

Dominion Medical Monthly

And Ontario Medical Journal

VOL. XXIX.

TORONTO, AUGUST, 1907.

No. 2

Original Articles.

STATIC ELECTRICITY AND X-RAY IN GENERAL PRACTICE.*

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In introducing this subject I feel under obligation to apologize for its wide scope, but it will permit me to make some general remarks, and bring before you a few cases, some of which received a combined treatment of static electricity and X-ray. In this short paper I shall not endeavor to treat this subject from the scientific standpoint of the electro-therapist or radiologist, but from the ground of utility to the surgeon and general practitioner. Perhaps I could not more aptly demonstrate the uses of static electricity and its various modalities, than to use the illustration of comparing it with the use of some known drug, such as opium. We find that opium contains no less than eighteen different alkaloids, each possessing a specific virtue of its own. Then we have twelve officinal preparations, giving us in all thirty specific substances.

Now, static electricity has nearly as many modalities, each one with its own specific mode of application and therapeutic results.

Electricity is not all a mystery, but an agent capable of doing much good when properly selected and applied, but capable of much harm if improperly made use of. All that may be said of drugs applies equally to electricity, and *vice versa*. Electricity,

*Read at May Meeting of the Lambton Medical Association.

like any other single agent, is not a panacea for all the ills that flesh is heir to, but its indications are many. Much more would be accomplished by electricity were it not for the lack of interest, if not real prejudice, in the minds of many practitioners. At the present time the every-day life of a great mass of the inhabitants of all civilized countries is touched on every side by electric devices intended to do our work and help us in our pleasures. Within the memory of most of those here present, the telegraph, the telephone, the phonograph, the electric motor, the X-ray, and the electric light produced from the dynamo have come to be as common as the use of steam. It would be the height of absurdity for the medical profession to stand aloof, and refuse to accept the benefits to be derived from the scientific use of electricity in the treatment of disease, on the score of ignorance of its nature and powers. We have been glad to hail the many inventions and discoveries that have been of assistance to us in the business of life. Now, let us be equally glad for the accomplishment and promises of this wonderful fluid in the treatment of disease. The success of treatment by electricity depends, in most cases, upon equalizing and stimulating the circulation, and so improving the nutrition of the part or parts, or in its sedative effects upon the nervous system.

Now, without taking time to enumerate the many indications for electro-therapy, I will simply introduce a few of my cases treated during the last three or four years.

CASE 1.—E. K., a boy aged about three and a half years, with right hemiplegia. His family history was not good, the father being a heavy drinker; one brother also suffered from paralysis of the flexor muscles of one foot. I began treatment, using the Morton wave current, August 4, 1904. During the first ten days progress was very slow, but by the end of two weeks he was able to use some of the muscles of his arm and leg, and by the 21st of September had practically gained control of all that side, though he couldn't talk as plain as before the seizure.

CASE 2.—G. G., a little girl of sixteen months, with paralysis and atrophy of the muscles of both arms and legs. This followed six months after an attack of acute meningitis. In this case, also, I used the wave current, and occasionally the spark, treatment lasting from August 18, 1903, to November 21. Partly on account of her not being able to take the treatments regularly, recovery, as you'll notice, was not so rapid in this case. Two or three times since that date this patient has threatened relapse, but nothing serious has developed.

CASE 3 was that of a man thirty-five years old, a driller, who had returned from two or three years in the Far East. He had paralysis of the flexor muscles of the right foot, and came under treatment two or three weeks after the attack. In this case I relied nearly entirely on the spark, with an occasional treatment with the wave current. Treatment began Oct. 19, 1904, and by November 7 he was able to flex his foot nearly as well as the other.

CASE 4.—Miss McC., a young lady with chronic synovitis. Fourteen weeks before coming under treatment she had been kicked by a cow just below the knee-cap. During this time she was under active medical attendance, consisting of poultices, evaporating lotions, blisters, etc. The knee was then twice its natural size, and the tendons behind the knee so drawn that she couldn't touch the toe on the ground. In this case I used a combined treatment, using the X-ray every other day, and the spark every day, for over five weeks. At the end of three weeks she was able to place her foot on the floor. One week later she could walk on it with the use of a cane, and at the end of five and a half weeks walked a mile without the use of a crutch or a cane.

