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THE PRESIDENT'S ADDRESS*

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THE GENERAL PRACTITIONER.

It is supposed by some that the general practitioner will soon become extinct. Although that seemed possible or probable a few years ago in some cities, such as New York, Chicago, etc., it appears that the pendulum is swinging the other way, and the family physician is now considered a necessity in most homes. There is perhaps no member of an ordinary community who comes more prominently into view than the doctor. He must run the gauntlet of criticisms very varied in character. Sometimes these criticisms are harsh and unjust, but on the whole we have no cause to complain. One of the finest characters ever described was Dr. McClure. How many such there are we know not: but there are a few—perhaps many. We might name one—Gawn Shaw Cleland of Toronto, who “crossed the bar” last January. The *Toronto Globe*, in an obituary article, said respecting Cleland: “He was loved and respected by his patients and was looked upon throughout the community as another Dr. McClure.”

He it was or such as he that Luke Fildes had in view when he painted that great picture, “The Doctor,” nineteen years ago. Sir Mitchell Banks, of Liverpool, England, made the following reference to it in 1892: “Of the hundreds of medical men who have stood before that picture I am sure there was not one whose pulses it did not quicken with pleasurable pride, or who left it without thinking that it already had been, and again would be his privilege to fight against pain and suffering and death like his colleague on the canvas. Note where the scene of the picture is laid: not in some rich man’s mansion, but in a workingman’s cottage. With admirable skill

*Delivered before the Canadian Medical Association, Toronto, June 1-4, 1910.

the painter has pitched on the early hour of the morning for the time. . . . The sick child, worn with the raging fever, lies spent and exhausted. Till then the parents have been fighting on with their nursing: soothing, caressing, encouraging their little one, and hoping against hope seems all that is left to them. And there sits their friend—the gentle doctor—watching with them, and still puzzling his brains to think what more he can devise to stay the lamp of life from flickering out. He is no courtly physician, no London specialist, that man (thank God!). He is only a country doctor. But his somewhat rugged face tells of honesty, and common sense, and self-reliance, and gentleness. What more do you want? The men that look like that man, whatever be their business or trade or profession, whatever be their wealth or their social position, I say, of such men is the kingdom of heaven.” The original picture is now in the Tate Gallery, London. We do not pretend that the majority of physicians are saints or heroes; but we do contend that the practice of our profession furnishes grand opportunities for good work in the interests of suffering humanity. We are proud to think that in all parts of Canada there are physicians who make the most of such opportunities.

Some may wonder whether Fildes' doctor will continue to exist. We are told that therapeutics is becoming unpopular because there has been in the past, and is now, too much empiricism in our methods of treatment. The all-important subjects among the final branches are diagnosis, prognosis and pathology. It is supposed by some that the “McClure” and the “gentle doctor” will go out of fashion, and that the modern physician will struggle longer and puzzle more over his diagnosis, and, then in a case such as Fildes' sick child, he will turn to the mother with a bland smile on his wise face, and say to her: “Madam, this is really a most interesting case. It has been very puzzling, but I am pleased to be able to say I have made a diagnosis and prognosis. This child has malignant endocarditis and will die in about five or six hours. I can do nothing more for you now, but I shall call in the morning to make a post-mortem examination.”

One of the most vexed questions of the present day is the preparation of general practitioners, *i.e.*, methods of medical education. In recent years there have been many discussions on the subject in the British Medical Association. I am glad that our friend, Dr. Connell, of Kingston, will read a paper on the subject at this meeting. The amount of work in all departments of medicine has increased so enormously during recent years that students are bewildered, confused and dis-

heartened. The students of to-day bolt more, and cram more, and observe less, and think less, than did those of ten to twenty years ago. There seems to be little continuity between the teaching of the primary and the final subjects. In the early years the students are now swallowing pure and applied science in masses too big for their assimilative organs; or, in other words, are largely memorizing facts without understanding them. It is believed by many that this unfortunate condition of things exists in many, if not most of the best medical colleges in North America, as well as in the old world. It would appear that the level-headed Britishers are realizing the situation more fully than the teachers of any other countries.

Francis Shepherd, of Montreal, in his presidential address before this Association in 1902, referred to certain defects in modern laboratory teaching. There is probably no man on this continent who understands this subject more intimately than he from two standpoints—the scientific and the practical. He expressed the opinion that in many of our modern hospitals with their laboratories “students are not taught to observe so carefully the evident symptoms of disease, and are becoming mere mechanics. . . . The higher and more intellectual means of drawing conclusions by inductive reasoning are almost neglected.”

On the other hand we have scientists who think that such ideas are entirely wrong and not even worthy of consideration. Some of our advanced educationalists are even growing a little tired of Johns Hopkins, because those Baltimore men still stick to the old-fashioned idea that the student should be encouraged to observe and think and reason. We are told that they hope soon to be able to manufacture machine-made physicians and surgeons who will be vastly superior to the home-made article.

As a matter of fact, the differences between the schools of thought commenced many years before Shepherd sounded his note of warning. About fifteen years ago the late Sir George Humphry, Professor of Anatomy, Cambridge University, in an address delivered in Oxford, spoke as follows about methods of teaching medicine: “There is too great a mass of facts heaped on the memory and too little reflection on them. . . . The sciences of physiology and histology have become, and those of pathology and anatomy are becoming, more separated from medicine, delegated to special teachers, doubtless to the advantage and width of scope of these sciences, and to the greater knowledge of them, but I fear there is hereby engendered a tendency to take the student too far afield. . . . It is apt to

lead too much to meandering in altitudes, too little to straight going on *terra firma*; too much to pride and obtrusiveness of supposed higher knowledge, too little to reasoning, and too little to power by reasoning upon simple data, and too little to that sort of reasoning which constitutes the basis of common sense. The scientific and the practical, in short, become too much separated. What is needed is a greater regard to that connection between the two which should be maintained through the whole period of study." If these opinions expressed fifteen years ago were correct, they will apply with still greater force to the teaching of to-day. Let us come to more recent times—especially the last two years.

Let us quote from a physiologist of high repute. Professor Ernest Sterling, of University College, London, during a discussion at the meeting of the British Medical Association at Sheffield in 1908, said: "The tendency for anatomical education to be imparted by professed anatomists has led to increased demands upon the student in the way of accuracy of knowledge.

. . . Pharmacology is practically a new science. . . . The work demanded of a student has practically doubled in amount and is steadily increasing. What is the result? We are trying now to get two pints into a pot that formerly held one. . . . The result is that the student is over-burdened from the very beginning of his career. In his first year we try to make him a man of science. To this end we stuff him with facts and absorb the whole of his time in classes, so that he has no leisure for independent thought."

The following extract is taken from a leading editorial in the *British Medical Journal* last April: "Biology as taught by non-medical biologists must go. All the biology a student wants can be given him in his physiological and anatomical courses, and in the study of parasitology and helminthology under the pathologist. Chemistry in the future must be taught by the physiological chemist, and physics by the physiological physicist, by medical men who have gone through the whole training and know the needs and aims of practical medicine. . . . In anatomy great reform is needed, for the size of the present textbooks, and the mass of useless detail required, have reached the limit of pedagogic absurdity."

While our college professors are studying methods in medical education, many of our general practitioners are watching the situation with a very deep and intelligent interest. We think the majority of physicians consider it unwise to endeavor to stuff a quart of material into a pint pot. Many of them also

believe that our teachers should teach less in order that our learners may learn more. A certain proportion favor Fletcherization because of their belief that the intellectual pabulum given to our students should be properly digested and thoroughly assimilated.

By a process of evolution the general practitioner frequently develops into a specialist. We have also the ready-made specialist, to whom reference has previously been made. The relationship between the general practitioner and the specialist has been much discussed in the past. Dr. Matthew D. Mann, of Buffalo, read a paper last February on "Dichotomy" or "Dividing Professional Fees." It would appear from what he says that a large proportion of surgeons in the United States are in the habit of giving percentages or commissions to physicians who send them patients, without the knowledge of the latter. I hope it is not necessary to tell members of this Association that such conduct is undignified, unethical and dishonest. It is quite true that the division of fees between the general practitioner and the operating surgeon is frequently or perhaps generally unfair to the former. How can a more fair division be made? We are inclined to think the general practitioners must find that out for themselves. At the present time the relationship between general practitioners and specialists is being considered by a strong committee nominated by the Medical Society of the County of Erie, New York. We shall look forward to their report with much interest.

The general practitioner takes great interest in the work of the specialist. When he goes into a modern hospital theatre while a surgical operation is being performed he beholds something which fills him with wonder and admiration. He asks: "What are these which are arrayed in white robes? and whence came they?" The master of ceremonies answers: "These are they who have discovered something 'more rational' than antiseptic surgery as practised by Lister." The general practitioner does not object to a uniform. The surgeon may wear a nightcap, a mask, a nightgown, mittens and top boots in his well-equipped hospital with all sorts of new apparatus and laboratory appliances if he pleases. There is grave danger, however, that the undue exaltation of modern histrionics may overshadow the real essentials in connection with the prevention of sepsis. We want men of the Lister type to teach our students and practitioners. The wondrous charm of Lister's simplicity in his methods of teaching and operating is one of the most delightful things the world has ever contemplated. Some of our shining lights nowa-

days, in hospitals and medical societies, appear to aim at giving exhibitions of their skill instead of imparting some practical knowledge to the everyday doctor—knowledge that will help him while working on the side lines or in the backwoods, where theatrical costumes can scarcely come into general use.

When His Majesty our late king came to Canada in 1860 he travelled from the far East as far West as our railway trains could carry him. That far West was Sarnia, in the Province of Ontario. If he had returned twenty-five years later he might have travelled more than two thousand miles further west to a beautiful town called Victoria. There are now in that great Western district populous cities and towns in all parts, well-cultivated farms, with an active, intelligent people building up one of the greatest countries in the world.

That great new country has helped this Association very materially during the last twenty years. The crowning result appeared last year when there was held in that modern, beautiful city, Winnipeg, the largest and most successful meeting our Dominion Medical Association has ever known. We slow, sleepy folk of the East respect our brethren of the West because of ability, we admire them because of their untiring energy, we love them because of their big, warm hearts, we enjoy their generous hospitality beyond expression. We are becoming infected with something akin to their boundless enthusiasm. Especially is this the case in connection with the question of Dominion registration.

The discussion on this subject in Winnipeg was one of the best that have occurred during the last twenty years, and the address delivered by Dr. Thornton, of Deloraine, Manitoba, was one of the best our members have ever heard. He directed our attention to the national side of the question. He told us that "Canada had made great strides towards nationhood in many of the important details of national life, but in the practice of medicine this ideal was no further advanced than in 1866 when Confederation was accomplished. The Provinces were to-day as widely separated as if they flew different flags. There was no such thing as a Canadian physician or a Canadian Medical Association in the broad sense of the terms." We are glad to know that that broad, public-spirited member of our profession, of whom we are so proud, Dr. Thos. G. Roddick, is still taking a very active interest in this question; and we sincerely hope, both for his sake and our own, that his magnificent work will soon meet with the success which it so richly deserves.

This Association is growing not only in numbers, but also in the sphere of its work. We are now considering many matters of vital importance to the people of the whole Dominion, chiefly

in the direction of the physician's noblest and most unselfish work—the prevention of disease. We shall have the pleasure this afternoon of learning something respecting the invaluable work accomplished by one of our committees, known as the "Milk Commission," during the past two years, under the able chairmanship of Dr. Chas. J. Hastings.

It would be interesting to give some account of the work done by our Executive Council, the various standing committees, the committee having in charge the establishment of a journal, the local committees, and many individual members in all parts of this big Dominion during the past year. Your President on this occasion, however, cannot find words to describe their work in a fitting manner. Even if he were inclined to undertake such a task the Committee of Arrangements has not given him a sufficient number of hours to accomplish it.

We are all happy now over the present condition of our Association. We are filled with hope for the future. We are becoming national in the true sense of the term. May I add—we are growing more imperialistic. We really want not only Dominion registration, but also reciprocity with the profession of our dear Mother Country. Although we are plunged in grief over the appalling calamity that has befallen our great Empire, our wish, our song, our hymn, our prayer is still—God save the King.

RADIUM TREATMENT OF RODENT ULCER, SKIN CANCER, SARCOMA, KELOID, NAEVI, ETC.*

BY DR. W. H. B. AIKINS, TORONTO.

Consulting Physician to Toronto General Hospital, Hospital for Incurables, King Edward Sanitarium, etc.

The most distinguished worker in connection with the therapeutic uses of radium is conceded to be Dr. Louis Wickham, of Paris, who for years has been devoting himself to this branch of study. He stands in the fore-front of all observers, and it is to his friendly consideration that I was enabled for successive years to make observations in the Laboratory for Radium at Paris. Sir Malcolm Morris writes, "Nothing can deprive Dr. Louis Wickham of the glory of having laid the foundation stone of scientific radium therapy."

I wish to dwell more particularly upon the use of radium in the treatment of skin cancer, as the opportunities I have had in observing its use in these cases have been numerous. I have seen radium used and have used it with satisfactory results in keloids, papilloma, naevi, tuberculosis of the skin, chronic eczema, sycosis, psoriasis acne rosacea, pruritis ani, as well as in the rodent ulcer, skin cancer and sarcoma.

Some of the writers still continue to regard the rodent ulcer as distinct from epithelioma, though pathologically no distinction can be discovered between them. The canceroid ulcer is a superficial form of epithelioma with clean cut edges which are somewhat indurated and everted and the skin may be undermined. The crateriform ulcer of Hutchison, Paget's disease, in other words, papillary epithelioma, can all be properly grouped together under the heading of carcinoma of the skin, so far as the question of treatment by radium is concerned.

Carcinoma of the skin may be classified pathologically as squamous celled, cuboidal celled, and as cancer rising from prickle cells or from the basil cells usually of greater or less malignancy, and extending into tissues where they did not normally occur giving rise to metastasis, local or general, rarely spontaneously retrogressing, but leading if not completely eradicated to general cachexia and death.⁽¹⁾

The rays from radium have a selective action on certain diseased tissue elements, affecting them much more powerfully than they do healthy tissue, and eventually causing their destruction. The types of cells on which they have the most marked

* Read at meeting of Canadian Medical Association, Toronto.

action are the comparatively weakly resistant cells of rodent ulcer, and various other pathological conditions of the epidermis, such as epithelioma of the skin and warty growths. Their destructive action has also been proved to be great in the case of cells of epithelioma of the lip and mouth.⁽²⁾

Dr. Wickham uses the word "cancer" in its widest sense, signifying the whole series of malignant new growths, histologically different, including epitheliomata, carcinoma, lymphosarcoma, lymphadenoma, mycosis fungoides, etc. Considered from this point of view he affirms, from a study of cases of tumors of each variety, before, during and after the treatment, that the malignant evolution of these tumors may not only be arrested for months, but that occasionally these tumors have entirely disappeared, giving the impression of real cure.

He writes: "To speak in a general way of the cure of cancer by radium, without specifying and explaining circumstances, is to make use of unscientific and inexact language; and too great enthusiasm in radium is apt to lead the doctor who possesses any to use too much, and thus deprive the patient of the benefits of other treatments which have already proved their utility, especially surgery. When a doctor who possesses radium is consulted in a case of cancer he should proceed as follows: (a) In cancers of the skin which are localized, superficial, non-inflammatory, and of rather small dimensions, radium is of great benefit, and he can, without exaggeration, assure the patient of a cure, but only on condition that the patient binds himself to come once each month for a long period to see the doctor, to catch the first trace of any relapse. (b) In all other cases, whatever their nature, the doctor must first consider if other means cannot do better. If surgery can do better (as in excision of the breast for an operable cancer, or in excision of a commencing and operable cancer of the tongue, etc.), then radium can be suggested to consolidate the cicatrix after operation; treatment by radium is then an auxiliary to surgery, and I consider it better than the X-rays on account of the penetrating power of the radiations. When dealing with a new therapeutic agent which has given such brilliant results from some points of view, one must be armed with all one's *sang froid*, and observe the facts with justice. The question thus presented of the part which radium is actually able to play in the fight against cancer places it, in spite of the reservations enumerated, in a good position, because it is a valuable auxiliary in sufficiently experienced hands and in certain cases which one must know how to distinguish."⁽³⁾

That radium is of great value in the treatment of malignant tumors can be asserted with extreme definiteness, but it is too early in the use of this therapeutic agent to be positive that it leads to a complete cure in all cases. On account of its great expense experimentation has been limited to the few, who were privileged to make trial of the costly mineral and to judge of its power in combatting diseased conditions.

