographs of warts from various parts of the body, mouth, tongue, extreme cases, were shown, all of which had been completely and perfectly cured by the use of radium.

The lantern slides of the cases before and after treatment were most instructive. One, a large parotid tumor which would have been almost impossible of treatment by surgical means, was completely cured by the use of radium.

CANCER OF TONGUE AND GUMS.

He next showed some cases of cancer of the tongue and gums which were cured. One of these that was cured died recently of cancer in some other part of the body. In treating one case of cancer of the tongue, the part became so painful he had to use surgical means, removing part of the tongue and then continuing the radium treatment until the condition was cured.

MYELOID SARCOMA.

Dr. Abbe reported radium a specific for myeloid sarcoma. He showed photographs of a boy where a tumor of this variety was present in the jaw. The tumor occupied almost the entire half of the inferior maxillary bone, and in this mass of growth there were three loose teeth. Radium laid about this mass caused it to shrink, and after a few applications the growth began to get gritty and finally became harder and harder. The size became reduced to normal, with the bone firm and hard, and the teeth perfectly firm and solid in their places.

Some specimens of carnotite containing two or three per cent. radium were then passed round. He said that the original mineral in which this was found was pitchblende. This was American ore. He also showed some Austrian pitchblende, and remarked that the Austrian pitchblende is much richer in radium than the American, but that all contain radium in workable quantity.

RADIUM APPARATUS.

Dr. Abbe then exhibited different forms of radium used in the treatment of disease. The first specimen handed round for examination was a little glass tube some three inches in length and containing 60 milligrams of radium in one end of the tube. He said this form is used in the treatment of such con-

ditions as diseased eyelids, for inserting in various body cavities, also for inserting in the tumors themselves after opening them surgically. When passing it into these tumors he usually wraps a little cotton about the tube. He said the most perfect way apart from the tubes is the little vulcanite style with ten milligrams of radium in it. This is pure radium bromide in a little convenient holder. If this is laid on the hand for ten minutes it will cause a burn, or on a wart it will disappear. Another form exhibited was the plaque of square metal having a burnished surface and containing 25 milligrams of radium. Dr. Abbe explained that this little plaque was emitting from it multiple rays, and later during the course of the lecture he showed these on the screen. All the rays are given off from this plaque excepting alpha.

Exhibiting an ordinary barium platino-cyanide screen and holding up a plaque of radium the screen became brilliantly illuminated. The rays had gone in a straight line from this small piece of radium, and, striking the screen, it shone brightly. In radium we have something absolutely new in physics. There is something in it like life itself. From it rays go straight into infinite space with almost the speed of light. They do not deviate from their course till influenced by some magnetic influence. If the rays pass through some magnetic field they are separated instantly. The alpha rays, being positive to electricity, go to the right, and the beta rays, being negative to electricity, go in another direction. The gamma rays are not affected by the magnet and they will still go straight on into space, uninfluenced in their course by electrical force. These gamma rays are like light itself, rapid, vibratory rays going straight into infinite space. Holding the plaque in his hand, Dr. Abbe said, "The rays from this little plaque this instant are now in the universe off to the nearest stars and they are continuing to go. They are discharged instantly. This peculiar quality of radium makes it a very penetrating and very active agent. If you allow these rays to strike the cells of tumors or the cells of the skin or even vegetable cells you will get the same demonstration of its representative action on cell life."

THE ACTION OF RADIUM ON SEEDS.

A very interesting experiment which Dr. Abbe had carried out was one showing the action of radium on seeds. Some seeds were put in a box and a piece of radium placed on top of the box. Every few hours some of these seeds were taken

out and planted in rows in turn as they came from the box. Some of the same seeds that had not been influenced by radium at all were planted beside those that had been so influenced. This experiment showed that the longer the seeds were exposed to radium the weaker was their growth. Those that were left long enough under its influence were killed, and did not grow at all. The action is the same on animal and vegetable cells. It is supposed that the gamma rays are the efficient ones that act upon the cells. The dynamic force of radium we have not yet measured very well. In regard to its use, however, the subject of cancer has become a prevailing one for serious popular contemplation. This is unfortunate, because this will hide the real use of radium. Cancer will not be settled for a generation. If we get to the fringe of it we will do a great deal. The very beginning of cancer has hardly been touched upon as yet.

In the experiment with the seeds he showed different rows stunted by different exposures. All the plants were there, but stunted in growth in direct relation to the time of their seed exposure to radium influence. Bulbs also were shown retarded in growth in a similar way. These bulbs went through life each the same as the other, only stunted and delayed in growth. The action on the cells of tumors is the same. The cells of these are arrested in development, and if the exposure to radium is long enough they necrose.

A very remarkable case was shown, one of sarcoma of the scalp. After using a large amount of radium in treatment for two days the tumor was half gone and in twenty days had entirely disappeared. This patient remained in Johns Hopkins Hospital for two months and then went home cured. Speaking of the physics of radium, Dr. Abbe alluded to the experiment already mentioned, and said that the alpha rays have a short excursion, the beta rays an excursion of about five inches, whereas the gamma rays go straight into infinite space. An experiment was made to prove that there are these different rays. A radium plaque was used with lead screens in front of it to prevent the rays getting beyond a certain distance; beyond was a barium platinocyanide screen. The rays from the plaque were seen going to the upper part of the screen, but below all was in darkness by reason of the piece of lead interposed. An electric magnet was put in front and all the alpha rays were changed in direction and the beta rays were changed in course so completely that they illuminated behind the point from which they started. They were so deflected they came

round and beneath the plaque. Trying the effect of the separate rays, it was found the beta rays arrest growth and the gamma rays seem to have no effect.

When we once understand exactly the effect of each of these different rays, we can apply the different kinds of rays and get the different results of each. Dr. Abbe thought that the whole question of the popular stories of radium in the treatment of cancer, as written in the press, should be suppressed.

Whether applied to papillomata, those heaped-up cell masses of the skin and mucous membrane, to the epitheliomata of the skin and mucous membranes, or to those increased formations of the squamous cells or basal cells of the skin or to the myeloid tumors, those central tumors of bone, or the pure myomata or the tumors of glands like the parotid or thyroid, to all invasions of the normal tissue with overgrowth of the cells normal to the part, the result is the same. These weaker cells are driven back into ordinary growth. The fact of the surrounding cells not being injured and these cells constituting the local disease being destroyed, shows that the weaker cells have been first attacked and that they have been destroyed. Troublesome papillomata of the vocal cords disappear very quickly under radium. Cases of this sort presented proof that mucous membrane cells are not affected by radium, while the papillomata cells were caused to disappear.

NOMENCLATURE FOR RADIUM THERAPEUTISTS.

Pathologists may name tumors as they choose, but the nomenclature for radium therapeutists is (1) those tumors that are cured by the use of radium, (2) those tumors that are not cured.

THE PENETRATING POWER OF RADIUM.

To exhibit the penetrating power of the radium rays Dr. Abbe showed a picture of a granite boulder with a radium tube lying on it and a photographic plate underneath the stone. In this experiment some 50 milligrams of radium photographed itself through six inches of solid granite. This experiment has been carried out on a larger scale, passing through boulders as thick as twenty inches. If a piece of radium is lost upon the carpet and a plate is held over it, the portion there will photograph its own photograph on the plate. If the radium is not seen the piece of carpet can be sent to the laboratory and the radium present in it recovered there.

Dr. Graham Chambers asked, "Did you state that cancer cells return to normal?" Dr. Abbe said he did not mean that. "There is a reticulum that holds the normal cells together. We cannot see it, but in these cases that return to normal this reticulum must be there. In many of the tumors one has the feeling while working at it that there is a return to the normal line of growth of many of the cells composing these tumors. A papilloma under treatment is a good illustration of this. There there is a return to the normal line, but this is about as far as our knowledge here will take us. I began to see cases where I thought radium stimulated growth and then tried experiments with oats in different ways. One experiment was, that I took a piece of wood and split it into twenty layers, then laid some oats on each layer and put a radium plaque over them. Each quantity of oats was a little more distant from the radium. Then I took the seeds out and planted them carefully in rows. The findings in this experiment were the two rows nearest the plaque were killed, the three layers next were stunted, and the next four layers were very much stimulated. These last layers were distant from the plaque one to one and a half inches. Then came another confusing series. The rows of oats began to grow more and more poorly until the nineteenth row, which was affected most. Speaking of this to Madam Curie last summer she thought it was owing to the different action of the gamma and beta rays. There was here shown the losing effect from the beta rays and the gaining effect of the gamma rays. The conclusion here is that the alpha rays go a short distance, one-half inch, the beta rays go one and a quarter inches, and the gamma rays go any distance."