Before saying more regarding the therapeutic action of the X-ray, I will refer to its use in diagnosis, etc. In the treatment of fractures great advantage may be gained as to the position of the end of the bones. It is also of great service where there is dislocation or impaction of a joint. There are three ways in which the case may be examined. First, the radiograph, where a permanent record is taken. Second, the fluoroscope, and commonest way of examination. Third, the screen, which, though it requires the room to be dark, has the advantage that two surgeons can easily confer as to the conditions present. As an illustration of the advantages of this method, I would draw your attention to radiographs Nos. 1 and 2. The first was a case of a boy of 4 1-2 years, who got caught in a disk-harrow. At the time I first saw him there was considerable swelling, and I could not be very sure of my work, so I placed temporary splints, and arranged to have him brought to my office next day. With the assistance of the ray I had no difficulty in bringing the bones into apposition.

In the case of No. 2, I took the radiograph partly as a safeguard. As you see, it was a green-stick fracture, and the boy coming to my office alone, I thought it best to have a permanent record, lest, after it had been set, doubt might arise as to its having been broken. There is no small degree of satisfaction in

knowing to a certainty that the apposition is correct and that every reasonable precaution has been taken, thus giving no cause for worry, or fear of legal action in case of failure.

Carl Beck, of the New York Post-Graduate School, recognizes to the full the advantages of X-ray examination in fracture cases, and has written many powerful articles on the subject. I saw him operate on a case of fracture of the thigh while we had the radiograph before us. In this case a weak union had taken place with the lower fragment displaced nearly two inches upward. He had very little difficulty in breaking this union and bringing the bones into proper apposition.

Plate No. 3 illustrates a faulty union in the tibia, which, by driving the fibula down, interfered very materially with the action of the ankle.

Another use for the ray is the location of foreign bodies. These may be classified into, 1st, those formed within the body, such as calculi; 2nd, those introduced through the natural openings, such as the nose, ear, mouth, rectum or urethra; 3rd, bodies introduced by force, such as needles, bullets, etc.

With the first two classes my experience has been very limited, but before passing I would like to draw attention to some illustrations along this line in the notable collection of skiagraphs exhibited by Dr. Cummings, of Hamilton, at the British Medical Association meeting in Toronto. He had a collection of skiagraphs, taken at intervals varying from a few minutes to hours, of a patient that had swallowed a quantity of bismuth.

In this way it is possible to diagnose stricture of the œsophagus, to map out the stomach, or locate an obstruction in the bowel.

The third class which I mentioned perhaps brings the ray into use more frequently than either of the others. It is often a very easy matter to locate bullets, needles, glass or other foreign bodies of this class, but when we come to extract them we are often surprised at the amount of trouble they give us. If it is possible to cut down at right angles on a needle, such as was possible in radiograph No. 4, there is little difficulty; but in cases such as illustrated by radiographs Nos. 5 and 6, where the piece is small and deep-seated, we sometimes find that less harm will come from its presence than the attempt to remove it.

In the case of a boy brought into the hospital a year ago last September with a hat-pin in his back, it took us considerably over an hour to extract it. The piece was three and a half inches long, and the approximal end an inch beneath the surface.

Radiograph No. 7 illustrates another use of the ray, that of

locating diseased bone. In this case the boy had stepped on a nail several months before, and though the wound healed up at the time, it began to trouble him later, and I was able with the ray to diagnose caries in the base of the 5th meta-tarsal bone.

Now, returning to the therapeutic action of the ray, it has been used in the treatment of almost all known diseases, and in the majority of cases some improvement, whether permanent or transitory, has been reported by some worker. As always happens, however, at the beginning of every new path of study, there is a great tendency to exaggerate results.

The cumulative action, at first not recognized, is now very generally understood, and instead of the exaggerated notions regarding extreme idiosyncrasy, a knowledge of the methods of employment, which has been learned by experience, makes its use relatively safe.

Numerous types of apparatus for measurement of therapeutic dosage of the X-ray have been presented for the consideration of the profession, with convincing arguments from the point of view of the inventors, but at the present time none of the devices can be counted as reliable. The Chromometer of Benoist has perhaps met with the most favor by specialists in this line. There are two important factors to be taken into consideration in the determination of X-ray dosage. First, it is a well-recognized fact that the X-rays projected from a high-vacuum tube have an intensity relative to the greater degree of potential required to overcome the resistance of the tube, and characteristically a greater capacity for penetration. Second, an equal number of rays from a low-vacuum tube have always a degree of penetration relative to the vacuum. The operator who is daily engaged with his X-ray tube becomes familiar with the quality of fluorescence, the relative intensity and volume of radiation, and his judgment, with systemic regulations of periodicity, time distance, and fluorescence, is the best guide for therapeutic dosage.