Many have been using waters which were ascertained to be radio-active in internal cancer, such as of the stomach, and beneficial results have been claimed in relieving subjective symptoms, also minute quantities of the bromide of radium have been employed in injections and in the form of salves for permanent radiation.

The Heidelberg Institute of Cancer Research has collected much experience both with the injections and the salves. Prof. Czerney has used in his clinic the bromide of radium, and Dr. Richard Verner has reported results in connection with small epithelioma, angiomas, keloids, warts and isolated tumor nodules connected with cancer of the breast, and the results indicate a quick resolution of epitheliomatous tissue under the formation of a scab, which, when it becomes detached, leaves a small white scar and a good result from the cosmetic standpoint. Metastatic nodules also resolved if not over the size of a hazel nut, but complete healing was found to result in the angiomas and several cases of lupus. The conclusion arrived at as the result of the use of radium at the Heidelberg Institute is that taking all in all the experience of radium treatment of malignant tumors, notwithstanding all the skeptical views expressed, gives a strongly grounded hope that we may look forward to a permanency of cure in many cases.⁽⁴⁾

My observations have confirmed the statement that rodent ulcer, epithelioma of some degree, one might almost say extensive epithelioma, has been treated with success. This also applies to epithelioma of the inside of the mouth.

Finzi states that the cure of rodent ulcer when it can be reached at all is as certain as anything in medicine, and any one can improve his statistics by including this class of case.

Let me quote from Sir F. Treves' remarks of last year, founded on observations made at the Radium Institute in Paris, in speaking of the curability of rodent ulcer. He said: "Radium will cure rodent ulcers. Of what grade? Rodent ulcers that have existed for many years, in which the tissues have become adherent to the bone, or apparently to the bone, in which there is ulceration, and in which—and this is the most important point of all—in which the Finsen light, the X-rays and cataphoresis

have all been tried and have all failed. Such cases—and there are many of them—may be cured by two sittings of radium lasting one hour each, the parts being finally left free from attachment to the deeper parts, the skin being soft and pliable. Why I lay stress on such cases as these is for this reason: it has been said that radium only acts by means of X-rays, which are part of its radiation. Anyhow, here are cases, numerous enough, in which a condition is cured which has refused to heal after persistent treatment by X-rays. In other words, radium can effect a cure where X-rays cannot. With regard to epithelioma of the tongue and epithelioma of the lip. They are cured by radium. You say of what degrees. I acknowledge that the cases are in the early stages of epithelioma, but they are epitheliomata that are ulcerating, and that, so far as we know, can yield to no other treatment except that of operation. If, therefore, an epithelioma of the tongue can be cured by radium, and cured to the satisfaction of those who are responsible for the case, it is a case of epithelioma treated without operation.”⁽⁵⁾

It is interesting to note that our late King had a rodent ulcer which was cured by radium.

Finzi remarks: Epithelioma of the lips, buccal mucous membrane, palate, larynx and nose are suitable for radium treatment. The desirability of treating operable growths must be decided on the merits of the case, and the rate of growth and histological structure will have a great influence on the decision. At any rate disfiguring radical operations may be avoided by suitable radium treatment. Do not forget to treat the glands, even if not enlarged, in these cases. Epithelioma of the skin is suitable for treatment, even if rapidly growing. If ulcerated, one can give very large doses to the ulcerated portion without fear of damage.⁽⁶⁾

In the experience of almost every one who has employed radium for rodent ulcer, there is no remedy which gives such brilliant results as it does. Relapses have certainly occurred in several cases, but they have been either in cases of such an advanced type involving large areas and extending down to bone, that the quantity of radium was inadequate to thoroughly deal with them, or in which the exposures were insufficient, and the patient failing to report himself when recurrence showed itself.

Since publishing his classical work on Radium Therapie in Paris last year Dr. Wickham writes, as the result of further investigations, of the therapeutic action of radium in cancer:

“We have treated cases of cancer of the neck of the bladder with definite results, by the introduction into the urethra of a catheter containing a radium tube.

"With the help of Dr. Cousteau, a distinguished laryngologist, we treated a case of cancer of the larynx by acting simultaneously on the pharynx above and on the trachea below, through a tracheotomy wound.

"In several cancers of the rectum and intestines (high up) we were able to introduce radium through the orifice of an artificial anus.

"With the assistance of M. Gaultier and M. Labey, a surgeon of the Paris hospitals, we treated a cancer of the pylorus by our 'cross-fire' method. A very powerful apparatus, with a thick screen, was placed externally on the abdominal wall, in the situation where the pyloric tumor could be felt, whilst a radium tube of great intensity was introduced, by means of a curved catheter, into the stomach itself, through an orifice made by M. Labey for gastroenterostomy. The patient is now (ten months later) in good health.

"In some cases we have had recourse to surgery, in order to make a wide opening in large tumors by incision, or to perforate them with the Delbet gimlet, radium applicators being introduced at the base of the opening."

It may be stated that as regards the deep lying malignant tumors, including sarcoma, literature is replete with cases in which radium has given good results. I refer particularly to the literature of Wickham, Dominici, Degrais, Abbe, Wilson, Tompkinson, Roux and Caan.

The observations of Abbe, of New York on radium as a specific in giant cell sarcoma are of the most interesting character. In a recent communication he describes a series of cases of giant cell sarcoma apparently cured from an effect of specific radiumization alone. He says: "The unique retrograde changes, tending always to return to the normal, give a demonstration of the efficacy of radium as clear to the clinical student as a demonstration of euclid on a class-room blackboard." He expresses his conviction that every case of myeloid sarcoma should be given treatment by radium before an operation, and that many cures may be expected. Dr. Wickham's experience is that radium treatment is most successful in the malignant tumors of the sarcomatous and lymphadenomatous type. In the Paris Institute I saw among others a case of sarcoma of the shoulder joint which showed the favorable results of radium applied by the "cross-fire" method. Recently Dr. McCallum sent me a patient with a recurring parotid sarcoma (four months after operation), and here, after a minor operation, the beneficial results following radiation are becoming apparent under the use of the plaques and a tube containing

three milligrams of pure bromide of radium. Drs. Edmund E. King and G. Sterling Ryerson, who are using radium in their practices, saw the case in consultation.

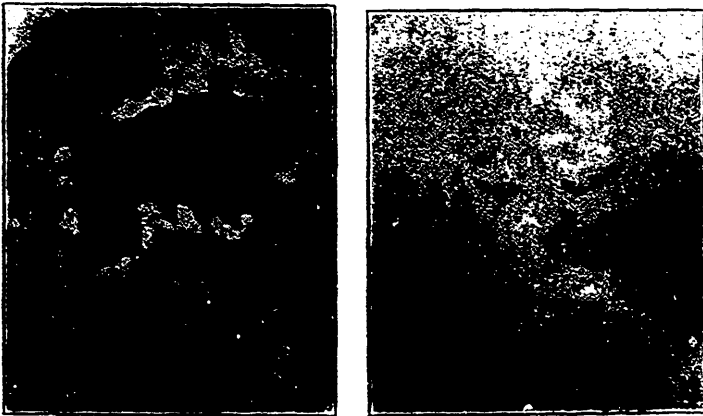
Case 1. Rodent Ulcer of the Nose. Mr. L. C., aged 34, referred to me by Dr. F. A. Clarkson, showed on the left side of the nose above the wing old scar tissue. The wing of the nose was entirely destroyed, and the skin around the margin was raised for some distance as in rodent ulcer, the inflammation extensive, somewhat elastic. The wound was covered by granulations which bled easily. The patient stated that fifteen years ago, as a result of an injury to the nose by a twig which scratched the left nostril, a small dry scab appeared on the ala nasi which came off from time to time and did not cause any inconvenience. Three years afterwards a physician was consulted and he used nitrate of silver stick, this seemed to increase the irritation, and an ulcer formed which spread rapidly. Six years ago he was admitted to one of the hospitals in Toronto and was treated for lupus. The spot was scraped, the wound seemed to heal rapidly, but shortly afterwards showed a considerable breaking down, and he protected the nasal septum with dressing and adhesive plaster so as to be enabled to continue work.



I used radium from a flat varnished surface, 1 centimetre, with a radio-activity of 500,000, at intervals for six weeks, the exposures varying from 15 to 30 minutes, the course of the improvement being watched and exposures made from time to time seemed to meet the requirements of the case. After the first three applications improvement commenced, the discharge became less and pain was absent. The decrease of the marginal

growth is well marked, with rapid absorption of neoplastic tissue, and there has been a healing of the diseased area. The patient writes under date of May 8 from Port Sydney: "I am glad to say that my nose is fine, is now quite clean without any scab; the doctor who saw me before I went to Toronto thinks it a wonderful cure."

At the Exhibition in connection with the Third Congress of Physiotherapy recently held at Paris, a room was specially reserved for the collection of photographs of Doctors Wickham and Degrais. In the collection referring to cancers, comprising the researches carried out during the last five years, was to be noted a series of sub-cutaneous cancers, apparently cured. One case was particularly striking: sub-maxillary epithelioma of the size of a fist. The tumor surrounding the vessels in the neck was *inoperable*. Dr. Louis Wickham first had the portion in front of the blood vessels removed by a surgeon, the floor of the gaping wound being covered by the cancerous mass. He then applied his apparatus with fixed dosage, some at the bottom of the wound, the others by the "cross-fire" method on the lips of the wound; the latest photograph shows the neck normal in appearance. This striking case is corroborated by others, but we notice the spirit of scientific wisdom by which the authors are careful in each case to avoid the word "cure."



This represents an epithelioma of the right temple treated by Wickham and Degrais.⁽⁷⁾ it was bordered by large epithelial nodules, the ulcer was covered by granulations which bled freely when touched. Improvement took place slowly in this case, but after some months there was no longer any tendency to recur.

Case 2. Rodent Ulcer. Mr. B. C. B., act. 43. Some years ago he was asked if he had had a frost-bite on the right cheek,

as a faint ring of white color was present until it ulcerated about a year ago after close shaving. It did not heal up and a physician applied nitric acid which aggravated the condition. When seen the ulcerated area was the size of a five cent piece. Applications of radium, extending over a period of three weeks, caused a disappearance of the ulcer, and the formation of a "radium crust," which was detached two weeks later, showing a smooth, supple skin which cannot be distinguished from the surrounding surface.

Case 3. Cancer of the tempero-malar region. Mr. J. D., referred to me by Dr. Colville, of Orono, noticed fifteen years ago a "mole" over the malar bone on the right side, this neoplastic growth gradually extending up to the temporal region, and a large area was involved, as is shown by the photograph. Various treatments, including exposures to X-rays, had been tried, but without avail, the diseased area continuing to increase. At the upper angle the growth was exuberant, a portion of the lower eyelid was destroyed and the upper lid bound down by adhesions, the periphery of the ulcer was elevated and painful to touch.



Radium was applied at varying intervals during a period of five weeks. I used a flat varnished surface 16 c.m. of a radio-activity of 100,000 with lead screens. The result has been eminently pleasing, there is apparently a complete disappearance of the cancer and a satisfactory cicatrizing.

Let us, however, add the needed word of caution. Abbe writes: "I have seen a few true cancers of the tongue, lip, hand and uterus, which seemed to grow more fiercely after radium treatment. Its beneficent action is not uniform, and this I attribute to the uncertain factor of correct dosage. It is probable also that Wickham's filtration will largely reduce these irritated types." And Dr. Louis Wickham in the preface to his erudite work of Radium Therapy says: "I wish to remind the younger radium workers who are in touch with our investiga-

tions of the necessity of avoiding exaggeration, particularly in connection with cancer, and of moderating their enthusiasm by a spirit of scientific criticism. Radium Therapy is indeed a very complex and delicate weapon to handle. Long and thorough personal experience is necessary in order to turn it to the best account to learn and distinguish accurately the cases for which it is the most suitable, and to avoid injuring patients either by badly proportioned doses or by depriving them of other therapeutic measures which might prove more successful."

1. Hyde's Practical Diseases of the Skin.

2. J. C. McLeod, *Practitioner*.

3. Dr. Louis Wickham, *British Med. Jour.*

4. Caan, *Munich Med. Woch.*

5. Sir F. Treves, *British Med. Jour.*

6. Finzi, Proceedings Royal Society of Medicine.

7. Radium Therapie, par le Dr. Louis Wickham et le Dr.

Degrais.

HYPOTHYROIDISM—WITH REPORTS OF TWO CASES

BY W. B. THISTLE, M.D., L.R.C.P. (LOND.),

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Probably nothing in medicine is more firmly established than the fact that deprivation or great curtailment of the thyroid secretion is the cause of the remarkable condition to which has been applied the well-known name of myxœdema.

It is only, however, when the full picture has been realized that the term is really applicable. In other words, only when the disorder has become so pronounced that, together with debility, lethargy and the various other disturbances of function, the curious mucoid œdema appears.

I have for this reason chosen the more comprehensive term of hypothyroidism for this communication. There is in this term no indication of the degree of deficiency. Simply a statement of fact that the patient suffers from insufficiency of the thyroid secretion and that this is the immediate and sole cause of the disease.

As to the question of degree, this can only be read in the symptoms present.

Apart from cases in which myxœdema results from extirpation of the thyroid gland or from very acute disease, the condition is a chronic one and may be of very gradual development. If one imagines a condition in which the thyroid secretion, ample up to the present, now falls slightly below the requirements of the body and that this deficiency continues and becomes gradually more and more pronounced from month to month and from year to year, until at length a condition is arrived at which is readily recognizable as that which follows marked deficiency of thyroid, he has a fair idea of the course of the disease. Because of this gradual approach the affection is frequently not recognized or is mistaken for something else, and only after a long period of invalidism is it discovered that too little thyroid was the cause of the patient's malady.

Every case which appears presenting the classical picture of myxœdema is a case which might have been recognized if one were on the alert years probably before and the patient saved a long period of ill-health.

A further point too occurs to one looking at the situation. Every case of thyroid deficiency may not be progressive. Whatever process is going on in the gland to limit its output may come

to a halt or be exceedingly slowly progressive, in which case the classical picture would never be realized. The patient would remain in the condition in which the full-blown case of myxœdema was during the early period of the disease.

Cases of fully developed myxœdema are very infrequently met with, and it seems highly probable that for every fully developed case there may be a number in which the deficiency is sufficient to produce slight or partially developed symptoms. These cases are very likely to escape recognition unless especially looked for. The difficulty is that the fully developed picture is borne in mind, and the fact that these cases have been years in reaching that condition is lost sight of. This is really the point of my paper, to urge the importance of watchfulness in cases of obscure and unexplainable debility. In the case of thyroid deficiency recognition is doubly important because treatment and cure so surely follow a correct diagnosis. The nature of the disease is not recognized frequently because attention is focussed too exclusively on one or two symptoms. The mucoid swellings are likely to suggest the nature of the disorder. But, as in the opposite condition of thyroid excess, or Grave's disease, cases differ much in the way in which the organism reacts to the diminished secretion. All the cases of thyroid excess do not present the symptom of exophthalmas, neither do all the patients suffer from tachycardia, diarrhœal attacks or copious perspirations. In one case of Grave's disease tremor is the marked symptom, although exophthalmas, tachycardia and excitement may be present; in a second exophthalmas is the feature; in a third central disturbance, and so on. Again turning to congenital cases of deficiency, the manifestations are not always the same. One case will have macroglossia with dwarfism; the next will show no enlargement of the tongue, but will exhibit the kidney-shaped swellings over the clavicles. If all the symptoms of thyroid deficiency were borne in mind in the same way that they are in the case of thyroid excess, and if it were recognized that these effects of deficiency varied in like manner the danger of cases escaping recognition would be greatly lessened.