To illustrate the different kind of tumors one may deal with, Dr. Abbe used his lantern slides and showed the following pictures of cases:

PAPILLOMATA.

A case of warts on the lips. Radium was applied fifteen minutes and the warts disappeared like smoke and never came back; warts on the eyelid were treated in the same way and disappeared completely.

Photographs of warts on the soles of the feet. Treatment and results equally good. Dr. Abbe had seen twenty cases of this sort, and all were cured completely. He had had two cases lately where the middle toe was to be cut off, and radium applied for half an hour resulted in a perfect cure. In these cases the reaction does not take place for a week or ten days, then during

the second ten days the part becomes itchy and burns and at the end of thirty days the growth drops off as a scab and leaves a normal skin. Other cases were shown of warts on the tongue, lips, and mouth, also cases of leukoplakia. One of these was a papillary tumor of the tongue with tendency to malignancy. Radium applied one and one-half hours effected a complete cure.

Other very serious cases of warty growths on the tongue were shown next, and the effect of radium on these was most satisfactory.

The next cases shown were those of warts over the scalp, and these were easily cured without destruction of the hair; also cases of warty growths on the vocal cords, and these when removed showed no return after three years, though previous to that no surgical treatment was beneficial.

One case shown was that of a fibroma on one of the vocal cords. This was cut off and came back rapidly, and the larynx filled with papillomatous growths. Treating this case, Dr. Abbe took a tube of radium of one hundred milligrams and held it between the vocal cords for thirty minutes, and then a similar treatment after two weeks. In eight weeks the tumor was practically gone. The patient could talk, and in three months she could sing. The cords are now perfectly well.

Another case shown was that of warts of the vocal cords, where a young woman had lost her voice by the growth of papillomas on the arytenoids and between them. Radium was inserted between the cords for thirty minutes and the larynx is now perfectly healthy.

KELOID.

Another class of cases benefited is keloid. A view before and after treatment of a young girl who had herpes zoster on the side of the face, leaving a red, tender, itchy and burning keloid, which was continuing to grow larger, showed that three or four radium treatments of this condition caused it to change from its enlarged condition, some two inches in diameter and extending some quarter of an inch beyond the normal contour of the face, to a white, flat and perfectly normal appearance. Here Dr. Abbe remarked that true keloid yields to radium just as readily as false keloids. Here is a condition which yields to this form of treatment but will not yield to surgery.

Another case exhibited was that of a young man whose face was very badly burned by acid thrown on it by a girl he had jilted. The primary scarred condition of the face was improving under the influence of radium.

NAEVI.

Cases of naevus were shown in the views, and all were completely cured through treatment. In these cases a radium plaque is laid over the deformity for ten, fifteen or twenty minutes, and this sets up a certain amount of inflammatory activity. As a result of this inflammatory reaction inside the blood vessels the naevus goes down to a flat scar in three or four months.

A birthmark on a lady's face was shown—one that nothing could remove except radium. This birthmark was two or three inches in diameter, extending over the side of the woman's face. In this case the condition was cured, the skin became soft and natural.

Dr. Abbe does not hurry these cases. He reports the results as better if two or three years are taken in treatment. Another view showed a case of lymphangioma of the tongue. The mouth was full, and the mass bleeding most of the time. This painful, large, granulating mass went right down under radium until now it is almost flat and the tongue never bleeds. Another of an ordinary hairy mole was shown to be easily cured by the use of radium. One severe case of this type was that of a young girl who had a large papillary hypertrophic mole of a blackish-purple color and about two inches in diameter on the back of her hand. This was cured nicely by the influence of radium. Another case shown was that of lichen planus of the neck, in which a complete cure was effected. Two cases of tuberculoma, one of the ear and another of the hand, were each beautifully cured by this treatment. These cases were treated several times with an exposure of one half hour each time. The plaque was merely laid over the tumors on each occasion.

SPRING CATARRH.

Vernal catarrh, ordinary spring catarrh, that form which ordinarily lasts all summer and only improves in the winter, to return again in the spring, is greatly benefited. One case shown presented heaped-up granulations of the eyelids. Four of those cases he had cured by radium without the slightest trouble. Here the eye was cocainized and little lead plates used to prevent the effects of the radium on the eye itself. Then a piece of radium was moved back and forth under the lid for ten minutes. At the end of one month the patient was nearly well, and with another treatment the patient was perfectly cured.

GRAVES' DISEASE.

A girl, a trained nurse, had given up work because of Graves' disease. She had a large growth in the neck which had been getting worse for one and a half years. With cocaine as an anæsthetic a cut was made in the middle lobe and a radium tube passed into the opening and retained there for twenty-four hours, one hundred milligrams being used. In two months this goitre had practically gone, and now, nine years afterwards, she has no tachycardia, no exophthalmus, and the symptoms of goitre are not present, and she is perfectly well. In her case, two months after commencing treatment she was able to walk two or three miles and in three months she was playing tennis. Most of the goitres are not so successfully cured as this one, where the results were perfectly magical. In ordinary goitre there is simply a hypertrophic glandular structure, and in such conditions the influence of radium proves most beneficial. These conditions are found in the spleen, the liver, the parotid and the prostate gland, and most of them will yield to radium. Not all of them, however, and why some of them will yield and others will not, he did not know. Another thyroid case was shown, a typical exophthalmic goitre, which was treated by external application of radium. The radium was held about three inches away from the part, and applied no longer than one hour over each part of the growth, as it is not safe to allow the gamma rays to penetrate one part for a longer time than one hour or a blister will be produced and cellular change with ultimate fibrosis result. This woman greatly improved, but she went away to the country and began to get worse again and became so bad that her case was thought hopeless by her doctor. She came back and had another radium treatment and improved again. After this she came for treatment three times, with some general improvement. The method of treatment was then changed. Under cocaine an opening into the gland was made and the radium tube was slipped in one-half the thyroid overnight and now she is on a fair way to full recovery. Another case shown was that of goitre going down below the sternum, so grave that Dr. Hartley refused to operate. For two years she had not been able to travel, and last year after treatment she was able to go to Europe. An X-ray was taken and showed a reduction of more than one-half the mass since commencing treatment. Ordinary goitre cases were shown, some cured and some not cured. While there are surgical triumphs in the treatment of goitre, some people will not have it, and in radium we

have a method that can be used to help that class. Another case of goitre where too much radium had been used and some necrosis was the result was cured. Also another one-sided goitre was reduced under radium treatment.

PAROTID TUMOR.

The next illustration of the effect of this form of treatment was a case of parotid tumor. Here the same strength of radium used in outside applications for goitre cases was used, namely, 150 to 200 milligrams of radium. That is enough to produce deep radionization through the tumor. He showed a man with parotid tumor—a mixed glandular sarcoma. On putting radium into it in two places, the growth shrank nicely and disappeared. He also showed a leukoplakia of the tongue which was completely cured. Another case shown was cancer of the tongue in a young woman. This was radionized. Result was that she was sent back to have half the tongue cut out and the remaining portion was again radionized when she came back. She is now perfectly well. Dr. Abbe next showed six or seven cases of basic-celled epitheliomata of the ear, which were completely cured by radium. Another case was that of epithelioma of the eyelid in an elderly man. He had gone to a New York hospital for treatment, but when they found he had hæmophilia the surgeons refused to touch it. A little tube was laid on for three or four minutes containing fifty milligrams of radium. The epithelioma disappeared in two months, and now, four years afterwards, there is still no sign of a return. Another case was shown where an epithelioma of the neck was quickly cured. A keratosis was cured in a few moments, also several cases of rodent ulcer and a basic-celled epithelioma of the interior canthus, all of which were completely cured. There was one case of rodent ulcer involving one-half the entire nose, and which was completely cured, although a bad scar remains.

A very interesting case shown was that of a cancer of the parotid gland, and this was a growth on the side of the neck of considerable size, lying chiefly in the posterior parotid region. A surgical operation on this case was done, but it was found that they could not get at the tumor to dissect it out; part of it being deep in the parotid sheath was adherent to the parotid tissue and the artery. As they could not remove all, a tube containing one hundred milligrams of radium was inserted. The wound was closed and the tube left in until next morning, when it was withdrawn. This patient was completely cured,

and has remained well for five years. She is as well now as she was ten years ago, five years before the operation was performed.