Now, to refer to some of the diseases in the treatment of which the X-ray holds an undoubted position, I will mention first some troubles of the skin, such as eczema, ringworm, favus, sycosis, acne, etc. I have now under treatment a case of psoriasis in which I am using the ray in connection with the brush discharge, with very pleasing results.

I come now to that all-important disease, cancer. Although many inoperable cases have actually been reported cured by reputable authorities, still we cannot yet hold out the hope that X-rays have proved themselves anything like a specific. But

this we may almost certainly say: they will allay pain and arrest discharge, while very frequently causing a retrocession of the primary growth.

Epitheliomata are considered by such authorities as Belot, Freund, Pusey and Seguiria to be very amenable to treatment, and this is to be expected, as the more superficial the growth, the more easily it is reached.

I have had some interesting cases of papillomata. One was that of a man, thirty-five years old, with a highly vascular growth; about the size of a five-cent piece, on his left cheek, and having developed within a period of about two months. With fifteen treatments of the ray it entirely disappeared. Another was that of a horn-like growth on the nose of a woman of fifty. This took considerable time, requiring some twenty-two treatments. Rodent ulcer and lupus are very amenable to treatment, though, as in other troubles, failures may be met with. I have a case of lupus now under treatment. The woman came to me a week ago for consultation regarding some enlarged glands. She has a tubercular family history, and has had tubercular glands removed from her neck.

Another disease that has been greatly benefited by the X-ray is leukemia. A very interesting case is reported by Ironside Bruce in the *Lancet* of January, 1906.

While I had some other cases I had intended reporting, I have now taken more time than I intended, so will reserve them for some future occasion.

ALCOHOL AND LIFE INSURANCE.*

BY T. F. McMAHON, M.D., TORONTO.

I am not a teetotaller, neither am I a prohibitionist. I have therefore approached the study of the influence of the use and abuse of alcoholic beverages upon the human economy without the handicap of strong prejudice against their use. The extreme position taken by many honest, but narrow-minded, teetotallers has done incalculable harm to the cause of temperance. To call alcohol a poison, and to say it must therefore be used only for medicinal purposes, and that its use, even in moderation, is harmful and noisounous, is not in harmony with the teaching of either

*Read before the Ontario Medical Association, May, 1907.

science or theology. There is no substance which is everywhere and always a poison. The term is a relative one, and there are many substances which, used in excess, deserve to be ranked as poisons whilst their moderate use may be harmless, useful, or even essential to bodily health.

I do not propose to discuss the desirability or otherwise of the employment of alcoholic beverages as foods. I think we may accept it as being the consensus of opinion amongst scientists who have given the matter careful study, that, whilst alcohol is a true food, supplying heat and energy in its combustion, yet it is not a practicable source of energy in the performance of muscular or mental labor. It has its field of usefulness in certain diseased conditions; for, instance, as a stimulus to appetite and digestion in aged and debilitated, and to tide over a crisis in grave diseases when the power of digesting other foods is temporarily impaired. But the healthy man does not need it. If he chooses to use it in strict moderation, to make glad his heart, or soothe his nerves, or as an adjunct to social life, he may do so without injury to his health; and if he would avoid all evil effects he must take care that the amount habitually taken must be very small, and he must guard carefully against the danger of insidious increase of dosage.

There is much evidence to point to the restorative influence of a small amount of alcohol after severe physical or mental exertion, or after prolonged exposure to cold, but nearly all are agreed that, until our work is done, we are better without it, and that, "in all those avocations of life where keen senses, sharp attention, the ready and immediate action of a clear judgment, or great concentration of the mind are called for, alcohol in any form or amount is injurious when taken during the performance of the duty in hand. He who has mental labor of an exacting kind to perform, and he upon whom great responsibilities devolve, is forced, if he would be at his best, to use alcohol as a restorative agent only at the proper season; he must behave to it as he does to many other pleasures and luxuries in his environment" (John J. Abel, of Baltimore).