Diagnosis in the early stage of the malady must be very largely a matter of exclusion and experiment. The patient comes complaining of debility, lack of energy, is chilly, the skin is dry, so also the hair, ideation is slow, the temperature may be subnormal and associated with a slow pulse rate. His complaint is chiefly regarding his weakness and lack of energy.

Systematic and complete examination excludes one organ after another. Failing to find explanation of his condition in

any of the organs, one next turns to the consideration of toxic blood states. The length of time excludes the ordinary digestive intoxications usually. Other intoxications, such as lead, must also be excluded. These patients usually show some degree of anæmia, with perhaps a slightly jaundiced or muddy tint of the skin. This, taken together with the weakness without apparent cause, suggests the diagnosis of pernicious anæmia. The blood picture may not be typical, but still there is anæmia. As a matter of fact this is the mistake most frequently made. Early cases or comparatively early cases of thyroid deficiency are thought to be cases of pernicious anæmia.

In the case the report of which follows pernicious anæmia had been the diagnosis. If one excludes the blood picture there is considerable resemblance between the two conditions. The period of life; the constant and increasing weakness, which cannot be accounted for; the anæmia with jaundiced tint, and the maintenance of body weight are features in each case. Examination of the blood usually shows the abnormal forms in pernicious anæmia and reduction in count with relatively high hæmoglobin index. Most cases of pernicious anæmia show more or less elevation of temperature. Hebetude and mental lethargy are not marked in pernicious anæmia as a rule, unless the anæmia is very considerable in degree.

Failing to find convincing evidence, it is easy to make the experiment, which entails no discomfort to the patient. If thyroid deficiency be at the bottom of the patient's trouble the administration of thyroid tablets three times a day for a short period will produce marked and continuous improvement.

In the case of congenital deficiency numbers of children are permitted to grow into typical cretanoid dwarfs who could easily have been saved had the cause of their arrested development been recognized. The common mistake is to look upon a child with insufficient thyroid as either a case of rickets or one of idiocy. The cretanous dwarf stands with the adult myxœdema. Neither should occur at the present time, except in cases where medical advice was unsought. Each is here simply through neglect or through failure to recognize the signs of thyroid deficiency.

As to what lies behind the deficiency in these cases, no doubt the causes are various. In the case of little children the supposition is, at any rate in many cases, that the thyroid is deficient from the beginning and that the body simply outgrows the supply. In the adult cases thyroiditis from various causes, frequently from one of the infective fevers, is followed by cirrhotic change and lessened gland structure.

The relation which the thyroid bears to the generative organs in the female is thought to furnish an explanation of the cases which occur in women after the menopause. During the active period the gland furnished sufficient secretion for the needs of the body, but, with the atrophy of the generative organs, the thyroid also undergoes contraction, with consequent lessened secretion.

I have two cases to report:

The first, a child, now aged $3\frac{1}{2}$ years, was brought when two and a half years old because the parents had become anxious owing to the fact that the child, although over two years old, made no attempt at either walking or talking and seemed to be mentally backward. Dentition was also backward, there being only four teeth. The tongue was usually protruded from the mouth.

The child was given one-half a grain of thyroid extract three times a day. There was shortly marked improvement. In a few months the child was walking and soon ceased to protrude its tongue. It also seemed much brighter. Dentition became very active; a number of teeth were cut in a short time.

The tablets were continued until about four months ago, when the parents discontinued them on their own responsibility. In three months' time the child was again brought because of a return of the former symptoms. The eyes had become puffy, and it was again becoming listless and stupid. Constipation, which formerly had been very marked, and which had completely disappeared while the tablets were being administered, again became marked. Thyroid tablets were again ordered; this time the dose was increased to $\frac{3}{4}$ of a grain three times a day. The parents were enjoined to continue giving the tablets indefinitely and to report from time to time. Improvement very shortly became again apparent and the child became bright and active as before.

Case II. was of exceptional interest. A lady in good circumstances, aged fifty-six, and mother of three children living, but with a history of a number of miscarriages, and on one occasion, the last, of very severe hæmorrhage. Illness began indefinitely about four years ago. First noticed weakness and lack of energy. This increased gradually in spite of tonic treatment. Constipation was a troublesome condition. The appearance of the face changed so that the features were less fine cut, the lips thicker than before.

Weakness continued to increase until about a year before coming under my care, she had to give up any attempt at going out or trying to look after her home or herself. For the last year

she was constantly under the care of a nurse and confined to the house. In bed most of the day.

A number of medical men saw her from time to time. The blood was examined and her case diagnosed as one of pernicious anæmia. Treatment for the relief of the anæmia had not been successful, the patient slowly growing worse. I saw her in August, 1908. She looked older than her age. The facial appearance was peculiar. There was quite pronounced pallor, but with a slight flush on the cheeks and a bluish tint to the lips. The face had a puffy appearance and the lips were thick and the nose broader and coarser than before her illness. The hair was dark, but dry, and on examination I found commencing baldness over the temples and brow and over the neck behind. Her hair had been formerly quite abundant. The eyebrows were almost gone. Hair of eyelashes was short and thin. The lashes were said to have been unusually long and the eyebrows quite well marked.

A few pigmented spots were found on the skin of the face. There was some fullness below the eyes, but no distinct gelatiform swellings. Examination of the upper eyelids, however, showed unmistakable translucent gelatiform swellings. This was somewhat concealed by the overhang of the eyebrows. The whole of the upper lid was thickened with a peculiar waxy appearance, and in addition over each eyelid towards the inner side there was a distinct bag of this waxy or jelly-like material, about as large as a flattened pea.

Mentally the patient was very slow, although quite accurate. Her speech showed a striking change. She talked as though the tongue and teeth were sore. Formerly she had been very talkative and bright mentally.

The hands and feet were dry and cold. The patient was always complaining of the cold, and said she had not noticed perspiration for a long time.

She described a curious condition on walking. At times the knees would, as it were, lock and hold her for a short time.

Vision was fair, but tired soon. She described spectra as of a mouse or some dark animal running across the field.

Examination of the blood gave a count of about 4,000,000, with very little irregularity in forms and a slight increase in the number of leucocytes.

Nothing abnormal discovered in the chest or abdomen. Kidneys were normal.

Constipation had been a very troublesome condition. Temperature was subnormal. Pulse 55.

I ordered her thyroid tablets, grs. 1½, three times a day, and also an acid and strychnia mixture.

Improvement was noticeable very soon. In six weeks time she was able to dispense with the services of the nurse. She became much thinner, the nose and lips lost their coarse appearance. Her behavior and speech were markedly altered. Ideation was active. Pulse became more rapid. The swellings of the upper eyelids entirely disappeared.

Improvement continued. Shortly the hair over the bared places on brow, neck and temples came on quite thick.

On Feb. 1st, 1909.—Pulse 68, temperature 98.1. Hair quite thick over neck and front, soft and glossy. The hair over eyebrows grown so as to form quite distinct dark eyebrows. Slight puffiness still below eyes. The bowels are now quite regular and she requires no purgative. She has noticed that the feet are moist frequently with perspiration. The complexion is much clearer and healthier in appearance. The lips have lost their bluish tint. The patient looks much younger. The speech is now quite normal. She talks rapidly and with former brightness. Goes to church, concerts, shopping, and looks after her household.

The thyroid tablets for a time were reduced to two a day because of occasional irritability of the bowels. Later and up to the present time she takes three tablets a day.

The latest examination, June, 1909.—The patient is still improving in every way; is practically well. Pulse about 80. Temperature normal.

The degree of curtailment of the thyroid secretion is indicated by the smallness of the dose required to cause disappearance of the symptoms.

THE DRUGLESS TREATMENT OF PNEUMONIA IN CHILDREN

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AND

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From a statistical standpoint institutional work has many advantages. The possibilities of uniformity in diet, in nursing, in the administration of baths and in general therapeutic measures will be apparent to everyone, and hence in such work statistics may be most readily secured. For the past eighteen years the children at the Protestant Orphan Asylum, in Detroit, have been under our care, and for the past twelve years accurate records have been kept of the maladies of these children. Their numbers have varied from 70 up to 125. For the past ten years the numbers have never gone below 100, and usually have been about 125. In the period stated, namely, twelve years, during which accurate records have been kept, there have come to us the usual number of pneumonic cases during the pneumonic season. We have had frank lobar pneumonias, apical, basal and root, and likewise broncho-pneumonias of varying degrees of severity, subsequent to whooping cough, measles and grippe. During this period we have carried out a system, which, commencing in a vague, uncertain way, gradually crystallized itself into a well defined plan of treatment. During the twelve years we have had sixty cases of pneumonia. Of these, 15 or 25 per cent. were of a mild type, and under ordinary circumstances would demand practically no medicinal treatment. The other forty-five represented all more or less severe types of the disease. They were about equally divided between the lobar and bronchial types; the lobar being a primary disease and the bronchial almost always secondary to measles, whooping cough or grippe.

During this period of twelve years all of our cases, severe as well as mild, have been treated practically without drugs. This was attempted in a somewhat timid way at first, but the crystallization of our purpose was rapidly accomplished through the excellent results achieved by our first attempts. In twelve years we have had sixty cases of pneumonia with one death, a mortality of less than one-half of one per cent. This result it seems to us, even in institutional treatment is quite remarkable.

It were better here that some qualification were given to the statement that these cases were treated without drugs. When such a statement is made, the impression which it is desired to convey is that there were no definite drug measures adopted beyond what was necessary for the relief of unpleasant, distressing or dangerous symptoms. The whole line of expectorants, febrifuges and alteratives were entirely discarded, both in the lobar and bronchial types. The rule has been that as soon as the case is diagnosed, the child is sequestered in the Infirmary belonging to the institution, which consists of two large, bright, sunny, airy rooms; well heated: in a quiet portion of the building; away from all noise and disturbing influences. The child at once receives a warm bath and is put to bed, either with or without applications of some kind upon the chest. During Dr. Douglas' term of service all chest protectors or poultices were discarded, while during the term of Dr. Donald it has been customary to apply them. There was a friendly difference of opinion here in regard to this line of treatment, of which more will be said anon. The cold air treatment was considered, only to be immediately forbidden, and all the children were kept constantly, as near as possible, at a temperature of 65 to 70 degrees day and night. The object desired was to secure not any special degree of temperature, but a uniformity of temperature, whatever it might be; and the feeling has grown that any degree of temperature is consistent with good treatment, providing that degree be maintained uniformly. However, with children from two to fourteen years of age, as are ours, many of them restless at night, kicking off the clothes, exposing themselves to the ordinary room temperatures, arising from the bed to go to the toilet room, crawling from bed to play during the nurse's absence or during their own convalescence, it has been deemed wise that the temperature be kept at a safely warm point. This decision we have never had any reason to change. It seems grateful to the patients, pleasant to the nurses, and safe to the physicians.

After the child has had a warm bath and is snugly tucked into bed, with or without his chest dressings, the temperature is taken at regular intervals of three to six hours, and upon showing any disposition to rise above 102 or 102 1-2 the child is immediately given another warm bath. This simple hydrotherapeutic measure is ordinarily all that is necessary to obtain a safe degree of temperature in the child. Should, however, the nurse be too busy, or should hot water not be available, or should any other occasion intervene so that it might be impossible or inconvenient to give the child a hot bath, the nurse is allowed to

substitute one or two grains of phenacetin, or other coal tar product, or a few minute doses of aconite, in order to moisten the skin and reduce the temperature. Beyond this no other drug is given, except that in cases of severe cough, small doses of heroin or paregoric are administered, and in cases of sleeplessness Dover's Powder or mild bromide mixture are permitted. Careful attention to the bowels and kidneys and skin is always insisted upon. The diet is liquid or soft, nutritious and palatable and easily digested. Milk is a basis and cereals, fruit juices or meat juices are allowed, depending upon the desires of the patient, and upon the capacity of the institution.

Should occasion arise in the course of a broncho-pneumonia, expectorant mixtures are ordered, and should there come, as there has come in several cases, periods of profound depression and cardiac asthenia, recourse is had to the most vigorous stimulation of the heart and vital centres. Strychnia, quinine, digitalis and the mild bitters have all been used. When they are demanded they are pushed if necessary to the limit. The occasion which would demand such a line of treatment arises exceedingly seldom. Ordinarily during the course of the disease neither this nor any other drug is given except as has been said before to meet some special indication.

Much stress is laid upon dietetic measures. For the first few days of the disease the child can take practically nothing, but after that every effort is made to induce it to take nourishment in some form agreeable to it. The desires of the child are always consulted, inasmuch as we know that where a desire is digestion is likely to follow. Food which is disliked by the child becomes often nothing more nor less than an irritant, or a toxic insert, and consequently it has always been impressed upon the nurse that the child should be fed what it reasonably desires, and what it can digest perfectly.

Upon the hydro-therapeutic measures we place the most dependence. The stimulation of the skin and the vital nerve centres, the sedation of the nervous irritability, the soothing of the wild delirium, and the production of quiet sleep we accomplish largely by this simple physical measure. Care of the emunctories we likewise consider of the utmost importance, and rigid rules are laid down to secure free elimination. Quietness and rest and sleep are secured through the quietness of the room and through the warm bath. Quietness we consider of great importance. All sources of extraneous irritation or over stimulation we deprecate and remove. The room is dark or partly shaded, strong lights are excluded, the nurse moves softly,

the child is handled gently. The alcoholics are never given except occasionally during convalescence when the vital forces show only too slight a tendency to recuperate. It would seem from physiological experiment as if alcoholics were always, or almost always, contra-indicated in this disease.

In regard to local applications to the chest, to which reference was made in the early part of the paper, there has been, as has been said, a friendly difference of opinion between the two members of the staff. Dr. Douglas has objected uniformly to covering or dressing in the shape of poultices or bandages to the chest, arguing that little was gained by such measures and much lost, that the patient was disturbed by having the dressings changed, and that the examination of the chest by the physician was always interfered with. The argument which appealed to the other member of the staff, Dr. Donald, was the soothing and comforting influence which was secured by such measures, with possibly some concession to ideas which have been in existence for many years. Arguments have been advanced pro and con upon this subject by many physicians and in many medical journals. A settlement of the question seems as far removed as ever. Our patients recovered with the applications and without them; and we find it impossible to say whether the use of such applications has been of value, other than as a salve to the fears and anxieties of the relatives or nurses. It would seem as if where there is much pleuritic pain, such application might be of service; and it would appear as if these might be discarded entirely where there was no such indication. It is a question of comfort rather than a question of cure. Where applications have been ordered, either the quilted or cotton flannel jacket, or the ordinary kaolin preparations, have been used. These latter have been selected in preference to the old-fashioned linseed poultices, on account of their ease of preparation and infrequency of application, a change being made only once in every twelve hours.

This constitutes in its simplicity what may be called the drugless treatment of pneumonia.

The type of child which we handle in an institution of this kind is ordinarily below the normal level of physical vitality. We take them as boarders and take them to adopt. They come of poor parents, who have often fed them improperly, and who have surrounded them with totally unhygienic conditions. Naturally they are often not in the best of health when they come to us, and they likewise often are not in the best of health when attacked with pneumonia. Even with these adverse con-

ditions confronting us, we have been able in this institution, by care in nursing; by the conservation of every particle of the patient's strength; by the elimination of all poisonous products from the patient's body, and by the elimination from our treatment of anything that might disturb digestion or metabolism, to secure the admirable result, which our statistics show. Our object is to demonstrate how much can be done without the administration of drugs. In pneumonia, particularly in the lobar type, drugs have little place, while in the bronchial type, infinitely less drugging than has been customary in past years may be done to the great benefit of the patient.