CANCER OF THE NIPPLE.

Photographs of a case of cancer of the nipple were shown. Radium took care of all these forms of cancer of the breast where the commencement was in the nipple rather than in the deeper parts of the gland. One of these cases where radium had cured cancer of the nipple now has cancer of the axillary glands and of the stomach and she will die. It is reported that ten out of a hundred X-ray workers have gone to death by cancer. The early stages of X-ray disease show heaped-up masses of epithelioma. Later as the parts become more seriously involved operations have to be performed. A case of this sort was shown—an X-ray tubemaker whose fingers had to be amputated. He had several of these tumors, and radium was applied to each of them fifteen to thirty minutes, and to some one hour. Some of these growths stood out nearly one inch before treatment, but after, everyone of these dropped off and left smooth skin. In ten days the base of these growths became a little angry and red, and in ten days more the growth had disappeared. Dr. Abbe treated seven or eight X-ray men who had conditions very much like these. Some were so bad that skin-grafting, freezing, in fact, everything had been tried, but in all cases after about three applications of radium the growth dropped off, leaving the parts free and smooth.

The next slide was a section of one of the cancers of the breast. Here radium was used for a time and then the disease cut out. The action of the rays in this case on the tumor was well shown by the photography. The skin of the breast was burned and the growth was commencing to atrophy. There was an exudate of the lymphocytes, showing the effects of irritation. In this case, one-quarter inch under the skin there were nests of cancer cells still left. These had not been radionized.

SARCOMATA.

A case of scalp tumor was shown, a large irregular growth about the scalp. Here there was malignant growth of the scalp, and the dermatologist treating the case said there was nothing to do except scalp the man or try radium. Radium was tried, and before long the scalp became perfectly natural and the skin a normal white. Some time afterwards two growths came back. Dr. Abbe cut those out and the pathologist reported the condi-

tion as lymphogranuloma—a hair-splitting diagnosis. This was a beginning sarcoma, and radium had cured it.

Another case was that of a giant-celled sarcoma of the skull. This got on nicely under the use of radium. In 1905 a big fibroid of the uterus was treated, and in one year this was reduced to a small tumor lying over the fundus of the uterus. Another case of this sort was treated by passing radium into the uterus by way of the cervical canal. There was an active inflammation of the endometrium and radionization of the tumor tissues present in the vicinity. In both of these cases bleeding was stopped very shortly after treatment was begun.

A photograph of a large sarcoma of the leg with a portion of radium within it was shown. This sarcoma was destroyed and healed by a few such applications.

A case of myeloid sarcoma of the end of the humerus was shown to be completely cured by this form of treatment. In this instance several tubes of radium had been placed over the tumor. These tubes were left *in situ* for one day only as a general rule, but in this case it was left in seventy-two hours. In this case an osteomyelitis developed, and Dr. Abbe's assistant cut into the upper end of the bone. Next year the entire bone was removed.

A case being treated at present was one of a similar form of tumor in the lower end of the radius. The growth is shrinking and there is hope of benefit. Cases of lymphosarcoma of the chest, axillæ and groin, under external radionization after two months' treatment were shown to be either cured or reduced to one-quarter the original size.

DISCUSSION.

Dr. W. H. B. Aikins, opening the discussion of Dr. Abbe's lecture and demonstration, said: "Dr. Abbe's excellent and illuminating address, which has been deeply interesting—even fascinating—throughout, discloses his great knowledge of the subject, and his true scientific viewpoint is beyond criticism. I should like to refer to the use of radium in the treatment of certain conditions of the thyroid gland.

GOITRE.

"This is a field which Dr. Abbe was the first to develop, as in 1905 he treated a case of exophthalmic goitre by inserting radium tubes into the gland. As he has stated, in eight weeks

the goitre had considerably diminished and the nervous symptoms disappeared, and the patient has remained well since.

"I have myself used radium in fifteen cases of goitre. Nine of these showed evidence of hyperthyroidism, while six were of the simpler variety. Of the nine exophthalmic cases, in six the improvement has been most gratifying. The nervous symptoms disappeared, and the enlarged thyroids have decreased to a remarkable extent.

"In one case which I would like to mention particularly, the circumference of the neck was reduced from $14\frac{3}{4}$ to $12\frac{1}{4}$ inches. The exophthalmic symptoms were most severe, but quite disappeared under the treatment, which consisted of three series of exposures to radium of 280, 225 and 100 m.g. hours respectively, from November to April.

"In another case there had been enlargement present for some years. The enlargement was particularly in the middle and right lobes, which had lately been producing constitutional symptoms, and the circumference of the neck was fifteen inches. In a comparatively short treatment of 100 m.g. hours of radium the goitre decreased so that the circumference of the neck was only thirteen inches, and the nervous symptoms quite cleared up.

"In two of my nine cases of exophthalmic goitre, the improvement, although considerable, was not complete, and in one no improvement resulted.

"Of six cases of simple goitre, in four considerable reduction occurred in the size of the gland, the neck decreasing in circumference from three-quarters to one and one-half inches with almost complete disappearance of the enlargement. In one case, though there was a reduction of one inch in the circumference of the neck a large mass still remained present, and in one other which was reduced three-quarters of an inch the bulk of the goitre still remained. This particular one had been present for ten years. A great deal of fibrosis had evidently taken place, and therefore resolution could not so readily occur.

"Thus from my own observations which have been confirmed by what Dr. Abbe has told us this evening, one cannot help but conclude that the radium rays have a distinct place in our therapeutics of thyroid gland conditions.

"The ease and absence of discomfort with which radium plaques can be applied should be emphasized when one considers the highly nervous state in which many of those patients are with the dread of something going to happen to them."

Dr. G. S. Ryerson said he had never before seen a demonstration so satisfactory, so convincing and so obviously truthful

as this one. "Dr. Abbe has placed before us casts and photographs which are undeniable, and if I might be permitted to say it, his personality would appeal to any of us as that of a truthful man. There are some people who look on the radium business as allied to quackery. One wonders what kind of a man that man is who is making use of radium in the treatment of diseases. Where suspicion lurks venom will find origin in his spleen. It is like painting the lily to say anything more about Dr. Abbe's address. All present at this meeting have undoubtedly been greatly interested in Dr. Abbe's paper and beautiful demonstrations."

Dr. Hunter asked what result Dr. Abbe had had in the treatment of cancer of the uterus by radium.

Dr. Graham Chambers said he was very much interested in the remarkable results obtained. He thought if anything was to be said in criticism it should be directed to the wide application Dr. Abbe had made in the use of radium. This possibly comes from the fact that Dr. Abbe is also a surgeon. Men that work in dermatology and use radium do not in treatment make such a wide application of it.

Dr. King Smith was struck with the conservative method of Dr. Abbe. It was pleasing to hear him tell of the failures he had had. There is a wide impression that radium is a cure for all forms of cancer. The conservative report of Dr. Abbe should go to the press, that the better knowledge of the use of radium might be more widespread.

Dr. Herbert J. Hamilton said that in regard to the press the reporters had been denied admission, although requests had been made that they be allowed to be present. It was explained that Dr. Abbe's address would be technical and not of interest to the public. The mistaken knowledge of what constitutes cancer in the mind of the laity, is responsible for the reports in the press in regard to the use of radium for that disease. The public call anything in the shape of a growth on the skin a cancer.

Dr. Herbert A. Bruce referred to Dr. Abbe's case of sarcoma of the face that disappeared like magic under the influence of radium, and said that some eight or ten years ago he had a case of lymphosarcoma of the tonsil. This was treated by X-rays by Dr. G. R. McDonagh, and this tumor disappeared in a similar way in a week or ten days. This growth returned in three or four months with a fatal termination. He hoped a similar result would not occur in Dr. Abbe's case. He said the use of radium in the treatment of exophthalmic goitre recalled the fact

that at a recent meeting of this Academy one member advised the operation of short-circuiting of the intestines as a treatment for that disease. He hoped radium would prove more useful than this suggested treatment for goitre. In regard to the point that Dr. Abbe is a surgeon, and of wide experience in medicine, it is fitting that such as he should make use of radium, for in their hands this agent will not be used as the sole treatment of cancer. This treatment will not be used to replace surgery, but as an adjunct to surgical measures.