All this does not involve the necessity of total abstinence. In the judgment of many the discipline of moderation is better than the discipline of abstinence, and the evolution of an efficient self-control will prove humanity's best safeguard against the vicious tendencies of alcoholic indulgence. So far as the influence of the strictly moderate use of alcohol upon an applicant for life insurance is concerned, it is not my purpose to contend that

such a user of alcoholic beverages is a less desirable risk than a total abstainer. The man who drinks a glass, or even two glasses, of wine or beer a day, is not, in my opinion, a less desirable risk than one who drinks none at all, except for this, that an abstainer is perhaps less likely to become an immoderate drinker than one who becomes habituated to its use in moderation. He is less exposed to the temptations of the club and the bar-room, and there is thus, perhaps, less danger of contracting vicious habits. But those of us who have had much experience in life insurance examinations know how difficult it is to draw the line between moderation and excess. Many who pride themselves on their moderation, and who would be indignant at any suggestion that the amount they consume is in excess of the limits of safety, are in the habit of drinking, not one or two, but half a dozen or more drams in the course of the day. Their appearance, and the results of physical examination, give no indication that they are other than good risks. They resent close questioning as to their habits in this regard, and the examiner who probes too deep is likely to give offence and drive the applicant away to some other company. Complaints from the agents follow, and he soon finds himself supplanted by an examiner less likely to give offence. The fact is, that no examiner can always distinguish moderate from immoderate drinkers, and hundreds of risks are taken on men who habitually use alcoholic beverages in such amounts as to render them undesirable risks likely to abnormally swell the mortality.

The only scientific division, *i.e.*, into (a) Abstainers, (b) Moderate drinkers, (c) Immoderate drinkers, is not practicable. No company will, knowingly, accept a risk on the immoderate drinker.

A classification into (a) Abstainers, (b) Strictly moderate drinkers, (c) Those claiming or believing themselves to be moderate drinkers, who, nevertheless, use alcohol in such amounts as to render themselves less desirable as risks than classes (a) and (b), would be ideal, but unfortunately it cannot be made to work out in practice.

If, therefore, there is to be any classification of the assured along this line, the only practicable one is into, (a) Abstainers, (b) Non-Abstainers.

Is this classification necessary or desirable?

If the life expectancy of the average abstainer is higher than that of the average drinker who does not drink in such amounts as to make him unassurable, it is surely only fair that abstainers

should be separately classified, so that he may enjoy a lower rate on non-par. policies and share in the greater profits accruing on the lives of abstainers in the participating class.

To obtain reliable information on this question it is necessary to examine the records of the companies which have for many years carefully tabulated their experience along these lines, for thus only can we hope to obtain anything that is of greater value than a mere opinion, which is too apt to be based on personal prejudice.

The first of the companies to make a separate classification of its risks according to their non-use or moderate use of alcoholic beverages, and the one having the widest experience in so classifying its risks, is the Temperance and General Provident Institution of Great Britain. This company was founded in 1840, and has recently issued its 66th annual report, for the year ending Dec. 31, 1906. From this report we learn that for this year the company had experienced a loss ratio of 64.79 per cent. of the theoretical expectation as to the number of lives, and 53.49 per cent. as to the amount of loss in its abstainers' section, whilst in its general section its loss ratio was 86.07 per cent. as to the number of lives and 81.62 per cent. as to the amount of loss.

To make these figures more striking, let us suppose that 10,000 deaths were expected to occur in each section according to the Standard Table: The actual loss would have been 6,479 lives in the abstainers' section, and 8,607 lives in the general section, an excess of the latter over the former of 2,128 lives.

The bonus additions declared in this year for the five preceding years ranged from £105 to £213 on each 1,000 in its abstainers' section, whilst in the general section they ranged from £87 10s. to £155, according to the duration of the policies.

I have before me a tabulated statement of this company's experience for the forty years from 1866 to 1905, inclusive. This statement shows that the number of the company's expected losses under whole life policies for the whole period was 10,463 and its actual losses 7,484 in its temperance section, while the number of its expected losses was 13,514 and the number of its actual losses was 12,811 in its general section.

These figures indicate that during a period of 40 years, out of every 100 expected losses in its temperance section 71.5 losses occurred, while out of every 100 expected losses in its general section 94.8 losses occurred during the same period. The actual saving as to number of policies (which may fairly be presumed to indicate number of lives) was 2,979 in the temperance, while

in the very much larger general business it was only 703. With the same rate of mortality in the general section that was experienced in the temperance section, there would have been a saving of nearly five and one-half times the number of policies that were actually saved to the company in its general section through mortality being lower than the theoretical expectation.