SANITATION IN CONSTRUCTION CAMPS

BY C. R. COUTLEE, C.E., OTTAWA.

The practical necessity of supervising construction camps is clearly recognized when one reads that smallpox has broken out or that typhoid is raging on a new railway. It is far away, however, and the death rate is soon forgotten, while the broken-down survivors become city mendicants, and their dependents become slummers. The typhoid outbreak in the Crow's Nest Pass in 1897 is now forgotten, and this summer's visitation at Cobalt and the north country is accepted as a matter of course.

If the pigs of Western Ontario develop a high death rate, however, quarantine is inaugurated, and thousands are cheerfully spent to eradicate the disorder. We pride ourselves on freedom from cattle disease. Will we ever develop a pride in Canada's freedom from smallpox, freedom from typhoid, freedom from consumption, and freedom from industrial accidents? Every town in the country has had its baptism of fire, its horrible accidents, and its deadly epidemic. If our firemen delay, if our police funk, if our veterinary inspectors neglect, there is at once an outcry; railway officials even are beginning to feel the sharp whip of the law, but our factory inspectors and our health inspectors remain obtuse through it all. Surely a "British Fair Play League" could be organized to see that the lowly immigrants who swarm in at our call and give their labor to do our work will be assured as good humane treatment, as the law assures them prompt pay.

Immigrants.—Italians, Gallacians, Swedes and British form the great army of construction work. They are hired through labor agents, whose sole object is to secure a fee for any sort of men they can smuggle through quarantine, and unload upon a contractor. Here begins our sadness. These men have passed some days awaiting work in a city. They have resided in the slums and come in contact with disease while badly nourished and badly housed, and there is no rigid contact inspection by a health officer before they are shipped into construction camps. The railway journey may be long, the food insufficient the cars crowded, foetid and comfortless, and sleep impossible. Tired and hungry the squad arrive at some small way station, they are hustled into waggons, or perhaps walk ten or fifteen miles to camp.

This is not as it should be. We have game wardens to watch

the sneaking out of deer and game along our railways, but not a soul to inspect the transport of laborers.

Arrived at camp, the men are mixed with former arrivals, some, perhaps, occupying bunks vacated by sick men, whose blankets have not even received a shaking out. It is also common for men to arrive, carrying their own blankets from other camps, which they have left owing to an outbreak of sickness.

There is no contact examination of these men on arrival, nor is there a building set apart for such as show high temperature and pulse. Fire wardens and game wardens travel these outlying districts, and cullers visit each lumber camp from week to week, but there is no health warden to examine new arrivals, quarantine suspects, inspect camps and cooking, and enforce proper disposal of waste.

The Camp.—Fair sites are usually chosen for camp grounds, but there is no health warden to say nay, if the most inopportune site is selected. Such an official, trained and instructed just as a timber culler is, could render great service to the men, the contractors and to the public, by seeing that the camp has a south exposure; that the site is high and gravelly, if practical, and near good water. They could be paid from the medical fee charged each laborer each month. This fee should rather be called a "sanitation fee," and value given the men and the contractors therefor, by a system of health wardens reporting to the provincial authorities.

The buildings should be set according to some scheme that would locate the dining and cooking camps on the extreme flank, then the sleep camp 50 to 100 ft. distant, and at least 500 ft. away from these, the horse stables. Between the stables and sleep camp should be the latrine site. In rear of the sleep camp, and at least 500 ft. distant, the quarantine and hospital tents should be set.

Buildings are now usually built of boards. If logs are used, however, they should be stripped of bark, chinked with mud and brushed inside and out with lime wash.

Meal Houses.—The dining and cooking building must be well lighted, so that dust, scraps of food and vermin cannot collect out of sight. The walls, roof and floor should be brushed with lime wash. A wash of half cement and half lime gives good results. Over each window cheese cloth or mosquito netting ought to be tacked, while each entrance is provided with a screen door arranged to close by springs or weight. These screens are most important, as they prevent the entrance of flies which carry disease both from the stables and latrine.

Tables and benches should be whitewashed, and arranged to be moved about for sweeping and washing.

The kitchen is to be separated from the dining room by a well lighted pantry, in which to keep food and dishes. Doors and windows of both kitchen and pantry are to be well protected against the entry of flies.

Dormitories.—Sleeping rooms should be removed from the meal houses, and well lighted. There should be an anteroom, in which wet clothing can be aired and dried, separated by a partition of canvas or boards from the dormitory. Off the dormitory, too, a bath room and clothes washing rooms are required. All coal-mine camps have a bath room with an attendant, who is paid by a levy upon the men, and it is not too much to expect this even in temporary camps. The walls, roof and floor should be lime washed.

Most sleeping rooms are provided with two tiers of bunks along the walls, each bunk 4 ft. 6 in. wide, to accommodate two men. A more stingy, "poverty-struck" piece of injustice was never forced on laborers. The practice of placing two men in one bunk should be prohibited and held up to derision as petty and behind the times. Fixed bunks moreover are dirty and prevent proper exposure to sunlight. Movable cots are used in barracks of all kinds, and absolute prohibition of double bunks will teach all concerned that individual canvas cots can be made and erected more cheaply. All openings require to be protected by fly screens. The rules against spitting on floors and other depravities are to be absolutely enforced by camp orderlies, and by empowering health wardens to have fines deducted from the pay of offenders.

Supplies.—The provisions used are generally of good quality, and the bill of fare includes a cereal, or mush as it is called, bacon, beef, bread, potatoes and canned vegetables, with tea, coffee and canned or dried fruits.

Cooking.—The cooking of these supplies is a most variable factor, however, due to the need of trained cooks. It is submitted that health departments could confer much advantage, both on contractors and men, by issuing a cooks' and bakers' license to such men as would qualify under a domestic science teacher. The suggested health wardens should also be holders of a cooks' and bakers' license in order to inspect intelligently and instruct if necessary.

Meat.—It should be insisted upon that all killed meat be sewn up in cheese cloth for shipment. This is done throughout the western part of the Dominion, and it rather surprises one to

see meat carried through the streets in our western cities without covering of any kind, frequently so carelessly thrown into the wagon that the wheels grind mud into projecting portions.

Milk.—Fresh milk is not usually supplied, and it is perhaps due to its absence and the abundance of fresh air and active employment that our men make such a good health showing, outside of imported epidemics.

Water.—The water supply of camps is dependent for its goodness upon the size of the stream whence it is taken. Men all realize the dangers of bad water, and it is only through ignorance that pollution takes place.

Springs form a good supply because they are covered by earth or rock, but care must be exercised to prevent impurities leaching through the covering. The quantity, especially in dry weather, is important, as good water is required not only for drinking and cooking, but also for washing dishes, for washing clothes, blankets, etc., and for washing the faces and hands. A spring should, therefore, be supplemented by a tank, say 12 x 12 x 5 ft. deep, to ensure continuity of flow, whence piping would lead to the kitchen and wash rooms. The supply from a small creek requires careful supervision, especially when it flows through flats and swamps. An elevated tank should be insisted upon with creek supply, or that from wells. The tank is filled by pumping, and in it the sediment falls either naturally, or by treatment with alum.

Some form of filter is very desirable for a camp supply, and a health warden could be trained to familiarity with the various kinds. If at all limered, the supply should be softened by the addition of soda, etc. Hard water makes a dirty wash room, as it curdles the soap.

Copper immersed in water at the rate of 5 sq. inches per gallon is said to sterilize in five hours.

Disposal of Wastes.—Latrine pits should be dug and covered with a canvas tent in such a way as to allow of the trench being fired every day in summer and occasionally in winter.

Disinfection.—The health warden and resident camp orderly should understand disinfection of buildings and wastes. Lime is probably the cheapest and best understood, but it is a little bulky for distant transportation. Whitewashing is most important.

Garbage.—All scraps of food and refuse and sweepings from the kitchen should, winter and summer, be deposited in a covered receptacle. This will prevent the hatching of house flies in the heated, decomposing material. Old bags or barrels may be used

to receive garbage, and three times a week it should be cleanly gathered and taken to a pit for burning.

The liquid wastes from the wash houses are best led to a covered cesspool where septic action will take place.

Manure.—When stables are situated with the men's quarters, a pit 5 ft. deep should be provided for manure, and, each day, earth from the excavation should be thrown in. If the stables are on a rocky site, then the manure must be hauled away to such a distance that flies will not hatch in it to infest the camps.

Prevention of Sickness.—This depends largely on a good organization, and a code of rules carried out by an orderly under the inspection of a trained health warden. The chief matters to be seen to are:

1. A contact examination of pulse and temperature of men on arrival.
2. Good food well cooked, and good water well cared for.
3. Well lighted camps with all openings screened against flies, and individual beds easily cleaned and aired.
4. Proper disposal of wastes and disinfection.

Organization.—The present provincial organization is good so far as it goes, but the writer's experience leads to the idea that a corps of trained health wardens, similar to hospital sergeants, should be formed by the Medical Health Departments of the various Provinces. These men could be trained and pass examinations in first aid, disinfecting, domestic science and hygiene, and receive licenses. The medical fee now collected from our men is quite sufficient to pay such wardens, and the laborers, the contractors and the public would receive more adequate protection.

I appeal to the Toronto Academy as the most forward body of its kind in the Dominion, to ameliorate our laborers' conditions by endorsing this movement for individual beds, contact medical inspection and health discipline.

Selected Articles.

CHANGES INDUCED IN THE BLOOD OF RABBITS BY LIVING IN AN ATMOSPHERE OF WATER GAS¹

BY GEORGE G. NASMITH, PH.D., AND F. C. HARRISON, B.A., M.B.

(From the Ontario Health Laboratories, Toronto.)

Three years ago one of us,² in the attempt to produce anæmia in guinea pigs by carbon monoxide, found that certain blood changes of rather a surprising nature were produced. Animals were placed in a chamber through which was drawn a mixture of water gas, containing about 20 per cent. of carbon monoxide and air, and they were kept continuously in that atmosphere. After a few days it was found that the number of erythrocytes in the peripheral circulation began to increase until a definite maximum had been attained, the maximum varying according to the proportion of the blood hæmoglobin saturated with carbon monoxide. Thus, when 25 per cent. of the hæmoglobin was saturated, the number of erythrocytes present in the peripheral or internal circulation was found to be 8,000,000 as compared with the normal number of 6,000,000. Other changes were also noted which were constant and definite in character.

We considered it of interest to find out whether, in the blood of animals subjected to the continuous action of water gas, hæmolysins, agglutinins or precipitins would be formed which would react with the sera and erythrocytes of normal rabbits. We also wished to see whether we could produce anæmia by means of carbon monoxide by varying the amount and method of giving the same. We selected rabbits for these experiments, as we needed to draw small amounts of blood at frequent intervals. It was, therefore, necessary to see whether rabbits would react to the carbon monoxide in the same way as guinea pigs.

Rabbits were accordingly placed in the gas chamber through which a dilute mixture of gas and air was drawn for the first twenty-four hours; a larger percentage of gas was then added, until on the third day about 25 to 33 per cent. of their hæmoglobin was saturated. If placed directly into this strength of gas they invariably died. At the end of three days profound degenerative changes were found in the erythrocytes, corresponding in detail to those found in the guinea pigs. Nucleated

¹ Received for publication, January 17, 1910.

² Nasmith and Graham, *Jour. of Physiol.*, xxxv, 32.

reds were always found, their appearance usually occurring within two days. The changes in the white blood corpuscles were also comparable to those in the guinea pig.

A rabbit (B and W) was placed in the gas chamber on January 4, 1909.

RABBIT B AND W.

Date.	R. B. C.	W. B. C.	Per cent. hæmoglobin.	Nucleated red corpuscles.
Jan. 4, '09	7,008,000	10,400	79	0
" 8, "	6,832,000	33,500	79	141 in a 500 differential count
" 29, "	10,704,000	4,600		
Feb. 2, "	10,976,000	7,300	118	1

Other animals have reacted in exactly the same way, so the red blood corpuscles of the rabbit evidently are affected by carbon monoxide in the same way as those of the guinea-pig.

Rabbits with a high erythrocyte content have also had the blood from the carotid and heart counted and the same number has been found there as in the peripheral blood. The increase, therefore, as in the guinea pig is a real increase in the production of red blood corpuscles and is not due to a mere peripheral stasis. The hæmoglobin increase, though marked, does not correspond to the rise in erythrocytes. Thus a rabbit with 11,000,000 erythrocytes only had 118 per cent. hæmoglobin; the increase in the erythrocytes being 82 per cent., while the increase in hæmoglobin was only 37 per cent. The specific gravity of the blood of a rabbit with a high erythrocyte count is greatly increased. For instance the blood of Rabbit L with 11,272,000 erythrocytes had a specific gravity of 1,072, while a normal rabbit with 6,000,000 erythrocytes had a specific gravity of only 1,051. It was found also that the erythrocytes of a rabbit with a high blood count had the same osmotic tension as erythrocytes of normal rabbits. This was shown by adding the washed corpuscles to varying strengths of sodium chloride solution. The corpuscles from rabbits with high and normal erythrocyte counts were hæmolyzed by exactly the same strength of sodium chloride solutions, so there was evidently no difference in their osmotic tension.

Taken altogether it has been found by us that rabbits living continuously in an atmosphere of water gas react in exactly the same way as do guinea pigs, and the changes as far as the red blood corpuscles are concerned are quite similar. Furthermore, the conclusion that we drew previously, namely, that the increase

of erythrocytes is due to an attempt on the part of the animal to keep its oxygen-carrying capacity constant, we believe, still holds good. We endeavored to determine whether the law of Weigert would hold under these circumstances, that is, whether animals undergoing active regeneration of red blood corpuscles would go on forming new corpuscles after they had been removed from the gas—in other words, when the stimulus had been withdrawn.

A rabbit with 11,000,000 erythrocytes per cubic millimetre was bled from the jugular vein, forty cubic centimetres of blood being withdrawn. The counts from the marginal ear vein taken at various times since the operation are given below.

Date.	Erythrocytes.	Per cent. of hæmoglobin.
Mar. 6, 09	11,512,000	120
Mar. 8, 09	8,360,000	95 two days after operation.
Mar. 10, 09	9,264,000	—
Mar. 15, 09	9,336,000	94
Apr. 1, 09	9,330,000	—
Apr. 12, 09	9,784,000	—

A second rabbit similarly treated gave the following results:

RABBIT B AND W.

Date.	Erythrocytes.	Per cent. of hæmoglobin.
Feb. 26, 09	10,976,000	118
Mar. 2, 09	9,592,000	— day after operation
Mar. 3, 09	8,040,000	92
Mar. 8, 09	9,784,000	92
Apr. 17, 09	9,596,000	87
Apr. 26, 09	7,184,000	—

From these experiments it may be seen that two days after the operation in both animals there appeared to be a diminution in the number of erythrocytes, then a rise of about a million, the total count then remaining constant for several weeks, although the hæmoglobin had fallen back to its normal amount. Other rabbits taken from the gas when undergoing active regeneration of erythrocytes and placed in air show no further increase in the number of erythrocytes. Evidently, therefore, in these cases the blood-forming organs cease to throw out large numbers of erythrocytes into the circulation, just as soon as the stimulus has been withdrawn. In other words, there is only a sufficient amount of hæmoglobin produced and distributed among the erythrocytes to carry the amount of oxygen required by the tissues. The fact that with a definite saturation of the blood with carbon monoxide there is a definite quantity of corpuscles and hæmoglobin produced for that saturation is another proof that the stimulus acts only until certain conditions for the supplying of oxygen to the tissues are fulfilled. The hydrogen, methane and carbon dioxide present in the gas mixture would all

tend to have the effect of reducing the oxygen tension in the lungs. Rabbits given the gas air mixture for three hours followed by air for three hours for periods of days or weeks reacted in exactly the same way as did rabbits living continuously in the gas air mixture.