Dr. Albert A. Macdonald spoke of the scientific spirit Dr. Abbe had shown in speaking of his cases. He pointed out that if this spirit is held on to by the radium pioneers we will soon find it necessary to make positive statements to the public in regard to the value in treatment of this remedy.

Dr. W. H. B. Aikins, seconded by Dr. G. S. Ryerson, moved a vote of thanks to Dr. Abbe. The motion was carried heartily by the Fellows present, all of whom were greatly impressed by Dr. Abbe's address and splendid demonstration.

Dr. Abbe in reply said: "I would like to say one thing in accepting the vote of thanks. Cancer of the tongue is a troublesome thing to handle. Going over my records the day before coming to Toronto, I found that in thirty cases of cancer of the tongue and mouth, only one or two cancers of the tongue were cured. Most of the cancers of the tongue are not of the basal-celled type. They are of the squamous-celled variety, and this does not yield so readily to radium as does the basal-celled. I should say also that in every case but one of cancer of the mouth in men the patient was a heavy smoker. They were all heavy smokers. The best case I had was one with a taint of syphilis, and having a typical smoker's tongue. He had leukoplakia. After treatment he got well. Smoker's tongue is a mark against tobacco. Men who smoke from two to twenty cigars a day are the men who in from two to ten years get leukoplakia and ulcers, then hardening of the ulcers, and then serious disease. They will get well if treated early. Those men who get cancer inside of the teeth are men that chew tobacco. Only ten or eleven women had cancer of the mouth, and three of these were smokers. The other day a woman came to me from Oklahoma with her husband. She had a typical smoker's tongue. She said she did not smoke, but used snuff. She rubbed the snuff in with a toothbrush. She had a tobacco tongue. These cases of cancer of the mouth and tongue constitute a black mark against the practice of smoking. This fact is as plain as daylight."

REGISTRATION UNDER THE CANADA MEDICAL ACT *

R. W. POWELL, M.D.,

Registrar of the Medical Council of Canada, Ottawa, Ont.

Allow me in the first place to express my appreciation of the compliment extended to me in giving me this opportunity of addressing this distinguished gathering of educationalists. I fully realize that it is the office I hold that has singled me out for this distinction, but, nevertheless, I feel that you will pardon an humble pride when I tell you that this scheme of "Dominion Registration" has for many years been very dear to my heart and that in season and out of season I have forwarded the measure to the limit of my capacity, and now when I find that within eighteen months of its fruition I am here in the flesh to amplify its measures to my colleagues of this great republic, I feel a sense of gratification not measurable in words.

Since the birth of the Dominion of Canada in 1867 the profession of medicine has never once lost sight of the unfortunate position it was placed in by reason of certain clauses in the British North America Act, which placed matters affecting education under the control of the provinces. It is fairly clear that such was not the absolute intention of the framers of that Act; but rather that what was intended to be included were matters of ordinary or common public education, and from that day to this the provinces have held out stoutly for what they honestly believed were their rights under the constitution.

With the birth of the Dominion came the birth of the Canada Medical Association, and at its first session in Quebec in 1867 under the presidency of Dr. Tupper, now the veteran Sir Charles Tupper, the question was introduced and discussed and a bill was actually framed about two years later to test the question in the Canadian parliament. So many obstacles appeared to be in the way that the scheme was dropped so far as the active political leaders were concerned. When I mention that Sir Charles Tupper, a prominent member of our profession in his day and a prominent and leading politician as well, felt that the scheme for a federal act was out of the question, you will realize that serious

* Read at the Tenth Annual Conference of the Council on Medical Education, Chicago, Feb. 24, 1914. Selected from Journal of American Medical Association.

difficulties must have been on the horizon. Sir Charles was not a man to be daunted by trifles and he was always the embodiment of loyalty to our profession.

I may add that years afterward (in the early eighties) I personally went into the matter with him, only to be told that the one and only way to accomplish our desires was by first securing an amendment to the British North America Act in the Imperial Parliament at Westminster—many of my hearers must know what a herculean proposition this would entail.

Our profession, always hopeful and never pessimistic, kept on bringing the question to the notice of the general body of practitioners as represented by the Canada Medical Association. From the time I joined the association in 1879 the point has never once been lost sight of, and it came about that the great mass of practitioners, constantly increasing in numbers and influence, became gradually permeated with a desire for some general scheme that might be called an inter-provincial reciprocity, or roughly, a breaking down of imaginary barriers so far as active practice was concerned. Committees were formed and discussions took place annually, but all to no purpose. It would appear that we were seeking the solution of an impossible situation.

The growth of the Dominion, the addition of new provinces, the establishment of new borders, all tended to tighten the rein, and the barriers became strengthened rather than weakened.

Equalization of standards and the creation of examining boards with corresponding similarity of ideals must be the preceding elements to interprovincial reciprocity. Then again, certain universities had acquired charter rights from the crown extending to all faculties, and this became a bar not easy to surmount in some quarters.

I must now digress for a moment to say that at a most opportune and auspicious moment a patriot and a prophet arose in our country, and to him was given a roving commission by the Canada Medical Association to inaugurate a scheme for the establishment of a medical council for Canada. I refer, of course, to Dr. T. G. Roddick of Montreal, late dean of the faculty of medicine of McGill. To say that Dr. Roddick threw his whole soul into this work would but feebly express my thoughts and his untiring services. He threw his time and his money as well as his energy into it and in 1896 actually sought and obtained a seat in parliament in order to be in a still stronger position to forward his measure. Could human devotion and enterprise go further than this? It necessitated hard work, much patience and diligence as

well as a refined diplomacy of a high order. Unbounded pluck and perseverance came to his assistance. He travelled the length and breadth of Canada on three separate occasions, met all the provincial councils, sympathized with them, argued with them, persuaded them to rise above provincialism, and while all this was going on he never lost an opportunity of bringing his scheme to the notice of the profession at large. It is gratifying to us all to know that his work has been appreciated and that on its consummation in November, 1912, he was unanimously elected the first president of the Medical Council of Canada by acclamation.

I most sincerely wish that he could have been here to-day to enter into the spirit of this meeting and to take my place on this platform by addressing you, but it was not possible. He begs me, however, to assure you that he is thinking of this meeting to-day and that while he can only send his benediction, his hopes and wishes are for the highest fruition of your endeavors and that they will be crowned with a result that will stand for what is highest and best.

The history of the creation of a Canada medical act can be told now without trespassing too long on your patience. I may say that the pivotal points of the act were few. Certain great principles had to be kept in mind, and possibly if I take these up seriatim I can the better elucidate what has happened.

I have told you that the provinces of our Dominion had certain charter rights specifically granted to them, and it was provided that as new provinces were carved out and given a constitution by the Dominion Government at Ottawa, these charter rights were to be automatically extended. One of these was education, and so it came about that each province has from time to time passed certain laws regarding the admission of men to the license to practice medicine. Certain bodies outside what we know as the regular profession also secured rights for their adherents.

It is evident now that the Parliament of Canada could not pass laws that would contravene the provincial rights, and I may say that on many occasions the framers of the Canada Medical Act were confronted with this awful bugbear. It was thought by some that beneath the wording of the act there must be some sinister influence lurking that would in some way undermine their privileges. It was not really so, because the Canada Medical Act to-day does not take away a single right of the provinces, albeit some years were spent in establishing the argument.

The first point then is that the Federal Act constitutes a body known as the Medical Council of Canada, giving it powers to

create an examining board and to establish a medical register for Canada. The next point was that the standard to be fixed by the council, the passing of which would entitle the candidate to be enrolled on the register, was at all times to be at least as high as that obtaining in any province of the Dominion. If the council allows the standard to fall below a certain plane and exception is thus taken to the Act by an aggrieved province, there is provision in the Act for a tribunal before which the matter is to be heard and settled.

The next point was the composition of the council. This really gave rise to much controversy owing to the unequal distribution of medical men in the various provinces and to the fact that if so-called justice was to be done as regards representation by population, the council would be an unwieldy, cumbersome body with its efficiency proportionately reduced. It was kept in mind that in this great country where I am speaking to-night the small state of Rhode Island had representation in the Senate equal to her sister states. I submit this subject to correction.

To leave out pages of discussion and argument, a basis was finally arrived at as follows: Each province of the Dominion through its medical council is entitled to send two representatives to the council, and they are to be chosen or elected in such manner as the particular provincial medical council may by by-law enact.