On the 30th of November, 1903, Mr. Roderick MacKenzie Moore, a prominent British actuary, read a lengthy and exhaustive paper before the Institute of Actuaries of Great Britain, on, "The Comparative Mortality Among Insured Lives of Abstainers and Non-Abstainers from Alcoholic Beverages." This paper was based on the experience of The Temperance and General Provident Institution, and in compiling it Mr. Moore had under review 31,776 lives of non-abstainers, passing through 466,942 years of life, and 29,024 lives of abstainers, passing through 398,010 years of life, taken from the same classes of people, following similar occupations, and differing only in their habits as regards the use of intoxicants. This address was undoubtedly the most interesting and valuable that had ever been prepared on the subject, on account of the ability of the writer and the reliability of his sources of information. I would like to quote largely from its pages, but I shall only call your attention to two of Mr. Moore's conclusions which are contained in this statement, viz., "Abstainers show a marked superiority to non-abstainers throughout the entire working years of life, for every class of policy, and for both sexes, however tested," and to the following table, which indicates the greater chances that abstainers whose ages are written across the table have of reaching the ages at the left-hand side of the table than have non-abstainers. For instance, the table shows that the man who is an abstainer age 40 has 26.86 per cent. better chances of reaching 80 than the man who is not an abstainer.

Ages to be Attained.	Ages at Entrance.				
	20	30	40	50	60
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
40	3.55	3.05
50	8.90	8.39	5.18
60	16.21	15.66	12.23	6.71
70	25.9	25.14	21.65	15.66	8.39
80	31.37	30.74	26.86	20.62	13.04
90	31.36	30.70	26.89	20.62	13.03

Writing for the *Contemporary Review*, in March, of 1906, Mr. Thomas P. Whittaker, M.P., managing director of the company, said, "Taking the mortality of the abstainers and the non-abstainers as a whole, from ages 10 to 95, the superior mortality of the abstainers is very marked. The mortality in the general section was, on the average, 36 per cent. higher than in the temperance section."

The mortality of the temperance section was not only very strikingly lower than that of the general section in the institution; but it was much lower than that of the assured lives in other offices, as shown by the Hm. and Om. tables taken as a whole. Over the period of 61 years, it was 30 per cent. lower than that shown in the Hm. table, and 25 per cent. lower than that shown by the Om. table.

I have quoted the experience of The Temperance and General Provident Institution of Great Britain because it has had the longest and widest experience in this connection of any company in the world, and because the results of its experience have been more fully dealt with by experts of the highest attainments and character than those of any other company. The experience of every other company following the same methods of classification which has had any considerable amount of experience has been very similar, as will be seen from the published evidence, some of which is as follows: The report of the Selphe Life Association, of London, England, submitted to its annual meeting, held on the 28th of February, 1907, shows that during a period of twenty-three years from 1884 to 1906, inclusive, its expected losses in its general section were 2,798, and its actual losses 2,211, being 79.02 per cent. of the expectancy, while in its temperance section its expected losses were 1,796 and its actual losses 967, or 53.90 per cent. of the expectancy.

The latest report of the Australasian Temperance and General Life, covering a five-year period, shows the experience of that company to have been that while a mortality of 81.4 per cent. of the expected mortality was experienced in its general section, a mortality of only 50.1 per cent. was experienced in its temperance section.

During the twenty years from 1883 to 1902, inclusive, the Scottish Temperance Life Assurance Company had a mortality of 71 per cent. of the expectation in its general section, and 45 per cent. in its temperance section, and a recent letter from the manager says that its subsequent experience has been very similar to that already published. If where 45 deaths occurred amongst

abstainers, 71 occurred amongst non-abstainers on an average for twenty years, then where 100 occurred amongst total abstainers 158 must have occurred amongst non-abstainers, making the loss ratio amongst non-abstainers 58 per cent. higher than that amongst abstainers in the experience of this company. It is no wonder, then, that its rates to total abstainers for whole life policies are 10 per cent. lower than its general rates.

I come now to the experience of Canadian companies on the same lines. The Temperance and General Life, which was the pioneer in this field, had a very successful experience as an independent company from 1886, when it began business, till 1901, when it was amalgamated with the Manufacturers Life. Since the amalgamation the two sections have been maintained, with a similar experience, so far as the very favorable mortality experience shown by its abstainers' section is concerned, as is shown by the annual reports and other publications by the company.