An animal, Rabbit M, was placed in the gas mixture and kept there for four days until the blood showed a great amount of erythrocyte degeneration, with many nucleated red blood corpuscles. The animal was then operated on and blood smears taken from the carotid, splenic vein, portal vein and hepatic vein. Differential counts of these smears did not show any marked change, that is, there was no apparent difference between the blood going to and coming from the liver and spleen. Nor was there any perceptible difference between the numbers of degenerated erythrocytes going to and coming from the spleen and liver.

As it was thought possible that there might be something of the nature of hæmopoëitin present in the blood of rabbits which were rapidly producing new erythrocytes, some of them were bled to death and the serum injected into fresh rabbits which had had their erythrocytes accurately counted. In no case have we been able to demonstrate satisfactorily anything of the

DIFFERENTIAL COUNTS OF RABBIT M.

Source of blood	Pseudococsinophils.	Small lymphocytes.	Large lymphocytes.	Eosinophils.	Basophils.	Nucleated erythrocytes met with in a 500 count.	Transitionals.
Ear	38.4	49.8	1.4	4.0	6.4	50	
Carotid	33.8	57.8	1.1	3.0	4.3	14	
Splenic vein	40.8	49.0	2.0	4.2	4.0	41	
Portal vein	47.0	42.2	5.6	2.0	3.0	23	.2
Hepatic vein	39.4	45.2	8.2	4.0	3.0	32	.2

nature of hæmopoëitin, although occasionally there has been a slight rise in the erythrocyte count; in other cases there has been a slight fall.

For example, Rabbit YF was injected subcutaneously with 25 cubic centimeters of serum obtained from a younger rabbit which had been in the gas for four days and showed marked erythrocyte degeneration with many nucleated reds present.

Date.	Eryt rocytes.
June 22, 09	7,024,000—injected with 25 c.c. serum
June 23, 09	7,032,000
July 3, 09	7,296,000

These experiments also serve to demonstrate the absence of hæmolysins, for, though there was sometimes a slight reduction

in the number of erythrocytes, there was no constancy in the results obtained.

Washed corpuscles from normal rabbits were incubated with serum obtained from the blood of rabbits showing marked degeneration of the erythrocytes. Hæmolysis was never obtained in the several cases investigated, and we have, therefore, concluded that in the blood of rabbits showing severe erythrocyte degeneration hæmolysins capable of hæmolysing rabbit erythrocytes are not present. We have also tested the washed corpuscles of normal rabbits with serum from rabbits in various stages of erythrocyte degeneration and regeneration, but we have never been able to demonstrate the presence of agglutinins. Similarly, we have tested normal rabbit sera against sera of rabbits in various stages of degeneration and regeneration and have never been able to show the presence of precipitins.

The fact that we were unable to produce hæmolysis of the washed rabbit corpuscles with salt solutions of other than the strength required to hæmolyze normal washed corpuscles, although the specific gravity of the blood in rabbits with a ten million erythrocyte count was much above the normal, 1.070, compared with 1.049, seems to demonstrate the fact that the plasma of both rabbits must be of the same specific gravity. In other words the increase in the specific gravity of the blood is due to the additional corpuscles and hæmoglobin only.

CONCLUSION.

1. Rabbits living in an atmosphere of carbon monoxide react in general as guinea-pigs react.
2. The increased specific gravity of the blood in "carbon monoxide" rabbits is due wholly to the increase in the number of erythrocytes and of hæmoglobin, and not to any change in the plasma.
3. Weigert's law of inertia, that production would continue after the stimulus has ceased to act, does not hold in the case of carbon monoxide stimulated rabbits.
4. Hæmolysins, precipitins and agglutinins towards normal rabbit corpuscles and sera were not present in carbon monoxide rabbits.
5. "Hæmopoeitin" or anything of a similar nature was not found in rabbits in any stage of erythrocyte degeneration or regeneration.—*Journal of Experimental Medicine.*

THE PSYCHOLOGICAL IMPORT OF THE DOCTRINE OF IMMUNITY

BY CHARLES J. WHITBY, M.D. (CANTAB.).

Perhaps few of us realize the full significance of the recent emergence of a therapeutic doctrine which bids fair to transform our whole attitude towards the problems involved in the treatment of disease. For the first time since the world began we find ourselves in possession of a conception, which not merely throws a startling light upon the dark mysteries of pathological processes in general, but has obvious analogical bearings upon the subject-matter of other sciences, in particular of psychology. It would hardly be going too far to assert even that, in the theory of immunity, if it should, as there is little reason to doubt, be confirmed and extended, we have the germ of a new *philosophy* of human nature, one which differs from all its predecessors, moreover, in that it was conceived not in the brain of some speculative bookworm, but inductively and in response to the need of some interpretation of authentic facts of experiment and observation. It should also be noted that the theory of immunity is not the product of any one mind: it arose, as it were, spontaneously out of the co-operative researches of a number of workers, beginning with Jenner's empirical discovery, attaining a rational basis in the life-work of Pasteur, and culminating, for the time being, in the subtle and elaborate formulation supplied by Ehrlich. It is obviously, therefore, no ephemeral mushroom growth, but a genuine working hypothesis, solidly based on innumerable clinical observations, to say nothing of the beautiful experiments which are being specially directed to the elucidation of its complexities and side issues.

The theory of immunity in its narrowest and strictest sense refers mainly, if not exclusively, to the processes involved in reaction against, and recovery from, specific infections of bacterial origin. Obviously, however, its implications carry the mind, which has once assimilated its central idea, much further than this. It is impossible to doubt that many other poisons besides those toxins arising from the presence of the specific micro-organisms can evoke reactions of an analagous nature to those whose result is the production of antitoxins, properly so-called. The widespread popular belief that "herb" medicines regularly administered over a prolonged period "lose their effect" may not be altogether unfounded, and is an obvious case in point.

Those who remember the horrible sensations ensuing upon the smoking of their first pipe of tobacco—I will contrast them with the mild and pleasurable response of their now seasoned nervous system—will hardly dispute the plausibility of a belief in a nicotine immunity dependent upon the presence in their blood of a nicotine antitoxin. Further illustrations of this wider conception of immunization are found in the extraordinary resisting power against such poisons as opium and arsenic, which, as we all know, can be acquired by those addicted to the abuse of such poisons.

Side by side with our increasing knowledge of the mechanism of immunization against specific infections, we have recently been learning a great deal about the *rôle* of internal secretions in regulating the various functions, and maintaining, by their balanced and mutually reacting stimulus, the general health of the organism. Here, as it seems, we have, yet again, a clear indication that the conception of immunity needs to be considerably broadened beyond its original and strictly technical signification, so as to include many of the facts revealed by the study of these autogenous toxins and antitoxins, for as such they may clearly be regarded. It is more than a mere surmise that many of the symptoms of such diseases as rickets and exophthalmic goitre—to name only two of many possible examples—are due to impairment of that balanced activity of opposed gland structures, whose products, in health, function as toxins and antitoxins. Of two such glands, or groups of glands, one gets the upper hand, the other fails to respond in normal fashion or degree. The result is an excessive and one-sided elaboration of a toxin whose normal antidote is relatively deficient, and a whole train of symptoms directly traceable to the effects of the said toxin. In health we may be said to enjoy immunity against the poisons whose elaboration within our own organs is necessary to the activity of those or other organs; in disease this immunity, through disturbance of balance, is lost or impaired. Restore the balance by administration of the defective agent and you will relieve all the symptoms, just as, by the administration of an antitoxin, you relieve those of a specific infection. And, by ensuring a needed rise to the faulty organ, you may thus in time effect a radical cure.

Mr. Ernest Stratford has recently reported several cases of appendicitis and oöphoritis associated with symptoms closely resembling those of Graves' disease.

Here, it seems to me, we have important clinical confirmation of the reciprocity of action of the thyroid gland on one hand,

and the ovaries on the other, suggested by the temporary hypertrophy of the former, which occurs in many women at the menstrual period.

The special object of the present article, to which the above remarks form a necessary introduction, is, however, to suggest that the theory of immunity in its wider acceptation may assist in the physiological interpretation of many familiar facts of our emotional and mental development. If one reviews the entire life-history of a normal individual, one will find that it divides up into a series of distinct phases, each differing from its predecessor in several important respects, but mainly in this, that some special veil of illusion, based upon a corresponding emotional *susceptibility*, has been permanently removed, or, at least, greatly thinned, so that the intellectual outlook has gained more objectively, more power of disinterested survey, more detachment from and independence of organically determined moods. Thus at one period of his career, probably that of and following adolescence, he will be constantly "falling in love," and all his views of life will be colored, consciously or otherwise, by a glamor of sexual illusion. The physical determinant of this malady—for who can doubt that love is a pathological state or analogue?—will no doubt be the pouring into his circulation of neurotropic toxins of testicular origin. And the time will possibly come when recovery from such a state, supposing that circumstances rendered the normal elimination of the sexual virus inconvenient or socially deleterious, may be expedited by the administration of an anti-erotic serum! Later, perhaps, the same individual may become obsessed by an hypertrophied sympathy with the victims of unavoidable social imperfections, and may feel strongly drawn to some one of the many fanaticisms which, in their extreme form, as seen in "eranks" of various kinds, constitute veritable diseases. Immunity from the subtle virus of a fanaticism is, generally speaking, a somewhat slow and tedious process, although, naturally, the power of reaction varies enormously in different individuals. In general, perhaps, it will be established, more or less critically, at or about the age of forty-five, when a certain hardening of conscience and the establishment of more virile views of life and reform are, I believe, the rule. Mr. G. B. Shaw doubtless had this moral climacteric in view when he composed an aphorism to the effect that "every man of forty is a scoundrel!" When, however, as is unfortunately too common, the power of reaction against the views of humanitarianism (considered as a disease) is altogether lacking or greatly deficient, the individual will tend towards a state of

hopeless despondency, and may become a pessimist, if not a melancholiac.

It may appear somewhat far-fetched, to those, at least, who are unaccustomed to the interpretation of psychical states in terms of physical function, to speak of an obsession by some fanatical or Utopian delusion, born of exaggerated social sympathy, as a disease, and to seek to account for it by an auto-intoxication by some subtle virus, affecting the nervous or cerebral tissues in some specific way. But all alienists admit the importance of the toxic element in epilepsy and acute or chronic mania, and the difference is only one of degree. Philosophically speaking, it is obvious that, so long as a man's moral and intellectual progress continues, every outgrown phase may be regarded as pathological when compared with the saner and more advanced phase which succeeds it. And, unless we are to revert to the dualism of pre-scientific psychology, we must admit that, side by side with intellectual and moral progress, there is a corresponding modification by the chemico-vital processes of the body. I submit that a reasonable explanation of the observed fact that life tends to divide itself up into a series of distinct psychic cycles is the following: Every period of life is characterized by the dominant activity of one or more organs, whose internal secretions constitute neurotropic toxins affecting the nervous system (consequently the emotions) in some characteristic way. The presence in the circulation of these toxins acts, however, as a stimulus to the activity of another organ or group of organs destined to dominate during the succeeding phase of development. This stimulus evokes from the organ or organs in question the elaboration of internal secretions antagonistic to those in possession of the field, the elaboration of what are virtually antitoxins in relation to these. Thus, in the course of years, a condition of *immunity*, more or less permanent and complete, to the first set of toxins is established; and the individual, *experiencing a change of mood* for which he is probably unable to account, enters upon a new phase of life, psychical as well as physiological.

As my aim here is rather to suggest what I feel sure will prove a fruitful field of observation than to anticipate in detail its results, I will not presume to define the typical life-phases of an average individual. Everyone who has reached middle age must realize, on looking back over his career, the differences of *mood* peculiar to different phases of his own development. And on reflection he will find, as a rule, that each of these moods is, *upon the whole*, related to its predecessor in somewhat the same

way as a state of convalescence to one of suffering or disease. To this rule there will naturally be many exceptions, for the disturbing effect of environmental influences may greatly modify or even reverse the order of events. But this does not affect the force of my contention that the theory of immunity, widely interpreted, has genuine psychological significance, and throws a strong light upon the nature of certain facts of human development hitherto but little understood.

A question which naturally arises, granting the justice of my general view, is, whether the process of self-immunization against autogenous toxins prejudicial to complete sanity proceeds continuously throughout life, so that a man's lucidity grows even in old age, or not. Old age is no doubt very commonly, but, I believe, not necessarily, associated with intellectual decline. Many great writers and artists have produced their best work quite late in life. Much may be forgotten, but the value of what is retained seems to be in some way or another mysteriously enhanced. The brain of a healthy old man may be conceived as immune to the perverting effect of all autogenous toxins, while not insusceptible to their influence as mild and healthful stimuli. Such a brain will belong to a man capable of entering into the moods of all younger man, without being carried away by any of them. It will be what, in popular style, is happily entitled a "seasonal" brain; and the mind that corresponds therewith will be one that we can call in the truest sense "*disillusioned*."

—*Folia Therapeutica*.

OPHTHALMOLOGY AT OXFORD

Oxford University has the honor of being the first corporate body to grant a diploma in ophthalmology. The first examination for the diploma will be held in the third week of July of this year. Residence in Oxford is not required, but, amongst other things, certificates must be obtained that the candidate has satisfactorily followed out in the University of Oxford courses of instruction on the anatomy, physiology, and diseases of the eye. Arrangements are not yet completed for giving these courses of instruction as fully as it is intended they shall be given in the future. The course for anatomy and physiology extends over two months, that for diseases of the eye over three months, but the course of lectures in this subject will be given in the two months corresponding to those in which the physiological and anatomical lectures are delivered. The remaining month of clinical work can be kept at any other time.

The certificates of satisfactory attendance are obtained from those who are responsible for the teaching of the subjects; the requirements from those who are obviously experienced surgeons would probably not be so exacting as from others.

The Reader in Ophthalmology (Mr. R. W. Doyne) has issued the following circular to clinical teachers:

“In connection with the diploma there is now arranged at Oxford in the Departments of Anatomy, Physiology and Ophthalmology a course of instruction to take place during the eight weeks of the summer term. But apart from this it is my desire to organize during this term annually a course of systematic instruction in ophthalmology that shall be the best of its kind. This year advanced lectures during one week have been arranged. I hope that before long a suitable fabric may be endowed and fitted with all the apparatus pertaining to ophthalmology for private study as well as systematic teaching.

“The department does not propose to deal with clinical teaching; that is excellently done in various centres throughout the country, but it is hoped that the value of a place fitted with all the requirements for systematic teaching and study will be recognized as a valuable adjunct to what is of course the more important consideration, that of clinical work. There is not, I believe, at the present time in this country any such special provision, and it has to be sought abroad by those who require it.

“Further, it is hoped that when funds permit of the employment of a skilled pathologist, the pathological work of those eye hospitals and departments which have not a pathologist of their own, may be undertaken, and the specimens be prepared, exam-

ined, and returned with reports to the hospitals to which they belong. In this way a large amount of valuable pathological material which is now wasted may be utilized, and each hospital have its own museum. It may be remembered that the late Sir B. Sanderson was very much in favor of such an arrangement.

“A great opportunity now presents itself, and I wish to be especially careful to avoid taking any step or doing anything in the matter that might be prejudicial to its success. Such a scheme cannot possibly succeed unless it receives the active support of the clinical teachers of the United Kingdom, and it is my desire to organize the generous support they may be disposed to give, more especially in the way of lectures. I shall be grateful for any advice or criticism, for I wish to support the English School of Ophthalmology, and in no sense to enter into competition with any of the excellent work that is being done.”