Then, each university having a teaching faculty of medicine, or medical school having university affiliations for granting degrees in medicine is entitled to one representative.

The homeopathic body, which has certain rights in all the provinces, is considered as a whole, and they elect three representatives from their adherents in Canada.

In order to cement this body and give the government of Canada a voice in the conduct of its affairs and to make it more or less an advisory body if need be, to the Canadian Government, the Governor-General in Council (which is the Dominion cabinet) has the right to send three representatives. On this point it is provided further that as certain of our western provinces have not as yet university representation, and until they do have it by virtue of the creation of faculties having degree-conferring powers in medicine and surgery, two of the three government appointees must be selected from one or other of the said western provinces to distribute as equably as may be the total body of the council over the entire Dominion.

Another point was that the Medical Council of Canada was to have nothing to do with matriculation or preliminary educa-

tion. The framers of the Act immediately conceded that this was eminently fair and in the spirit of the British North America Act.

Another important point which followed naturally from the foregoing is that holders of foreign diplomas must present similar certificates to those required of Canadian graduates.

This was necessary in order that the provincial authorities who must sign the certificates of those applying to come up for the Medical Council examinations, and who are not as yet licensed practitioners of any province of Canada, can satisfy themselves on all points as to whether the candidate has fulfilled all the requirements, including preliminary education and matriculation and the course of study subsequently.

A difficult question arose in considering the status of those who were already licensed in some province when the Act came into force. It was felt by certain provinces that it would possibly be to their detriment if the whole body could receive Dominion registration by paying the fee when the Act came into force and so receive registration in any province if they so desired. It was decided that a fixed time should be settled for a man to have been licensed before he could thus take advantage of the Act. It was pointed out that if a man had been six or seven years practising in a given locality, he would be more likely to have formed alliances and be more or less rooted in his habitat and that growing provinces would therefore not be liable to a stampede. After prolonged discussion and negotiation this period was fixed at ten years. Therefore, when the Act came into force those who had been licensed prior to the particular date and had been ten years so licensed could apply for and obtain Dominion registration by paying the fee and complying with certain ordinary regulations. This so-called ten year clause goes on for a time and applies to all who were licensed to practice prior to November 7, 1912. Thus, if a man was licensed in 1904 he can obtain Dominion registration under the clause when ten years have expired from the date of his registration, namely, 1914, and so on.

The result of this will be that the ten-year clause will be taken advantage of more largely in the first few years of its operation than later, and after ten years have elapsed there will be only a few men seeking registration by this means, because the natural law is always operating and cannot be legislated away, namely, that we are growing older.

I come now to my final paragraph and about this there was much discussion and argument: At what date was the Act to

come into force? Leaving aside much detail of interesting argument, it was finally settled in the Act that it was not to become operative, but was more in the shape of a permissive bill, till all the provincial legislatures had legislated in effect that they agreed to its provisions and had so amended the medical act of the province that it provided that if A. B. presented himself to the registrar of the province holding a certificate that he is enrolled on the medical register of Canada, he is entitled to be registered on the register of the province as a licensed practitioner by complying with the ordinary regulations in that behalf, such as paying the customary required fee, etc.

THE USE OF THE PINEAL GLAND IN THE TREATMENT OF CERTAIN CLASSES OF DEFECTIVE CHILDREN

BY WILLIAM N. BERKELEY, M.D., NEW YORK.

After reciting how he became interested in the pineal gland (*Medical Record*) and the research work prosecuted thereon, Dr. Berkeley tells of the form of the gland used as a medicament, the results with young animals, and then the clinical facts in the case of certain classes of retarded children. The first and last are here of practical interest. Latterly the glands of young bullocks have been exclusively used, calves' glands being not obtainable in practical quantity. The fresh glands are rapidly dried, mixed with milk sugar, and put up in capsules; each capsule corresponding to 150 pounds of bullock—live weight. This is a physiological dose; and the capsules are not unduly expensive considering that the dose is small. They are obtainable at New York pharmacies. The ordinary dose for a child of 25 or 50 pounds weight is one to two capsules a day, best after eating. If the child cannot swallow a capsule whole it may be opened and spread on buttered bread or given dry. It is harmless to the stomach; no other preparation or "extract" is recommended.

The remedy was given a fair trial on a large number of cases. On simple physical dwarfism with good mentality it soon became evident these were subjects for pituitary medication only. It has had a fair trial on 100 mentally defective children; and a large majority of these were without physical stigmata. No experi-

ments on cretinism were made. No result in one case of an amaurotic idiot. Negative results upon a few congenital idiots. Little or no response in mental defectives of any class over fifteen years of age. Some progress in two mongols. At Vineland, N.J., a four months' test was arranged. Some twenty-five subjects and twenty-five controls started upon the experiment; twenty-one subjects and fourteen controls finished, each child being grouped with the child or children nearest him in heredity and mental age, all being under the regular dietetic and educational routine of the institution. Several of the subjects were congenital idiots and these made no progress. Fourteen of the others made a gain, twice the normal and more than twice the progress of the control children in the same period. Some advanced .8 of a year; one 1.8 of years. In New York other experiments with other children showed more or less response. Those well marked by organic defects showed a uniform exception. Cases are given in detail. From the experiments and observations, Dr. Berkeley says the pineal gland is going to be a remedy of great value in many cases of retarded mentality in children. It has proved of great value in about a dozen patients with premature mental failure without a distinct organic cause. Some decline positively to be without it; and from their cheerfulness and mental activity while under its influence, it definitely stimulates the aging brain to the faster chemistry of younger days. It must be borne in mind that in caring for defective children their progress is slow and that the medicine must be systematically given for from four to six months. The coincident educational training must be accurately adapted to the precise mental age.

THE NON-EMPIRICAL TREATMENT OF DIABETES—A REVIEW OF MENYHERT'S THEORY

BY S. RINGOLSKY, M.D., SAN FRANCISCO.

In *The Therapeutic Gazette* for March, a review of Menyhart's theory appears. This theory calls for the treatment of diabetes according to the science of pathologic physiology rather than that of the empirical diet. It is not held to be an absolute cure, but the results obtained are said to far exceed the empirical method. In six years, under this treatment in Budapest, six hun-

dred severe cases have been treated without a single case of diabetic coma. The Menyhert theory is that there must be a saccharificating ferment present in the living organism or formed during digestion and when it predominates sugar is formed from fats and albumins which are not decomposed properly by their ferments. The lipolytic and proteolytic ferments are the balancing or equilibrium ferments to the diastatic ferment. A diabetic who has had polydipsia, polyuria and polyphagia and who metabolizes sufficient to maintain a certain reduced body weight is said to be in pathologic equilibrium. He must be brought back to physiological equilibrium and maintained there. In his case the saccharificating ferment predominates.

Menyhert does not feed by calories. The patient eats what the doctor orders until satisfied. He keeps track of the weight, and increases the diet if necessary. The portions ordered vary from 200 to 300 grammes each. Vegetables are used in large amounts. Meat, fish, cheese, wine and eggs are all on the diet list. The yolks of eggs are alone used in severe cases. Fats are restricted in severe cases. Menyhert has kept patients four to five months without carbohydrates and brought them back into a physiological equilibrium. Acetone may appear or increase, but sooner or later disappears.

Menyhert claims that it has been an error to give the three ferments in organotherapy when only one or two were essential. The diastatic ferment should be eliminated. He separates the three and uses only the lipolytic and proteolytic. As a proteolytic ferment he uses papain in pills, each containing 0.3 gm., keratine-coated; for his lipolytic ferment, steapsine, in 0.3 gm. pills, keratine-coated; for his alkali, sodium bicarbonate in 0.5 gm. pills, similarly coated. Thus they can pass through the stomach unaltered and disintegrate in the intestinal tract. In severe cases, he takes advantage of the frequent urination at night and gives large doses of bicarbonate of soda six hours after the evening meal in order to obtain rapid alkalinity of the patient. The urine and feces are the guides; they must be alkaline to litmus. About 20 to 25 grammes of the alkali are given per day—a few grains every half hour, the soda being reduced or increased as desired. Very often six, ten or fifteen doses a day are sufficient. The papain is given three times a day, one hour before meals, in doses of three to six or eight to twelve a day, as the case demands. The lipolytic ferment is usually given when an increased amount of fat is prescribed in the absence of acidosis. One or two doses a day are given for a short time and then discontinued. Mineral

waters are forbidden. Diarrhea must be checked. One movement a day is recommended. Opiates to check the bowels, if necessary. When edema appears on the extremities then the alkali is reduced in quantity or left off entirely for a day, and a large dose of sulphate of magnesia on an empty stomach administered. Complications are treated as they appear. Conclusions: (1) The Menyhert ferment therapy has merit; (2) It should be tried by every physician who fails with the empirical diet; (3) Every diabetic can be put back into a physiologic equilibrium and maintained as such by the use of the ferments; (4) No diabetic should succumb to diabetic coma.