The report of Mr. T. Bradshaw, vice-president, actuary and managing director of The Imperial Life, on the position of The Temperance and General Life Assurance Company, made while the question of amalgamation with The Manufacturers Life was under consideration, contains the following statements: "An examination of the figures cannot but prove that The Temperance and General has enjoyed a very favorable mortality experience, one markedly below that of any other Canadian life insurance company similarly situated in respect to age, that I have examined, and the officers who have selected the risks are to be highly commended for the great care and skill with which they have performed their duty. I have had an opportunity of examining into this company's death losses in its temperance and general sections separately. The experience of the temperance section fully confirms the investigations made by several eminent actuaries and certain life companies, that risks on the lives of total abstainers, carefully selected, carry with them a markedly lower rate of mortality than do those on the lives of ordinary insurers."

"Should the companies unite, it would, in my opinion, be absolutely essential, in the interests of the different classes of policy-holders, to keep the business in three sections, so that the temperance policy-holders would not be bearing the heavier mortality of the general section, nor yet the still heavier mortality of the foreign section." Such, then, is the result of my examination of the figures of some companies who have made a separate classification of abstainers and non-abstainers. I have not been

able to obtain any results from such companies which are contradictory.

We are all familiar with the immoderate drinker who tries to get insurance. Too often he succeeds by making statements which are untruthful, or, at best, half-truths. We can keep out the men with cardiac, or tubercular, or renal disease by exercising great care; but some immoderate drinkers defy detection, and it is precisely this class who are most likely to become addicted to gambling, late hours, chambering and impurity.

Most companies refuse, except under exceptional circumstances, to take risks on gamblers, book-makers, professional athletes, all-around sports, and on those actively engaged in the manufacture or sale of intoxicants. If abstainers as a class show a lower mortality rate than non-abstainers, it is but fair that they reap the advantage.

If it be argued that the large companies do not make the separate classification, I would point out that bigness is not always founded on merit, and that the recent New York State investigation has shown that the largest concerns have been the most rotten at the core.

MAXIMUM DOSES.*

BY T. S. C. SMELLIE, M.D., FORT WILLIAM, ONT.

I propose to bring before your notice three cases of poisoning occasioned by enormous doses of drugs taken by the respective victims without medical supervision, without suicidal intent, and in complete ignorance of any hurtful consequence of their imprudence. All the patients recovered.

The first case was that of E. H., a woman of from 25 to 28 years of age, who had previously applied to me without success for some preparation of belladonna as a remedy for amenorrhœa. As she was of florid complexion, plump figure, enjoying good health, without cough, and reporting no unfavorable family history, I refused to prescribe, and advocated merely hygienic measures and some little delay. This latter portion of the advice was based on the fact that it is a very common thing for females coming from the East to the Lake Superior country to miss from three to five menstrual periods without suffering any inconvenience and without having been guilty of any imprudence. If such per-

*Read at Ontario Medical Association meeting.

sons, who are usually very anxious about themselves, can be induced to leave themselves alone, they resume regularity without the assistance of any medicine or any interference.

Within three days I was hurriedly called in to see this woman, who was reported to be in convulsions. On my arrival a neighbor woman gave away the whole story. The girl had purchased an ounce package of belladonna leaves at the drug store, had made a pint of infusion, and had swallowed the whole brewing. The paper cover of the package was then fished out of the wood-box, and a look at the teapot and its contents confirmed the whole story. Evidently all the leaves had been used, and only an ounce or so of the infusion remained. The patient's skin, usually of a pronounced pink and white, was a deep crimson, approaching a purple color, the pulse was rapid and small, and the pupils were dilated to their utmost extent, twitching of the whole body varied occasionally by convulsions was to be seen, and severe vomiting began almost from the swallowing of the dose, which latter circumstance probably saved her life. Stimulants and emetics were persistently used. She was out of apparent danger in about fifteen hours, but she took about a week to make a full recovery. Within a day or two of convalescence substantial evidence of a case of incest subsequently arose, and this was evidently the cause of the woman's anxiety to procure and use the drug with felonious intent.

As showing how differently this drug may act on different people, I may mention being suddenly called in to see a lady patient some years ago, who declared that she was choking and going quite blind. In making up a tonic for her a day or two before, I had added drop doses of the tincture of belladonna for chronic constipation. The dose was to be taken before meals, and she had taken but four doses. I advised her to discontinue the medicine as unsuited to her constitution, and told her that all disagreeable symptoms would shortly disappear, which of course was the case. There was dilatation of the pupil, but no affection of the skin.