The annual Congress of Ophthalmic Surgeons is announced to assemble at Keble College, Oxford, from July 20th to July 22nd. One hundred and fifty rooms will be available in Keble College for the first applicants, and will be allotted in order of application. The following are the members of the Council: Dr. Darier, of Paris; Professor Dufour, of Lausanne; Professor Greeff, of Berlin; Dr. Wendell Reber, of Philadelphia; Sir Anderson Critchett, Bart., Sir Henry Swanzy, Messrs. Brailey Browne, Collins, Cross, Doyne, Lawson, Mackay, Priestley, Smith, Ramsay, Sandford, Stephenson, Walker, Werner. Sir Anderson Critchett is honorary treasurer, Mr. R. W. Doyne, Master, and Mr. Sydney Stephenson, Honorary Secretary. About 120 names have already been received as foundation and original members of the Congress, and Mr. Sydney Stephenson, 33, Welbeck Street, W., will receive further names of original members until June 24th. There is no annual subscription, but half a guinea entrance fee and half a guinea on each occasion that a member shall attend the Congress. The programme of the Congress is not yet completed. It will be sent out later to those who have sent in their names for membership. The special features of the Congress will be operations for cataract and glaucoma. Operations will be performed by, amongst others, Professor Lagrange, of Bordeaux; Professor Holth, of Christiania; Professor Heine, of Kiel; Colonel Herbert, of Nottingham, who will each perform his operation for glaucoma. Sir Anderson Critchett will operate for cataract, and Major Gidney will perform the intracapsular cataract extraction practised by Major Smith. It is not proposed to have papers and discussions, but a series of demonstrations and exhibitions.—*The Birmingham Medical Review.*

Editorials.

THE KING'S DEATH

We learn from the various journals that, notwithstanding the rumors which were circulated during his late Majesty's illness, there was nothing mysterious about the cause of his death. For many years the physical condition of His Majesty was in certain respects unsatisfactory. He never quite recovered from his serious operation in 1902. For years he suffered to some extent from emphysema, with occasional attacks of bronchitis and laryngitis. The reports cabled about the serious condition of his throat during the twenty-four hours before his death were not correct. He had a somewhat serious attack of laryngitis, which produced slight painful spasms to the vocal cords, but there was nothing else present with the exception of inflammatory thickening of the hinder part of the glottis and chronic catarrh of the throat, or what is known as "smoker's throat."

The *British Medical Journal* states: "It was a case of a type to be seen every day in dozens of elderly persons. The cause of death in such cases is purely mechanical, the overburdened heart being stopped by the increasing resistance in the lungs. Could the king have been induced to spare himself more he probably would have lived many years longer. He had indeed suffered from glycosuria of a varying degree for a long time, but this did not, so far as could be judged, tend to shorten his life."

His Majesty appeared to derive much benefit from his visit to Biarritz, and it was exceedingly unfortunate that he should have considered it his duty to go back to London when he did, returning from the sunny South to the cloudy skies and the cold east winds of an English spring.

PARENT AND DOCTOR

Too often when the subject of the medical inspection of schools comes up it is taken for granted that the parent will be an obstacle to this work. In an article under the above heading

appearing in the April number of "School Hygiene," of London, England, it is pointed out that the very reverse is the case. Parents help. The article concludes with the saying of Samuel Butler that the well-being of the children of the people is the highest good. "Towards this all government, all social conventions, all literature, art, science should directly or indirectly tend. Holy men and women are those who keep this unconsciously in view at all times, whether of work, or of pastime."

The same article states that in England the intimation that parents will be welcome when the children are examined by the school doctor has been accepted by from 60 to 90 per cent. of parents, who have often come, especially in the cases of working-women, at great inconvenience and loss of time. But it is not only the working classes who should attend and whose children should be seen to. The writer of the article agrees with Dr. Catherine Chisholm, who stated that she "considered inspection of the children in the high schools quite as important as among the children of the poorer classes."

We cannot quote further from an article the value of which is apparent, but must content ourselves with drawing the attention of our readers to the magazine itself. "School Hygiene" is published at 2 Charlotte St., London W., at 7s. 6d. per year. The editor is Dr. Eder, and the magazine really stands alone as the only good magazine of its class in English. It is an excellent journal and well worthy of being kept on file, as it is full of valuable information.

ANNUAL MEETING OF THE ACADEMY OF MEDICINE

The annual meeting of the Academy took place in the Academy Building on the 3rd of May and was well attended. Men distinguished in particular branches of medicine and surgery—Doctors Hoover, Maurice Richardson, L. S. Barker, W. S. Thayer and John Lovett Morse—were the guests of the Academy, during the session and made the general meetings of great interest. Many of the fellows, however, appreciated more the smaller meetings of the sections on account of the exhibition of

cases and the freer discussions which took place at them.

The Toronto profession should, and no doubt does, value the Academy as an educational and harmonizing factor in its midst, and everyone should unite loyally in its interests and in promoting its usefulness. There is a great future before it.

By careful management of the funds, the trustees have a reserve at the credit of the Academy of some \$11,000, and expect shortly to announce the conclusion of negotiations for the erection of a permanent home for the Academy. This, too, it is hinted, may be done without touching the reserve mentioned above.

The financial statements of the trustees and treasurer and the report of the library committee are to appear in pamphlet form, and a copy will be mailed to each of the Fellows. The library contains about 6,000 bound volumes and receives 145 periodical publications. The report of the committee contains a request for donations of medical literature of all kinds. No doubt there is much valuable material throughout the country, hidden away in attics and dark recesses, which might well be sent to the Academy. We commend the suggestion to our readers.

The personnel of the new Council is as follows: President, Dr. Albert A. Macdonald; Vice-President, Dr. N. A. Powell; Hon. Secretary, Dr. W. Harley Smith; Hon. Treasurer, Dr. W. A. Young; Past Presidents, Dr. A. McPhedran, Dr. James F. W. Ross, Dr. R. A. Reeve, Dr. W. H. B. Aikins, Dr. H. J. Hamilton, Dr. Edmund E. King, Dr. J. Milton Cotton, Dr. D. J. G. Wishart.

Chairmen of Sections: Medicine, Dr. John Ferguson; Surgery, Dr. A. H. Perfect; Pathology, Dr. R. D. Rudolf; Ophthalmology, Otology and Laryngology, Dr. J. Price Brown; State Medicine, J. F. Goodchild; Pediatrics, Dr. W. B. Thistle.

ITEM

The Medical Society of the State of New York held a reception on the evening of May 6th at the New York Academy of Medicine in honor of Dr. Abraham Jacobi, to celebrate his 80th birthday.

Personals.

Dr. F. A. Clarkson, of College St., is now in Vienna for special work in internal medicine.

Dr. Henry Orton Howitt, of Guelph, was married to Miss Amy Saunders, of Toronto, April 20th.

Dr. J. Cameron Wilson, son of the late Dr. J. D. Wilson, was on graduating appointed resident surgeon to Victoria Hospital, London.

Dr. J. Orlando Orr, manager of the Industrial Exhibition, Toronto, was married to Miss Anna Marie Halbaus, of Toronto, formerly of Berlin, May 16th.

Dr. A. S. Moorehead (Tor., '07), of Toronto, passed the first professional examination in Anatomy and Physiology for the Fellowship of the Royal College of Surgeons.

Miss Florence Nightingale, "the Grand Old Lady of London," celebrated her 90th birthday May 8th. Although Miss Nightingale has been confined to her home in London for the past fifteen years on account of ill-health, she still takes a deep interest in nursing and all matters affecting the public health.

Dr. J. A. Robertson, of Stratford, returned from the West Indies early in the spring. Shortly after his return he had an attack of his old enemy, la grippe. He appeared to be recovering nicely at the end of a week and went out in his motor car for a short run, and, after calling on a patient, he started for home. He turned the crank to start the machine, but had, however, forgotten to move a certain lever, and the crank flew back, striking him on the wrist and causing rather a bad fracture. He suffered considerably from shock, but reports as to his condition about the middle of May were encouraging.

GREATER BRITAIN AND THE ANNUAL MEETING, 1910

COLONIAL RECEPTION COMMITTEE.

SIR,—The Colonial Reception Committee is particularly desirous of bringing the Annual Meeting, to be held in London

in July next, to the notice of all medical practitioners residing in the Dominions beyond the seas, as affording them an unusual opportunity of visiting London, both for the scientific purposes of the meeting and also for social intercourse with their fellow practitioners throughout the Empire.

The Colonial Reception Committee, in conjunction with the Colonial Committee of the Central Council, desires, through the medium of the Journal, to extend a very cordial invitation personally to all medical practitioners in the Colonies, and assures them of a hearty welcome to the Annual Meeting and to the capital of the Empire.

Great efforts are being made by these two committees to arrange such entertainments as it is hoped will meet with the approval of their colonial brethren and so add to the success of the meeting of 1910.

We are, etc.,

EDMUND OWEN,
Chairman,

DONALD ARMOUR,
Honorary Secretary,

of the Colonial Reception Committee.

429, Strand, W.C., Jan. 3rd.

Obituary.

June 1910

SOLOMON SECORD

Dr. Secord, a well-known physician of Kincardine, died at his home in that town April 24th, aged 76. He was born near Hamilton and belonged to the family which included the heroine, Laura Secord. He graduated M.D. from Victoria University in 1856. After practising for a time in Walkerton and Kincardine he went to the Southern States in 1861 and became a medical officer in the Southern army and served during the whole of the rebellion. After the war he returned to Kincardine and remained there until the time of his death.

JOHN DOLWAY WILSON

We deeply regret to announce that Dr. John D. Wilson, of London, one of the best-known physicians of Western Ontario, died at his home May 16th, aged 52. About five weeks previous to his death he became infected while operating on the tonsils of a little girl. Symptoms of septicaemia soon appeared, and in a very short time his case was considered hopeless. In a couple of weeks, however, he rallied to some extent, and for a time his recovery seemed possible if not probable, and the day before his death his attending physicians felt greatly encouraged, but a sudden change occurred and this well-beloved and accomplished physician passed to rest. Dr. Wilson not only had a large practice, but took a very active part in public matters. He was Mayor of London at a very critical time, during the celebrated street car strike. He was president of the Irish Benevolent Society, and took an active interest in the Western University. He was the chief organizer of the Victoria Hospital of London. He was greatly interested in the treatment of patients suffering from tuberculosis, and especially the sick poor. Dr. Wilson was a very fine type of the hard-working, conscientious physician. His fellow-citizens followed his case with the deepest interest until the announcement of his death cast a gloom over the whole city. We think we may fairly claim him as another Dr. McClure. He leaves a widow and six children, who have the profound sympathy of the community.

Book Reviews.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. For the use of students and practitioners. By James Nevins Hyde, A.M., M.D., Professor of Dermatology in Rush Medical College, Chicago; Professorial Lecturer on Diseases of the Skin, University of Chicago; Dermatologist to the Presbyterian, Michael Reesc, Augustana and Children's Memorial Hospitals and the Orphan Asylum of the City of Chicago; Member of the American Dermatological Association; Corresponding Member of the Societe Francaise de Dermatologie et de Syphiligraphie; Corresponding Member of the Wiener Dermatologische Gesellschaft, and Corresponding Member of the Dermatologische Gesellschaft, and Honorary Member of the Societa Italiana di Dermatologia e Sifilografia. Eighth and Revised Edition. Illustrated with 223 engravings and 58 plates in colors and monochrome. Philadelphia and New York: Lea & Febiger, 1909.

The Eighth Edition of this work, which is of exceptional excellence, has undergone careful revision, and may be considered easily the leading work published on this continent on diseases of the skin. The diseases of warm countries and the tropics are considered in a separate chapter. New articles have been written on the following subjects: Prurigo, Nodularies, Paraffin, Prosthesis, Osteoma and Calcification of the Skin, Meralgia Paraesthetica, Acrodermatitis, Pustulosa Hiemalis, Lichen Spinulosus, Keratolysis Exfoliativa Congenita Limpoma, Fordyce's Disease, Causalgia, Leukæmia and Pseudoleukæmia Cutis, Tinea Ciliarum, and, in particular among the disorders produced by animal parasites the important subject of Brown-tail Moth Dermatitis.

We had hoped to see a fuller account of the value of radium in keloids, rodent ulcers and naevi.

The work throughout is most beautifully illustrated and the chapters are well arranged. It is difficult to criticize a work which merits unstinted praise.

NEW AND NON-OFFICIAL REMEDIES. Containing descriptions of the articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association prior to Jan. 1, 1910. Chicago: Press of American Medical Association, 535 Dearborn Avenue. 1910.

HANDBOOK OF DISEASES OF THE EAR. For the use of students and practitioners. By Richard Lake, F.R.C.S. (Eng.); Surgeon Diseases of the Ear, etc., London School of Clinical Medicine; Surgeon Royal Ear Hospital. With 4 colored plates and 66 original illustrations. Third edition. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, 1910.

This work continues to be popular with the profession, and is one of the best on the subject. The third edition has been somewhat modified and improved. The chapter dealing with Intercranial Complications is particularly lucid, and the chapter on Diseases of the Middle Ear shows the master hand.

MANUAL OF DISEASES OF THE EYE. For students and general practitioners. By Charles H. May, M.D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1890-1903; Attending Ophthalmic Surgeon to the Mt. Sinai Hospital, New York; Consulting Ophthalmologist to the French Hospital, to the Gouverneur Hospital, to the Red Cross Hospital, and to the Italian Hospital, New York. Sixth Edition, revised. With 362 illustrations, including 22 plates with 62 colored figures. Price, \$2. New York: William Wood & Co. 1909.

This popular work, which appeared first in August, 1907, is now in its seventh edition, which is a sufficient evidence of its great worth. So much has it been appreciated that it is now published in seven different languages, German, Italian, French, Dutch, Spanish and Japanese.

New paragraphs have been added on subjects such as Tuberculin Tests, Cerebral Decompression and Transillumination.

HIGH FREQUENCY ELECTRICAL CURRENTS IN MEDICINE AND DENTISTRY Their nature and actions and simplified uses in external treatments. By S. H. Monell, M.D., New York; Professor of Static Electricity, International Correspondence Schools, 1898-1903; Founder and Chief Instructor, New York School of Special Electro Therapeutics, 1896-1902; Member of the New York Academy of Medicine; Editor Journal of Treatment 1904-1905; Author of "A Pictorial System of Instruction for Physicians in X-Ray Methods and Medical Uses of Light, Hot-Air, Vibration and High Frequency Currents," Manual of Static Electricity in X-Ray and Therapeutic Uses, Etc. Finely illustrated with special instruction

plates. New York: William R. Jenkins Company, 851-853 Sixth Ave. 1910.

Interest begins in the first chapter, in which electricity and its mysteries are defined. This is conspicuous in the section, "Life Phenomena and Electricity," which tells what science has found out about how nature works in the human body. Then follow two chapters on Physiologic-Medical Properties of High-Frequency Currents.

"High-Frequency Currents in Medicine and Dentistry" was written to assist the progressive surgeon, physician and dentist, and for all who have electricity in their homes.

Selections.

Treatment of Delirium Tremens

Some novel suggestions for the treatment of delirium tremens are those of G. E. Pettey, who ascribes the symptoms of this condition to the accumulation of toxic products, autogenous as well as alcoholic, in the blood. Accordingly, he aims at the removal of these deleterious substances. He gives normal salt solution in large quantities by the rectum, hypodermically, or, if necessary, intravenously. Thus the entire circulatory system is flushed with fluid to its utmost capacity, and this is then relieved by free purgation with large and repeated doses of Epsom salt. Calomel in full doses is also given. Sparteine is administered in 2-grn. doses for the purpose of supporting the heart and promoting diuresis. For the delirium itself gelsemine is given every hour, or every two hours, until its physiological effect is produced; the dose advised is $1/25$ grn. Alcohol is reduced to moderate limits, but is not entirely withdrawn: opium and other narcotics are condemned as not merely dangerous but useless. Physical restraint is also held to be not permissible. In 450 consecutive cases the results of this line of treatment are described as excellent, and no death from delirium tremens occurred in the whole series.—*The Hospital*.