A NOTE ON THE MANAGEMENT OF BURNS

JOHN C. PLAIN, M.D., RANSOMVILLE, N.Y.

There are four things (*American Journal of Surgery*) to take into consideration in treating burns, any one or all of which come up in a given case:

First—To combat the shock, if it exists.

Second—To relieve the pain and nervous excitability.

Third—To prevent infection and protect the exposed living tissue.

Fourth—To help Nature in her work of repair.

(1) Shock, which often occurs as a result of severe burns, is treated on general principles, too well known to be discussed in this paper. It has been said that "shock is shock," meaning that, regardless of its cause, shock must be treated in the same manner under all conditions.

(2) To relieve pain and nervous excitability I think it best to give a hypodermatic injection of morphine and atropine. The size of dose varies according to the age of the patient and the severity of the case. Then immerse the burned area, if it be an extremity, in cold water to which has been added either a teaspoonful of bicarbonate of soda or common salt to a quart of water. A temperature of about 50° or 60° F. is preferable. If the burned area, on account of its location, cannot be immersed in water, it may be covered with a light, smooth cloth which has been dipped

in the solution; then by gently and continuously applying the solution to this cloth the same result will be obtained. This water-bath may be continued for some time, or until the systemic effect of the morphine is manifested. In institutions where trained assistants are always at hand the whole bath may be used and continued for days, if a large area of the surface of the body is burned.

(3 and 4) Protection of the tissues and prevention of infection demand our greatest efforts and must be kept in mind from the first. Nature puts forth her greatest efforts, and the system will exhaust its entire resources to accomplish this end; but Nature cannot prevent the invasion of pus-producing microorganisms. The surgeon may.

I wish to condemn two things often done that are sanctioned by most of our text books. First, the puncturing of blisters immediately after a burn; and, second, the use of carron oil and other remedies of this kind as a protecting dressing. A blister is a non-irritating protection to the delicate underlying tissues, and we can furnish none better. I have never known the raised epidermis to reunite with its base after the blister was punctured. In most cases it acts as an irritant, and for several days following it causes serum to be poured out under the dressings, to soil them and furnish a good culture for any possible pus-producing germ that may be waiting for a chance to assert itself. Within a few days the epithelial cells in the deep glands of the skin will have accomplished their work of repair if properly protected by the blister. If any blisters are accidentally burst, with the epidermis rolled up or displaced to any extent, it is better to remove such epidermis at once.

I consider the following line of treatment the best for preventing infection and protecting the tissues. After the patient is fairly comfortable the bath may be discontinued and the burned area with the surrounding surface sprayed or mopped with hydrogen peroxide. The entire surface should then be mopped with dry gauze. Then apply strips of gauze which have been previously soaked in a 2 per cent. solution of picric acid in dilute alcohol. Over this apply a thin layer of cotton and hold in place with adhesive strips or a roller bandage. This dressing may remain until it is soiled, at which time remove all soiled or wet dressings, clean with hydrogen peroxide, mop dry, and re-apply fresh gauze soaked in the picric acid solution. About the third day open all blisters and mop away the fluid contents, applying a fresh dressing as before.

I think that this is the best treatment for all burns whose severity is not great enough to cause sloughing. If sloughing does occur as a result of charred tissue, or later as a result of infection, the dead tissue should be removed as rapidly as it becomes loosened. Then the underlying exposed surface is cleaned with hydrogen peroxide, dried, and mopped with the picric acid solution. Over this put strips of rubber tissue that have been kept in a bichloride of mercury solution, 1 to 1,000. Then apply the picric acid compresses and cotton as before. The astringent action of the picric acid limits the exudation of serum by constricting the congested superficial capillaries, and does not interfere with the development of the new epithelium. Its antiseptic action prevents infection, and I have never seen any systemic toxic effect. The rubber strips furnish a non-irritating covering for the denuded surface, and do not disturb the granulations when they are removed. If the rubber tissue is applied in narrow strips and the edges permitted to overlap, the dressing will more perfectly congeal to the irregular surface. This dressing should be changed as often as is necessary to keep the surface clean and free from pus.

The treatment above outlined, allowing for modifications in each individual case, is one which I consider most nearly ideal with every degree of this most common accident, from a slight scald to that produced by the most terrific gas explosion.

Amebic Dysentery. — Rogers (*B.M.J.*) reports marvellous results from India of the use of hypodermic injections of emetine in amebic dysentery. In fact this discovery is being hailed as one of the greatest therapeutic discoveries of the day. It has been proven to be so powerful as an amebicide as to be effective in dilutions of 1 to 100,000. When Rogers had the inspiration to use emetine hypodermically, he found it had no bad results. One-third to one-half a grain of the hydrochloride as it is more soluble than the bromide, represents 30 grains of the crude drug; and as 100 grains or more daily was often found necessary, the emetine may have to be pushed similarly. The amebae disappear in a few days, or hours even, the bleeding is checked, and the stools become normal. Moribund cases are soon up and about. Emetine is said to rarely fail.

THERAPEUTIC NOTES

Exposing Lower End of Ureter.— E. S. Judd (*Annals of Surgery*) approaches the lower end of the ureter by a median suprapubic incision from the symphysis to the umbilicus. This extends through the fascia between the recti muscles down to the peritoneum. The peritoneum is not opened but brushed back from the fundus of the bladder in the usual way. The bladder is lifted well forward, the space packed off with gauze, and then the viscus is opened. It is opened to explore and pack the diverticulum to facilitate in removing as well as to ascertain the relationship of diverticulum and ureter, so that the latter would not be injured in removing the pouch. As the latter could not be satisfactorily done within the viscus, an assistant holds the wall of the left side, and then dissection is carried down to the base of the bladder. This exposes and frees the ureter for two or three inches. It is then held to one side while the diverticulum is separated from surrounding tissue and removed. With the ureter in sight, the opening in the bladder is closed. Thus the ureter is not injured nor its lumen interfered with. The wound healed readily by primary union and the patient was around in ten days. In two cases for stones in lower ureter the bladder was not opened. The method was also used in three cases of extra-peritoneal resection for cancer.

Prostatectomy.— John B. Deaver (*Annals of Surgery*) gives the advantages of suprapubic over the perineal operations. By the suprapubic route the approach is simple and practically bloodless. Adenomatous growths are enucleated with ease. There is a large working field under perfect control. The prostate is easily accessible and more so with digital pressure in the rectum. No danger of injury to the bladder from the use of tractors as in the perineal operation. Incontinence, therefore, follows less frequently. Permanent fistulas are less frequent. If the urethra is bougied they never occur. Stones can be more readily removed. The question of sterility is rarely of any confidence. The mortality is no greater, in properly selected cases and the percentage of uncomplicated cures is larger.

Acne.—H. Buchholtz (*Ber. Clin. Wochen*) has used a powder consisting of equal parts of yeast and boric acid with success. The skin is softened and then a thin layer of the salve is rubbed thoroughly in once a day. Sometimes the powder was made with two parts of yeast to one of boric acid.

Uterine Hemorrhages.—Focke (*Ther. der Gegen.*) states that for uterine hemorrhages without an organic base, digitalis is a powerful aid to the local measures applied, being particularly useful in hemorrhages during a pregnancy. It is also very useful in recurring menorrhagia in the young and the elderly: in fact in all cases in which the uterus is apparently sound, but disturbance in circulation causing transient congestion. Focke has used digitalis in one hundred cases in the last fourteen years. In excessive or too frequent menstrual hemorrhage he commences a week before the anticipated period. Coffee must be dropped, as it appears to counteract the effect of digitalis.