The second case of overdose was that of a man who asked me for a powder to stop cramps and diarrhea resulting from a spree. I prescribed two powders of pulvis opii, one grain each; the first dose to be taken at noon, the other at supper time, if needed. I was just setting off to reduce a fractured thigh, so I heard nothing more of the case until early next morning, when I was told that the patient had snored all night and would not waken up. One glance at him and the smell of his breath showed that it was a case of opium poisoning. I found on examination that

the druggist had handed over the prescription to a young apprentice, who put up two powders of one drachm each, and that the prescription had never been checked by the druggist.

The patient had taken the first powder at noon as directed, which was eighteen hours previous to my visit, and as the people in the house said he seemed too sleepy to take the second one at supper time, he had never taken it at all. The landlady told me that she had given him the whole of the first powder herself, and that he had swallowed it all. A look at the remaining powder and the condition of the patient made me gasp. The pupil was all but obliterated, the pulse was slow, sluggish and undecided, he was quite insensible, and his respirations were only six to the minute. The eyes were closely shut, the mouth wide open and the breathing was loudly stertorous. We could partially arouse him for a moment occasionally, so we gave him drachm doses of ipecac every ten minutes, and at speedy intervals filled him up with copious supplies of lukewarm water, and subsequently of strong coffee. In a very short time he vomited energetically, and the pulvis opii was plainly perceptible in the ejecta. The whole room was filled with the aroma of poppy, and we soon had evidence of the patient's having got rid of a large portion of the powder. We plied the ipecac and warm water industriously, as we had no stomach pump, and no means at hand of extemporizing one. His breathing gradually improved and he became imperfectly conscious. Then we walked him up and down the room for two or three hours and spanked him heartily at intervals until our palms ached; then we sat down to a memorable ten hours' spell of euchre, relays being provided for all the players except the patient. Many a dozen times we had to shout, "It's your play again, Jack," and at last thirty-six hours after the swallowing of the monster dose, he was allowed to lie down, presided over by an attendant who was cautioned to watch symptoms closely and wake the patient up every half-hour and make him give some more definite and compromising answer than a mere yes or no. Recovery was speedy and satisfactory.

The man was forty-five years of age, never had been sick in his life, and this was his first dose of medicine. He swore on recovery that it would be his last. He is now hale and hearty, and about seventy years of age. I have reason to know that he has faithfully kept his promise.

The third case was that of P. C., a chainman on the C. P. R. preliminary survey between Port Arthur and Chapleau, who dis-

solved and swallowed an ounce of sulphate of zinc in mistake for sulphate of magnesia. He used a large tablespoonful, which would weigh at least an ounce.

The medicine chest usually carried by these early survey parties on the C. P. R. route consisted merely of a few surgical needles, a spool of silk and some adhesive plaster, together with a dozen or two bottles of Perry Davis' Painkiller, two or three pounds of salts, a little sweet nitre and laudanum, some cathartic pills, and a dozen of porous plasters. When the party was to remain out in the bush all winter they usually added a small parcel of sulphate of zinc for the benefit of those who became afflicted when strong winds blew and a hot sun shone down upon the pure white and freshly fallen snow, and its rays were directly reflected into the eyes of the men, who were on foot from morning to night. Thus it was that the mistake occurred, hundreds of miles from any doctor. The error was soon discovered, and the only remedy his friends could think of was to give him salt and water. With the aid of the brine and the action of the zinc he was speedily relieved of all the contents of his stomach, and symptoms of collapse followed. There was a good flask of whiskey among the stores, and as he was no enemy to the beverage when well, there was no difficulty in this emergency in inducing him to swallow the whole flask in divided doses. He made a quick recovery and was all right again in two or three days.

These things all occurred more than twenty-five years ago, and we hear of no such cases now in that country. A reason for this may be asked. A very brief sketch of the history of medicine in the Lake Superior district of Ontario thirty years ago will probably answer the question. In those days of unexplored hills, trackless forests and roadless districts there were no doctors during the winter season, though an occasional medico was procurable during the season of navigation. Medically, therefore, as well as morally, every man did that which was right in his own eyes, and thereupon resulted an audacious handling of drugs that would horrify the modern doctor or druggist. With the opening up and settling up of the country arose a new order of things, and then began an arduous time for the pioneer physician. A trip of two hundred miles was undertaken in the early days of the operation of the C. P. R., on a freight train, to a confinement in which the woman had been already in labor for twenty-four hours. After a toilsome journey of twenty-four hours more, an instrumental delivery under chloroform saved the

lives of a thoroughly exhausted woman and child. In the same season, at the end of a walk of eighteen miles, where there was no road, and only a blaze through the forest, a primipara, thirty-eight years of age, and the previously undiscovered victim of cancer of the rectum, was, after being chloroformed, delivered of a child by turning.