Phenolphthalein

J. J. Gilbride, of Philadelphia, says that phenolphthalein was first introduced into medicine through the discovery of the purgative effects of artificial Hungarian wines which had been treated with it to prevent their substitution for the genuine article. This led to a careful examination as to its action on the bowels, and it was demonstrated by Vamossy that it invariably acted as a purgative. This fact led it to be quickly taken up and used under various names in proprietary medicines. Vamossy explains its action by its remaining unchanged in the stomach and being converted into a sodium salt in the intestines, more soluble and more active than the original drug itself. It has been further investigated by Ott, Scott, Tunnicliffe, and others. Clinical experience has confirmed their investigations and shown that it is a safe cathartic. It usually acts without pain in six hours, and is not followed by later sluggishness of the bowels. According to Gilbride's experience, it loses its effect somewhat

by continued use, but a dose of from 3 to 5 grn. will purge the average patient. Gilbride thinks that 5 grn. should be the limit of the dose, as some persons possess an idiosyncrasy for the drug, and for a child he would begin with a small dose, say $\frac{1}{2}$ grn., given at night. He recommends its introduction into the Pharmacopeia.—*Jour. A. M. A.*

Calcium Lactate in Eclampsia

A. C. F. Halford, of Brisbane, Australia, treats eclampsia and eclamptic symptoms, as well as the albuminuria of pregnancy—which, in his opinion, may be also due to paucity of calcium content of the blood—by the administration of calcium salts in generous doses. He believes he has averted eclampsia by following this procedure. Calcium lactate was the salt employed, both on account of its readily assimilable nature and because it is an organic compound. The dosage was 15 grn. every four hours until symptoms abated, and then less frequently.

In dangerous cases of eclamptic convulsions the author recognizes that to give calcium by the mouth would be too slow a method, and in such cases he recommends the injection intravenously of a liter of warm saline solution containing about 10 grn. of calcium lactate.—*Australian Med. Gazette.*

Cardiac Dropsy Relieved by Digipuratum and Diuretin

William H. Smith reports the case of a man of sixty-seven, with an unimportant family and previous history, who entered the Massachusetts General Hospital. For six months he had had gradually increasing dyspnoea, dizziness, and swelling of the legs; for five months he had had orthopnoea, cough, and at times blood-tinged sputum; for two months dull pain had been present in the left chest, while for five weeks there had been oedema and swelling of the genitals. The dyspnoea and orthopnoea were extreme the three days before entrance.

Examination at the time of entrance, Oct. 24, 1909, showed a well-developed and nourished man, with arterio-sclerosis, with marked failure of compensation, hydro-thorax, ascites, liver engorgement, and brawny oedema of the legs. The urine was that of passive congestion, the blood normal, the blood-pressure 185. Temperature, 94.6°; pulse, 95; respiration, 50, at entrance.

He was put at once upon digipuratum, four tablets, each of $1\frac{1}{2}$ grn., the first day; three tablets the second and third days; and two the two following days. His urine, which had been relatively small in amount, rose the fourth day to 190 oz. in the twenty-four hours. There was very marked improvement in his condition, the œdema of his legs disappeared, and the heart sound became louder, although there was little change in the rate. Unfortunately, it cannot be definitely stated that such rapid and marked improvement was due to digipuratum alone, as he was put upon diuretin, 15 grn., every four hours, two days before the marked diuresis occurred. The striking thing is that in a case of sensile heart with failure of compensation existing for months such a rapid improvement should occur, whether due to the digipuratum alone or in combination with the diuretin.

He was discharged relieved Nov. 8. It is important to remember that, in order to maintain compensation in these cases, some preparation of digitalis must be used for a considerable time after compensation has been established.—*Boston Med. and Surg. Jour.*

Dionin in Chronic Atrophic Rhinitis and Chronic Dry Pharyngitis

The seemingly wonderful results accomplished by the use of dionin in diseases of the eye led D. D. Wilcox, of Petersburg, Va., visiting oculist and aurist to Petersburg Hospital, to employ dionin in the treatment of a case of chronic atrophic rhinitis and in a case of chronic dry pharyngitis.

The atrophic rhinitis was well developed in a young girl eighteen years old. She stated that the trouble had been noticed about two years and had gradually become worse.

The writer directed her to come to his office, where, tri-weekly, he cleansed the nasal membranes and post-nasal space of all dried tenacious secretions, and then thoroughly sprayed the parts with a 2 per cent. dionin solution. She was also given a spray of boric-acid solution to be used three times daily at home. In addition she was given strychnine, phosphoric acid, and iron for her general condition. The first effect of the dionin was just as is seen in the eye, producing a well-marked œdematous appearance of the entire mucous surface. This, she said, lasted the entire night and, as she expressed it, made her have a bad cold without having to blow the nose. It was with difficulty that the writer persuaded her to let him continue the treatment, she preferring the large breathing space to the obstruction.

He is now able to report the case as cured after three months of ceaseless treatment.

The case of dry pharyngitis was in a man, aged forty-five. The diomin was applied on a cotton applicator at the office every other day for a month, after which time he did not return, but, when seen on the street a short time afterward, he said that his throat has never since troubled him.—*Virginia Med. Semi-Monthly*.

Death Some Days After Chloroform

Aubertin (*Sem. med.*) mentions the fact that some cases, apparently quite free from any hepatic or renal mischief, die between the second and fifth days after surgical interference under chloroform, generally without jaundice, and that in such cases degenerative and necrotic lesion of the liver are discovered *post mortem*. These hepatic lesions have been attributed to appendicitis, to the abuse of antiseptics, etc., but it is probable that the chloroform always plays an important part in their production, and it is nearly certain that in many cases it is the only cause. Aubertin, in fact, has succeeded in producing, in healthy animals, delayed death after a single production of chloroform anæsthesia, and has found in such circumstances two varieties of lesion; visceral changes affecting chiefly the liver, and general congestive and hæmorrhagic phenomena. It may be that the hæmorrhagic changes are partly caused by hepatic insufficiency; but in any case it is interesting to see that chloroform anæsthesia can by itself cause delayed death from hepatic insufficiency, accompanied, not by jaundice, but by hæmorrhagic symptoms.—*British Medical Journal*.

Famous English Physicians

Mr. George W. Smalley, in contributing the series of Anglo-American Memories to *The Tribune*, recently discoursed interestingly of three famous English physicians. We feel sure our readers will enjoy these anecdotes, and that Mr. Smalley will pardon us for reproducing them. They deserve preservation in medical literature and to be incorporated in the biographies of these celebrated medical men.

SIR THOMAS BARLOW.

Coming to England in the summer of 1896 on a holiday, I

had some slight illness and asked a friend whom I should consult. My own doctor was by that time attending patients, I suppose, in another and better world. My friend said he had lately seen fourteen physicians about his son, and each of the fourteen had given a different name to his son's disease.

Then I went to Dr. Barlow, who said, after a long examination, "I do not know what is the matter with your son nor what to prescribe for him." Then I felt I had found a doctor whom I could trust.

So I went to Dr. Barlow, without an introduction. At the end of a rather long consultation and a definite opinion and a settled prescription, I asked what his fee was.

"Nothing."

I thought he had misunderstood my question, and repeated it.

"Nothing. I can take no money from a man who has done as much as you have to keep the peace between the two countries."

When I next saw the manager of *The Times* I told him of this incident, which he seemed to think interesting. He said:

"Such evidences of good feeling from a man so distinguished as Barlow and so far removed from politics do indeed make for good feeling on both sides. I hope you will tell all your own people."

It is difficult, for I cannot tell it without more or less directly paying a compliment to myself. But many years have since ebbed away. Modesty is at best but an inconvenient hand-maiden, from whom I would part company if I could. Let her keep to her proper place. An obligation of honor is peremptory; and this, perhaps, is one. I did tell a certain number of friends at the time, and now I repeat the anecdote to a larger number. I set it against Mr. Price Collier's mischievous dictum that English and Americans do not like each other. The dictum already seems to belong to a distant and misty and mythical past.

Since that year of 1896 Dr. Barlow has become (in 1902) Sir Thomas Barlow, Bart., and Physician to the King's Household—about as high as anybody can go in the medical profession. A Lancashire lad to begin with, he has had a vast hospital experience, and still keeps up his hospital work; he has a vast private practice; Harvard and two Canadian universities have give him their LL.D.; he is an F.R.S., a K.C.V.O., and other parts of the alphabet pay him tribute. All these and many other titles and distinctions have their value, though the late Sir Henry Drummond Wolff, who had more than most men, did say: "They give me every kind of letter to my name except L.S.D." But

the essential thing in Sir Thomas Barlow's case is that he has the confidence of the public and of his profession.

Sir Thomas was one of the medical advisers of the King at the time of the operation for appendicitis by Sir Frederick Treves. Those were critical and fateful days, about which many legends have since grown up. The one I like best has nothing to do with Sir Thomas Barlow, nor have I ever asked him whether it is true, nor would he tell me if I did. But even a legend may be true, and this I believe is.

SIR FREDERICK TREVES.

Sir Frederick Treves, in one of the quaint phrases of the older days, Serjeant-Surgeon to the King, and reckoned, perhaps, the most brilliant operator of his time, was summoned to the King on a Monday in June, 1902. He made his examination and told the King there must be an operation on the following day. The right technical name for the King's malady is not appendicitis, which has become a household word, but perityphlitis. The King assented in principle to the operation, but said to Sir Frederick Treves it could not be performed before Wednesday. Answered Sir Frederick very gravely:

"Sir, I shall not be here on Wednesday."

The audacity of the reply amazed the King and filled the bystanders with terror. The King asked:

"What do you mean?"

"Sir, with every respect, I mean that I shall not be here on Wednesday."

"Am I to understand that if I wish you to perform the operation on Wednesday you will not do it?"

"I am obliged to tell your majesty that, in my judgment, if the operation is to be successful it must be done on Tuesday. If not on Tuesday it must be by another hand than mine."

The King finally yielded; the operation took place on Tuesday; the success was complete. But here again gossip steps in, alleging that the first incision revealed such results as to startle some of the few professionals present. At least one of them protested against going on, and finally left the room, saying hotly he would not stay to see the King "cut to pieces." But nothing shook Sir Frederick's confidence or nerve. He went on boldly, tranquilly, to the successful end.

Why, then, all this difference between Tuesday and Wednesday? Because, the surgeons will tell you, the King's malady was already so far advanced that a day's delay meant the danger, or the certainty, of blood poisoning. With this knowledge he was bound to face the King's anger. It was the way in which he

faced it that made the act so impressive, and carried the day. The King with all his suavity and unflinching tact and kindness, is a King. He has in him a thousand years of kingly traditions and inheritances. When he was Prince of Wales, and only the first of his mother's subjects, he had them. They have grown stronger with use since he came to the throne. He will listen to reason, but decides for himself, as a King should, or any other man should. If Sir Frederick had begun by explaining his reasons, the King might easily enough have brushed them aside and ended the discussion with a regal: "Wednesday, then." Nothing would have impressed the King like the respectful, "Sir, I shall not be here on Wednesday;" respectful, but also extremely rebellious. The essence of devoted loyalty was there, all the same.

One thing, it seems to me, the great surgeons and physicians I have known had in common. They were great men, first of all. They had great qualities outside of their profession. Two years ago last September, a time when the big men are mostly away, I wanted a surgeon and knew not where to find one.

SIR HENRY MORRIS.

A chemist finally gave me a name—Mr. Henry Morris—and an address; name wholly unknown to me, though the address—Cavendish Square—implied at least professional prosperity. I had had a fall at the Playhouse, as Mr. Maude calls his little theatre, the night before, leaving a box by what I supposed to be steps, and in the absence of steps coming down on the floor, bruised, and I know not what else. My surgeon made his examination. What struck me was that he wasted never a word, nor a gesture. The touch of his hands, of his fingers, had a mathematical or instrumental precision. So had his questions. In five minutes or less he had covered the ground and delivered his opinion. Anything might have happened, but nothing had—bar the bruised muscles. "We'll attend to those for you." He asked if I was leaving town, and when I said I was sailing for New York on Saturday he remarked:

"If you were a workingman I should send you to the hospital and you would be left in bed till you were well. But if you choose to sail on the *Lusitania* you must bear the pain. Now, as you are here, you might as well let me overhaul you."

Then, as before, the same precision, the same delicacy of touch, the same rapidity, nothing hurried, nothing missed; his examination a work of art as well as of science. Then he began to talk of other things; and again, and even stronger, was the impression of being in contact with a master mind. Seldom have

I spent a more stimulating hour. He was, I found later, Mr. Henry Morris, Consulting Surgeon to the Middlesex Hospital and President of the Royal College of Surgeons. In other words, Mr. Henry Morris, about whom I ought to have known, but did not, was, and is, in the very front rank of his profession. His eminence has since been recognized and rewarded by the King, and he is now Sir Henry Morris, Bart. I suppose even a republican may admit that, if titles are to be conferred, they are well conferred on men eminent in science.—*Buffalo Med. Journal.*

The Bladder in Tabetics

Rinaldo (*Gaz. degli Osped.*, January 18th, 1910) draws attention to a condition of the bladder which may sometimes be seen in tabetics as an early symptom, and, indeed, may be the only symptom at first. This consists in a loss of sensibility, so that the desire to empty the bladder comes at longer and longer intervals, until finally a spurious incontinence arises, very much as is the case in retention of urine from enlargement of the prostate, the overflow of urine being all that the patient is cognizant of. When examined by the cystoscope the condition known as "columnated bladder" is to be observed. The appearance differs somewhat from that seen in prostatitis, for in the tabetics the trigone and parts about the ureteral openings are free, whilst it is the lateral regions and the fundus of the bladder which display the marked trabecule constituting the abnormality in question. In the author's case there were no characteristic signs of tabes and no known history of syphilis; no eye symptoms, and the reflexes were normal, and there was no ataxia. There was some history of lightning pains in the thighs and calves and some complaint of altered sensation in the soles of the feet when walking. There was a history of temporary diplopia and girdle pains. There was no prostatic enlargement and no stricture. Owing to the inability to empty the bladder suprapubic cystostomy had to be done eventually. In spite of any known history of syphilis a Wassermann reaction was obtained, and found to be positive. The man was 48 years old. Attempts were made to stimulate the sensibility of the bladder by electricity, douches, etc., but with only moderate success. These bladder troubles in tabetics may be due to spasm of the sphincter, to inability to relax the sphincter, or to paresis of the detrusor. In the author's case there was no spasm.—*British Medical Journal.*

Radium in Tumor of the Eyelid

"Nothing so nearly resembling the marvellous has it been my fortune to see in surgical work," says Abbe, of New York (*Archives Roentgen Ray*, London, February, 1910), in describing how a tumor of the lower eyelid yielded to the application of radium. The case was that of a man, aged 45. The tumor had been growing for twelve months, involving two-thirds of the lid, and forming at last a mass in which all semblance of the lid and lashes was lost. It resisted treatment by X-ray experts and ophthalmologists. A section was taken from its centre and showed small-cell sarcoma. The patient was offered to Abbe that radium might be tried before excision of the lid. Strong radium in glass tubes was placed upon it four times during one week, the eyeball being protected by a thin lead shield. Week by week, without any more applications or treatment of any kind, the tumor melted away. At the end of eight weeks it was absolutely gone, and there has been no recurrence. To-day it would be impossible to say which eye was affected, save for a slight linear nick in the edge of the lid, where a bit had been taken for microscopic study. Abbe suggests, rather picturesquely, that the tumor was possibly a development of some intercellular, unrecognized, ultramicroscopic reticulum, and that this riotous cell-growth was beaten back into orderly life by the play of electrically-charged radium atoms.