Dyspnea.—J. A. Groher (*Deut. Med. Wochen*) contributes an article, the tenth of the series, on sudden threatening conditions confronting the physician who has no previous knowledge of the patient. No matter how pressing the danger in dyspnea, the physician must give to it a brief study before applying symptomatic treatment. Removal of the cause must be the first consideration. Examine the throat directly, by laryngoscope, and finger, keeping in mind infection from diphtheria through a bite. The finger may discover retropharyngeal abscesses, edema of glottis or spasm of vocal cords, while the finger may cause by retching the expulsion of false membrane, foreign body, etc. If the dyspnea comes from pleuritic effusion or pneumothorax puncture. If of cardio-vascular origin, intravenous injection of digitalis; in anemia, oxygen or transfusion of blood. In venous congestion, venesection. If secretions in the bronchial tubes, ipecac or antimony and potassium tartrate in not too small doses every ten minutes may be needed. Cooling baths followed by a cool douche has an excellent expectorating effect, acting especially on the finer ramifications. In very severe attacks, narcotics. In frightened patients, the physician's suggestions for deep breathing help, as well as cold applications to the chest, rubbing, etc.

News Items

Dr. J. J. Middleton has returned to Toronto after six months in the British Isles.

Dr. G. B. Archer, who has been on a furlough in Toronto, has returned to Kangra, India.

Dr. George A. Watson, Toronto, has gone to practise in Detroit with his brother, Dr. C. E. Watson.

Dr. Cattermole has been transferred from Penetanguishene to the Woodstock Hospital for Epileptics.

The Jordan Sanatorium at River Glade, N.B., treated thirty-five patients from March to November last year.

Dr. D. N. MacLennan, Toronto, will sail for Naples the latter part of April, and will spend the summer in Europe.

Queen's Medical College Faculty has appointed Dr. S. M. Asselstine of Marlbank as lecturer in pharmacology and therapeutics.

Dr. Andrew R. Gordon, 345 Bloor St. W., Toronto, announces that hereafter he will confine his practice to diseases of the Cardio-Vascular system.

The Third Annual Conference of the Ontario Health Officers' Association will be held in Convocation Hall of the University of Toronto on May 7th and 8th next.

Dr. W. W. Deeks, formerly connected with McGill University as lecturer in zoology and demonstrator of anatomy, but for several years chief physician in the Ancon Hospital at Panama, has been in Montreal recently on his way to England and continental Europe.

The American Association of Pathologists and Bacteriologists met in Toronto on the 10th and 11th of April, under the Presidency of Professor J. J. Mackenzie. On the 9th the International Association of Medical Museums met in the Pathological Department, with Professor R. M. Pearce of Philadelphia as President; and on the same day the American Association for Cancer research met in the Toronto General Hospital with Dr. E. E. Tyzzer, Harvard University Medical School, as President.

Dominion Medical Monthly

And Ontario Medical Journal

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Surgery: Walter McKeown, Herbert A. Bruce, W. J. O. Malloch, Wallace A. Scott, George Ewart Wilson.

Obstetrics: Arthur C. Hendrick.

Pathology and Public Health: John A. Amyot, Chas. J. C. O. Hastings, O. R. Mabee, Geo. Nasmyth.

Physiologic Therapeutics: J. Harvey Todd.

Psychiatry: Ernest Jones, W. C. Herrman.

Ophthalmology: D. N. MacLennan, W. H. Lowry.

Rhinology, Laryngology and Otol-ogy: Geoffrey Boyd, Gilbert Royce.

Gynecology: F. W. Marlow, W. B. Hendry.

Genito-Urinary Surgery: T. B. Richardson, W. Warner Jones.

Anesthetics: Samuel Johnston.

GEORGE ELLIOTT, MANAGING EDITOR.

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COMMENT FROM MONTH TO MONTH

“The True Aim of a Compensation Law is to provide for the injured workman and his dependents and to prevent them becoming a charge upon their relatives or friends, or upon the community at large.”

A workman who receives an ordinary cut, say for instance of the scalp or face, which generally heals readily under a week's time, under the new Ontario law, if he knocks off work, loses his wages for that week, suffers from the accident, and has the pleasure of paying for his surgical attendance, although the accident has been no fault of his. Wherein does he benefit under this law?

If he sustains an injury to a finger which in the ordinary run of finger accidents takes longer to heal than a scalp or face cut—say ten days' or two weeks' disability—he receives his wages for the total length of time he was disabled. If he is earning \$15.00 per week and is off work ten days he receives a week and a half's pay, while his surgeon's bill will probably eat up one-half his receipts. The accident has been no fault of his doing. He suffers

as in the first case. Wherein does he profit much through this arrangement; and wherein is he provided for as an injured man?

If through negligence on the part of the employer, he, say an unmarried man, paying four or five dollars a week for his board and lodging, falls on a slippery floor and sustains a Colles' fracture, he will be probably disabled six weeks and will receive \$90. Out of this he will pay for his board and lodging \$30, and another \$30 to the surgeon. Through the negligence of an employer he loses \$60 to receive \$30 with the pain and discomfort thrown in. Wherein is there much provision for the injured workman?

Workmen as a class are as good pay and as honest from the doctor's standpoint as any other class of the community; but an Act whose "true aim" is to "provide" for an injured workman should exercise complete provision and not tentative participation.

It is not fair to the workman to place the responsibility upon him of paying for his medical and surgical attendance, hospital attendance, nursing, etc. A severe accident calling for hospital attendance, nursing, operations, etc., will eat up all his wages.

With a chief medical officer and medical referees it should be impossible for that fearful bugaboo, medical overcharge, to eat into the Accident Fund to any great extent, or wrongfully. The majority of the workmen would have been better pleased and better served had the law provided for the payment of physicians, hospitals and nursing out of the Accident Fund.

ONTARIO MEDICAL ASSOCIATION

For the annual meeting in Toronto, May 26th, 27th and 28th, it is most important that an unusually good attendance should be present. The Committees have got their work well in hand and there promises to be one of the best meetings held for some years. But the meeting is of first importance on account of the agitation for withdrawal from affiliation with the Canadian Medical Association. There seems to be no question that present arrangements between the two are unsatisfactory to a considerable portion of the membership of both in the Province of Ontario. The occasion will call for calm, frank and judicious discussion, for, apparently, no one desires to injure either but to benefit both.

Editorial Notes

REPORT OF COMMITTEE OF THE ACADEMY OF MEDICINE OF TORONTO RE WORKMEN'S COMPENSATION BILL

The Committee's report was as follows:—

As the mover of a motion at the last meeting of the Academy of Medicine, March 3, 1914, which was carried unanimously I have been asked by the President to introduce the subject of the motion to the Fellows now present. The Committee then appointed have been supplied with a copy of the proposed Act entitled "Laws relating to the Liability of Employers to make compensation to their employees." I presume other members present have looked over the proposed bill. We are now assembled to consider the bearing such an Act would have on the rights and interests of the medical profession of Ontario and to take such action as this Academy deems necessary. First I would draw your attention to the reason given for the proposed Act. The basic principle is that the industries causing the accident and injury to the employee or employees should bear the cost of such injury and that the injured employee's relatives or friends or the municipality or state should not be put to the expense of caring for such a person.

By the proposed act the injured person is to bear the cost of his outlay for medical and surgical treatment or other necessaries. Page 15, Sir R. W. Meredith, second Interim report addressed to the Lieutenant-Governor of Ontario, October, 1913.

Sir R. W. Meredith says, in his report to the Lieutenant-Governor, October, 1913: "In these days of social and industrial unrest, it is, in my judgment, of the gravest importance to the community that every proved injustice to any section or class resulting from bad or unfair laws should be promptly removed by the enactment of remedial legislation and I do not doubt that the country whose legislature is quick to discern and prompt to remove injustice will enjoy, and that deservedly, the blessing of industrial peace and freedom from social unrest. Half measures which mitigate but do not remove injustice are, in my judgment, to be avoided." *We think this should be applied to the Medical Profession.*

Under the present existing Employees' Compensation Act, the medical or surgical expenses become an important part of the claimant's account for an award from the Court for his injuries; Sec-

tion 35 is the only reference to any compensation to the medical profession under the proposed Act. The section reads, "Where a workman leaves no dependants such sum as the Board may deem reasonable for expenses of his medical attendance and his burial shall be paid to the persons to whom such expenses are due." The list of possible dependants includes (members of the family, M. page 24 of report.) M. "Member of the family" shall mean and include wife, husband, father, mother, grandmother, grandfather, stepfather, stepmother, son, daughter, grandson, grand-daughter, stepson, stepdaughter, brother, sister, half-brother, and half-sister, and a person standing in loco parentis to the workman, whether related to him by consanguinity or not so related, and where the workman is the parent or grandparent of an illegitimate child, shall include such child, and where the workman is an illegitimate child shall include his parents and grandparents.