The Latest From Von Pirquet

Speaking before the Philadelphia Pediatric Society a few weeks ago on the latest development of his cutaneous tuberculin test, von Pirquet made some interesting and practical observations. There are new and authentic records of 328 cases of children previously subjected to this test. Of these 124 gave a positive reaction and examination showed tuberculosis in 123 of these 124 cases. In general the re-action is very intense if the infection has just started or has recently made progress. Further than this a positive reaction does not go in giving information as to the amount of damage done. One small gland may be infected or a whole lung may be breaking down.

The negative reaction is less conclusive. As in typhoid and the Wassermann test for syphilis, antibodies may not be present in large enough quantity to give the reaction. It is more often lacking than in emaciated patients, in the later stages of miliary tuberculosis and tuberculosis meningitis. Curiously enough the

reaction is always lacking during the first week of measles.

In adults the reaction is only occasionally useful, since so many with an old healed tuberculosis give a positive result. In cases of doubtful physical signs, however, an intense positive reaction certainly indicates a tuberculous infection.

In children, von Pirquet says the reaction is useful in the diagnosis of the following conditions: chronic intestinal marasmus, bone lesions, emaciation, anæmia, subacute bronchitis, glandular swelling, furunculosis and other skin lesions, beginning meningitis. In many of the cases it is not only diagnostic but prophylactic and therapeutic.

Finally he told of a very practical use of the test which he had been able to carry out in Baltimore. The 227 children of an orphan asylum were all subjected to the test. Of these 25 below the age of six gave positive reactions. These were promptly separated from the healthy children, and in this manner the inmates are protected from possible infection by their playmates. It seems that this simple procedure might have a wide application among institutions having the charge of small children.—*Detroit Medical Journal*.

The Sweats of Phthisis

Levi (*Gazz. degli. Osped.*) has experimented in a considerable number of cases of phthisis with various antisudorific drugs, namely, atropine, infusion of sage, phosphate of calcium and gallic acid, tellurate of sodium and camphoric acid by the mouth, also friction with camphorated alcohol. Of these drugs camphoric acid in two daily doses of 15 grains each, gave the best result. Atropine sometimes did good, but rarely stopped the sweats altogether; the same could be said of infusion of sage and calcium phosphate. Tellurate of sodium in 2 egr. doses was unsatisfactory both in not checking the sweats and in its unpleasant taste. Camphoric acid only failed in exceptionally bad cases, and its failure in any given case is looked upon as an omen of bad import. External friction with camphorated alcohol was a useful aid to treatment, but not sufficient of itself to stop the sweats. The exact *modus operandi* of camphoric acid is a matter of opinion, but in the author's experience there is no doubt as to its value as an antisudorific. Brief details of some 20 cases are given where it appears that camphoric acid often succeeded when the other antisudorifics had been tried and had failed.—*British Medical Journal*.

Miscellaneous.

A Very Grave Error

The experience of many of the best men of the profession, not only of the United States but abroad, has established the clinical value of antikamnia tablets. Among those who have paid high tributes to their value and who occupy positions of great eminence may be mentioned Dr. J. Acheson Wilkin and Dr. R. J. Blackham, practitioners of London. They have found these tablets of value in the neuralgias and nervous headaches resulting from overwork and prolonged mental strain, paroxysmal attacks of sciatica, brow-ague, painful menstruation, la grippe and allied conditions. Indeed the practitioner who has such cases as the latter come under his observation, and who attempts their relief by opiates and stronger drugs, when such an efficient and harmless agent can be used, commits a grave error.

Experience goes to prove that two antikamnia tablets in an ounce of sherry wine, taken every two to four hours, will carry the patient through these painful periods with great satisfaction.—*Medical Reprints*, London, Eng.

Surprising and interesting discoveries have recently been made in the scientific application of asbestos to every-day uses. As a result of this, the demand for asbestos is increasing by leaps and bounds. To the average Canadian it comes as a great surprise that about 80% of the world's supply of the most valuable and high-grade asbestos, that is, the asbestos with the long fibre, is produced from a very small district in the Province of Quebec, about 24 miles in length by anywhere from 100 yards to 4 miles in width. Of this 80%, about 70% is obtained from properties controlled by the Amalgamated Asbestos Corporation, whose first mortgage 5% bonds the well-known investment bankers, Emilius Jarvis & Co., Toronto, are offering to investors at 90 and accrued interest.

The company in question on the 1st of January had orders in hand to keep all their mills running for the full capacity for over two years. It seems evident that Canada has the world's monopoly of asbestos as well as nickel.

Messrs. Jarvis & Co.'s advertisement in connection with these bonds will be found on another page.

A Danger of the Trendelenberg Position

A patient, aged 46, suffering from complete but reducible uterine prolapse, was operated upon in the Trendelenberg position and hysteropexy with three sutures performed. The subsequent onset of intestinal obstruction necessitated further interference, and the mesentery was found twisted, with a volvulus of the ileum. Beneath the inferior border of the mesenteric loop were caught up two coils of small intestine, one of which was tightly nipped. Dr. H. Duret, who publishes the case in the *Journal de Science Médical de Lille*, attributes the obstruction to the position of the patient at the time of operation. The throwing back of the viscera at an angle of 45° causes some amount of disturbance to their normal relations, especially in those who, like the patient, are the subjects of visceroptosis, and when, at the end of the operation, the horizontal position is resumed, the mesentery easily turns upon itself, and a volvulus is produced, which usually occurs from left to right owing to the relative fixation of the cæcum. The author, therefore, advises care in the use of the Trendelenberg position when dealing with cases of enteroptosis; the operating table should be moved into position slowly, and the abdomen should not be closed after operation until search has been made for twisted mesenteric loops and volvuli.—*The Hospital*.

IF SANMETTO IS USED in conjunction with instrumental treatment of urethral stricture it will be found to soothe, check or prevent the smarting and inflammation that is so common after passage of bougie.

That palpation of the abdomen by a heavy-handed examiner may cause unnecessary pain to the examinee is well known, and is sufficient reason, apart from the muscular resistance evoked, for gentleness in such manipulations. But Schreiber in the *Deutsch. Archiv. für Klin. Med.* describes albuminuria as a hitherto unknown sequela, and finds that he can produce this phenomenon practically at will in patients with fairly thin abdominal walls. The exact position at which he applies pressure for this purpose is at the level of the second lumbar vertebra, where the renal arteries arise from the aorta; sustained palpation of the aorta here will lead to albuminuria shortly after-

wards. The patient passes his urine just before the pressure is applied, and at intervals of five minutes afterwards. Schreiber says that the urine secreted during the actual compression of the aorta is probably free from albumin, and that it is that secreted subsequently that is albuminous. There would appear to be no organic lesions of the renal tissue; the effect is thought to be due to local fall of blood-pressure. The phenomenon may last from ten minutes up to twenty-four hours. Both serum-albumin and serum-globulin are present, but no casts or blood-cells are passed. In rabbits, compression of the aorta below the renal arteries will cause albuminuria, but this effect is not produced in man. The shortest period of compression that will ordinarily set up albuminuria is ten seconds.—*The Hospital*.

IN ALLAYING INFLAMMATION IN THE PROSTATIC URETHRA, before surgical operations, and in keeping the urine bland and non-irritating after the operation is complete, sanmetto has been used very extensively and found valuable.

The Trials of a Country Doctor

Vanity Fair, which, by the way, we are glad to note, besides taking quite an exceptional part among periodicals of the day in exposing quackery, is devoting serious attention to the mutual interests of the public and the medical profession, publishes in its last issue an excellent article by Mr. Morell Mackenzie on the subject which heads this paragraph. Mr. Morell Mackenzie draws a vivid picture of a country doctor's life, and clearly suggests—although he does not mention—the personal qualities needed to make such a life tolerable. The practitioner in the position described is called upon, as a rule, for a life of self-sacrifice demanded in no other situation, unless it be that of a priest of the Roman Church. He must have unbounded sympathy for weak and suffering humanity, and be prepared to devote himself to their service, with little hope of reward; he must be content with poverty, and unless he has pecuniary resources of his own, is bound to celibacy under penalty of bringing his wife and children to want through his illness and incapacity to work, or his death. Furthermore, he ought to be a master of his work, with a keen love for it in its practice and science. If we have these latter qualifications they will have been acquired only by hard work, occupying with hospital house-surgeoncies, a necessary finish to a practical education, not less

than six or seven years, and costing between £1,000 and £2,000 in capital. As a profession, in the pursuit of which the abnegation of self is an essential feature, medicine may be practised in the country with satisfaction by congenial natures; as a trade worked on strictly business lines, it cannot, as a rule, provide any adequate return for the capital invested. It is not to be wondered at if Mr. Morell Mackenzie declares that, although he has the greatest admiration for many country doctors, some of whom are leading truly heroic lives, he would be very sorry to see a son of his start with a view of becoming a country G. P.—*Medical Press and Circular.*

Mr. Roosevelt at the Sorbonne

To an audience of 3,000, composed, we are told, of the *élite* of the Parisian intellectual classes, Mr. Roosevelt last week delivered a lecture on "The Duties of the Citizen in a Republic." The most impressive part of the address was, perhaps, that devoted to the family and to the population question. Mr. Roosevelt insisted that the benediction of Biblical times, "Thy seed shall inherit the earth," was the benediction of our own; he declared that sterility was the worst of scourges, and that nothing was more deserving of reprobation than voluntary sterility; it was worse than a misfortune—it was a crime. It would be interesting to learn whether Mr. Roosevelt was aware of the fact, which was commented upon at the time in these columns, that M. Bertillon a short while ago made a census of the classes of which the audience at the Sorbonne was composed, and found that the average number of children per married couple only slightly exceeded one. Some few had three, some two, many only one, and a considerable proportion none at all. The statistics for the rest of France do not show much difference from those of Paris. In some departments, in late years, the deaths have exceeded the births. Even among the Bretons it has become an opprobrium to have a large family, and the whole population has been kept from showing a positive decline only by immigration of Italians (who in many districts supply a great part of the unskilled labor), of Swiss, and even Germans. The French population has been virtually stationary for generations. During this time a rigid code of unwritten conventions has been constructed, and has fixed the whole of French society in bonds, from which, even if they desired it, they could not, without great difficulty, free themselves. During all these years individual

men of science and scientific societies have been constantly pointing out the ruin to which the nation was advancing, whilst in the National Assembly and the Senate debate after debate has taken place with a view to the provision of some remedy through the action of the State. Every intelligent Frenchman has been aware that the national security has depended upon population, and every married man has refused to make the sacrifice called for in rearing more than one or two children. Through the disparity of numbers alone, France, without allies, would lie at the mercy of Germany, and in so far as force gives predominance, she has lost for ever her position as the leading Continental power. The question of interest from the scientific point of view is, whether, by the gigantic system of artificial selection which they have been carrying on, the French have brought about deterioration of their race. We admit we have no data upon which to form a solid opinion, but certainly the small families and the matrimonial customs would, in theory, seem to favor survival of an inferior stock. For every girl, unfit as she may be for motherhood, if she has a fortune proper to her rank—and to provide this is the first care of the parents—a husband is found; and if her fortune be large, hardly any physical inferiority or mental deficiency will form a bar to matrimony. On the other hand, the rule, with very rare exceptions, is that the moneyless girl, however richly endowed in body and mind, cannot marry. No man will have her; she would be ashamed to take a husband without bringing him the usual *dot*. Similar remarks apply to the men. For the one or two boys of the family, however inferior, if they have enough money, wives can be always found. On the other hand, if families were large, it is, of course, evident that, as a rule, those best fitted for the battle of life would succeed in matrimony as in everything else, and the process of natural selection would not be seriously interfered with. The falling birth-rate in these islands brings this question home. We have, probably, a much bigger proportional residuum of wastrels of every class, and of the feeble-minded, than the French, and these are now multiplying without restraint, whilst our really well-bred stocks are more and more checking their increase by artificial means. Science has given to mankind now, for the first time, the knowledge and power to mold as it pleases its physical future. The quality, if not the quantity, of our populace can be vastly improved by the action of the State; it is to be hoped that enlightenment, of our legislators may in due course give them the power to lead the nation in the right direction before it has become altogether too late.—*Medical Press and Circular*.

Ether as an Antidote to Cocaine Poisoning. J. E. Engstadt.
Jour. Amer. Med. Assoc.

The author has frequently had occasion to treat cases of cocaine poisoning, the result of injection of cocaine for dental purposes. Strychnine and morphine he found too slow in action to be depended upon in urgent cases. Ether inhalations, however, stimulate the vasomotor system and have a powerful tonic effect upon the heart muscles, acting almost instantly. The anæsthetic should be administered only to the degree of mild surgical narcosis, or, at times, even less than this. A mask should be employed and the ether given by the drop method. This is important, as, given by the old method, the ether would only add to the danger of asphyxia by excluding air from the venous blood-engorged lungs. The same treatment is useful also for stovaine poisoning.

Why He Knew He was Alive

A certain young man's friends thought he was dead, but he was only in a state of coma. When, in ample time to avoid being buried, he showed signs of life, he was asked how it seemed to be dead.

"Dead?" he exclaimed, "I wasn't dead. I knew all that was going on. And I knew I wasn't dead, too, because my feet were cold and I was hungry."

"But how did that fact make you think you were still alive?" asked one of the curious.

"Well, this way: I knew that if I were in heaven I wouldn't be hungry. And if I was in the other place my feet wouldn't be cold."

Calcium Lactate in Post-Partum Haemorrhage. A. W. Ausems,
Nederl. Tijdschr. voor Geneesk.

Six cases, multiparæ who had suffered more or less from hæmorrhage in previous confinements, were given daily doses of 3.0 grammes (45 grains) of calcium lactate for a period varying from some days to several weeks before delivery. In all cases hæmorrhage appeared to be less than normal, but the author is not satisfied as to the success of the treatment. In a girl of thirteen years, however, suffering from metrorrhagia which had refused to yield to hydrastis or ergotin, calcium lactate arrested the discharge in three days.—*The Prescriber.*

Dysmenorrhæal Neuralgia

The following application is recommended by Dalche for lumbar neuralgia of menstrual association. It is to be painted locally over the lumbar region and may be associated with warm baths and massage to the loins, buttocks and thighs:

R.

Ichthyoli	dr. iiss
Spir. chloroformi	
Spir. camphoræ	aa dr. iv.
Alcoholis	oz. j.

—*Clinical Review.***Sore Nipples**

These may be painted with a four per cent. solution of silver nitrate, or an ointment having the following composition may be applied:

R.

Bals. peruvianæ	dr. j.
Ungt. aq. rosæ.....	
Lanolini	aa oz. ss.

—*Med. Record.*

As, in the realm of logic, one fact is worth a thousand theories, so, in connection with the practice of substitution by the druggist, one concrete instance will more clearly convince the physician of the reality and prevalence of this evil than will many arguments. In Montreal, Canada, one H. H. Lyons, who conducts three retail drug stores and who calls himself the "King of Cut-Rate Druggists," has evidently been a persistent offender. Before a police magistrate of the city mentioned he was recently convicted of the criminal offence of attempting to obtain money under false pretences, in that he deliberately dispensed a preparation of iron and manganese of his own manufacture instead of Pepto-Mangan, which was plainly specified on the physician's prescription. The evidence in the case was so definite and conclusive that the presiding judge had no hesitation in finding the defendant criminally guilty. Much credit for this exemplary result must be accorded to Messrs. Leeming-Miles Co., Ltd., Canadian agents for M. J. Breitenbach Co., manufacturers of Pepto-Mangan, who obtained and caused to be presented the evidence necessary to bring about the conviction of this flagrant substitutor. It is to be hoped that the laws in the United States may be modified to conform substantially to those of Canada, and thus permit the prosecution and conviction of such offenders under the criminal statutes.