The medical man's chance of being paid anything under this clause seems very remote.

The physicians are specially interested in the industrial disease schedule, page 50, section 96, which reads, (1) Where a workman suffers from an industrial disease and is thereby disabled from earning full wages at the work at which he was employed, or his death is caused by an industrial disease and disease is due to the nature of any employment in which he was engaged at any time within twelve months previous to the date of his disablement, whether under one or more employers, the workman or his dependants shall be entitled to compensation as if the disease were a personal injury by accident and the disablement were the happening of the accident subject to the modifications hereinafter mentioned, unless at the time of entering into the employment he had wilfully and falsely represented himself in writing as not having previously suffered from disease.

INDUSTRIAL DISEASES.

. Anthrax (handling of wool, hair, bristles, hides and skins). Lead poisoning or its sequelæ (any process involving the use of lead or its preparations or compounds). Mercury poisoning or its sequelæ (any process involving the use of mercury or its preparations or compounds). Phosphorus poisoning or its sequelæ (any process involving the use of phosphorus or its preparations or compounds). Arsenic poisoning or its sequelæ (any process involving the use of arsenic or its preparations or compounds). Ankylostomiasis (mining).

These diseases are to be treated as accidents. Other countries with somewhat similar legislation as is proposed in this new Act have made provision for surgical and medical care, and the cost thereof is charged to the industries causing the injury or disability.

In the following States of the Union to the south of us, provision has been made for medical and surgical aid: California, reasonable during first ninety days, not exceeding \$100; Illinois, necessary medical, surgical and hospital services for eight weeks, not exceeding \$200.00—necessary services of physicians and surgeon eight weeks without limitation on amount; Kansas, New Hampshire, Nevada, none unless employee dies leaving no dependants; New Jersey, during first two weeks, not over \$100.00; Massachusetts, Rhode Island, during first two weeks reasonable medical and hospital services and medicines when needed; Michigan, reasonable medical and hospital services and medicines during first three weeks; Ohio, such as Board may deem proper, not exceeding \$200.00; Washington, fifty per cent. of benefits added for first six months of total temporary disability, not more than 60 per cent. of wages in all; Wisconsin, reasonable for first ninety days, includes medicines, appliances and hospital.

In the proposed act we cannot attach for payment of medical services any award during life of injured man or any award which goes to his dependants in case of death.

From the First Annual Report of the Industrial Insurance Department of the State of Washington, U.S.A., we note page 280, D, the Government Commissioners say:

“There is no question but that there is an insistent demand on the part of the injured workmen, their families and friends for some amendment to the act whereby victims of work accidents will be given immediate and thoroughly competent medical attendance after an accident, and that the cost of such treatment be paid by the Employer directly or by the State out of some fund, or indirectly by an increase in the scale of awards sufficient to cover the cost in all cases.”

Dr. J. W. Mowell, Chief Medical Officer of the Board for the State of Washington, says: “This report would not be complete without paying a tribute to the Medical Profession for the share they have had in making this law a success.” Further on he says: “I take this opportunity of thanking them, since thanks and kindly feeling are all the Commission is yet able to offer.”

We are so familiar with these votes of thanks and eulogy of the Medical Profession where words cost nothing that it almost nauseates the man of experience.

This proposed act will apply all over the Province of Ontario. The employees under this new Act will have to bear the burden of all costs for surgical or medical attendance, nursing and necessaries. After an injury the workman's wages cease immediately. There will be an injustice done to the members of the medical profession by imposing on them the duty of attending accident cases without any provision for remuneration. There will also be the added liability for suits of malpractice if the patient is not satisfied with the results secured in his case. Our present rights to be paid for our services as part of the damages recoverable under the Employers' Liability Act now in force and under the common law are to be taken away.

A committee was appointed two years ago this last February to present the views of the Academy of Medicine to the Commissioner as to the effect the proposed legislation would have on the medical profession. We have a copy of the letter sent asking for a hearing and an acknowledgment of its receipt from the Secretary of the Commission. No appointment was granted.

Before concluding, we wish to assure the gentlemen present and the other members of the medical profession of Ontario that there is no politics in this movement, that we are actuated solely by a desire to present our views to the proper authorities so that the interests of the registered members of the College of Physicians and Surgeons of Ontario be not overlooked before this proposed act becomes law.

I am sure you will agree with me when I say that the people of this Province, including all classes, owe a debt of gratitude to Sir William Ralph Meredith for his work as Commissioner appointed to investigate and recommend a just and economical means of compensating employees who have been injured. The fund of information which he has collected and his judicial opinions will be of inestimable value.

As Sir William says, "He does not claim that the proposed act is perfect nor that the last word has been said," when he made his recommendation for its adoption to the Government.

We would recommend that the proposed bill, "Laws relating to the Liability of Employers to make compensation to their employees for injuries received in the course of their employment," have the following sections added:

Section 33, subsection 1, by adding thereto the following:

"And such sum as the Board may deem reasonable for the expenses of his medical attendance and hospital care, to be paid to the persons to whom such expenses are due."

Section 33, subsection 2, by adding thereto the following words:

“ And a further payment of such sum as the Board may deem reasonable for the expenses of his medical attendance and hospital care, to be paid to the persons to whom such expenses are due.”

Section 36, by adding thereto:

“ And such further sum as the Board may deem reasonable for the expenses of his medical attendance and hospital care to be paid to the persons to whom such expenses are due.”

BRUCE L. RIORDAN,

Chairman of Committee.

The report was adopted unanimously and a copy of same ordered to be sent to each Fellow of the Academy.

ADVERTISING BY PHYSICIANS

(J. A. M. A.)

Following the midwinter Conference on Public Health, Legislation and Medical Education of the American Medical Association, held in Chicago, February 23 and 24, numerous news items and editorial comments appeared in the public press regarding one of the papers presented at the Conference. The substance of the newspaper items was that the American Medical Association was considering the revision of its principles of ethics with a view to removing or modifying the restrictions placed on individual physicians as to personal advertising. Some of the reports stated that revision of the principles of ethics would be taken up at once, and that an overwhelming majority of members of the Association were in favor of such a change. So far as we know, there is no intention or indication of any change in the position of the American Medical Association on this question; the reports in the newspapers were due to a misapprehension of the character of the paper in question and the intent of the writer.

The paper was an argument for a better understanding and closer co-operation between the medical profession as an organization and the newspaper publishers as a class. The author did not advocate or discuss the question of personal advertising on the part of physicians; the proposition set forth and defended in the paper and presented to the Conference was something en-

tirely different from personal exploitation; it was a plea for closer co-operation between medical organizations and the press for the public good, and not for personal benefit. It suggested that the expert knowledge of the medical profession could be utilized by the public press in two ways: first, by the dissemination through the newspapers of scientific knowledge which would be of value to the public in preventing disease, and second, in placing at the disposal of those newspapers which desired it the expert knowledge of the medical profession in separating worthy and reputable from dishonest and disreputable institutions which might seek publicity through the newspapers.

Of these two important activities one has already been inaugurated by the American Medical Association, and the other is worthy of serious consideration. Neither of them, however, has the slightest bearing on the question of personal exploitation of physicians through newspaper advertising or by any other means. An honorable physician could not conscientiously advertise for personal business, for the same reason that the honorable minister and lawyer would not advertise. A professional man has no commodity to sell; his only assets are his scientific knowledge and his personal ability; and he who claims to possess greater knowledge or greater skill than his professional associates—whether physicians, preachers or lawyers—is an egotist, or worse, and forfeits the respect of both his professional brethren and his fellow citizens.

THE UNIVERSITY OF TORONTO

requires aid from the Treasury of the Province of Ontario to the extent of \$1,400,000. There is a deficit of \$85,000 to be faced and one of \$120,000 for next year. The Provincial University is an institution to be proud of and should be dealt with generously by the Province. A student-body of four thousand drawn from all parts of the province and a university which is among the first-class institutions of America, located in Toronto, might very well receive an annual contribution of substantial dimensions from the City of Toronto as well as from the Province. There is a splendid chance for some private citizen of the province with the money to win a name for himself as a great philanthropist. It has not been unusual in other cities. Why not in Toronto?