On another occasion, an amputation of the leg, also under chloroform and without any skilled assistance, was performed at the end of a lonely journey of thirty miles over a stiff up-grade on a railway velocipede. Journeys of from fifteen to twenty miles on foot after roads and clearings had been left behind were of no infrequent occurrence in the middle hours of the night, without moonlight or lantern or company, and only the stars shining down into the narrow path cut through the forest to keep one from straying into the trackless wilderness. When miles away from any habitation, with none to give needed assistance, and the temperature far below zero, a man practically took his life in his hands. When summer came, and the dread of intense cold removed, all that greeted the midnight practitioner was the hum of millions of the ubiquitous mosquito or the croak of the cheerful frog. This would sometimes be varied by the dismal hooting of a solitary owl or the growl of some prowling black bear. Under such circumstances, could it be wondered at, that in desperation through the want of medical assistance the early settlers occasionally took large chances in their unceremonious handling of dangerous drugs.

Circumstances have happily changed. The pioneer doctor, whose pre-requisite for usefulness was physical strength and resolute self-endurance, has been replaced by the well equipped modern physician, who is within comparatively easy distance of his patient, and who, untrammelled by extra fatigue, is able to give the best product of both mind and body to his unfortunate patient. The district is now filled with young medical men, who are not only thoroughly equipped for their life-work, but many of them have received a liberal education entirely outside of their immediate calling, a goodly number of them being graduates in Arts of their respective universities. Much may be expected of these men who "go forth to war" against accident, pestilence and disease fully prepared for all that may be before them. It is now theirs to command success under reasonable conditions, while the doctor of a quarter of a century ago, experiencing defeat where he should have had success, could only say, by way of unsatisfactory excuse, that he had done what he could.

WINGHAM GENERAL HOSPITAL.

A new General Hospital was opened in Wingham the first of February last. For some time the need of such an institution has been apparent in the town and adjoining country. Wingham's rapid growth as a manufacturing centre, its distance from any similar institution, its excellent railroad facilities, and its prosperous surrounding country, made it desirable that some suitable provision should be made for the care of the sick and afflicted. With this object in view a number of prominent citizens took up the matter, and there was found to be a very general public sympathy with the movement to establish a public hospital. A list was circulated, and very soon some \$8,000 was subscribed. The undertaking was liberally assisted by many Wingham "old boys," and a large number of wholesale houses doing business with retail merchants in the town, and also by the County of Huron and the Wingham Town Council. A commodious private residence, a three-storey brick building, containing some twenty-two rooms was secured. It is an ideal spot for a small hospital, being situated on the highest point in the town and in one of the most quiet and secluded spots, surrounded by a spacious lawn and beautiful shade trees. Dr. R. W. Bruce Smith kindly looked over the building and made many valuable suggestions in regard to changes required and the remodelling of the interior to make it suitable for hospital purposes. An energetic Hospital Board was appointed, who took the matter in hand, making such alterations and improvements as were necessary to afford accommodation for public, private and semi-private patients. The interior of the building was completely overhauled. A splendid system of hot water heating was installed by Philip Gies, of Berlin, which has proven eminently satisfactory; the plumbing by the Jas. S. Robertson Co., of Toronto.

The hospital has been beautifully furnished, nearly all the furnishings being given by private individuals. Messrs. Walker & Clegg furnished the reception room handsomely with beautiful leather-covered mission furniture of their own manufacture. Mr. Thos. Bell, President of the Board, Mr. John Leslie, of Winnipeg, Mr. Wm. Britton, of Orangeville, Mr. Jos. Walker, of town, each furnished private rooms. The Canada Furniture Manufacturers furnished the dining room complete. The proceeds of Rev. Father Tobin's lecture furnished the Loretta Ward, a surgical ward for women.

The Hospital Board reserved the right to have placed uniform institutional beds in all the private rooms and wards.

The operating room was fitted up and furnished by the Board at a cost of over \$500, and is certainly very complete for so small a hospital.

The "White line" operating table, No. 2, was secured with the Mayo instrument rack attached. The sterilizer, which cost \$190, and, in fact, all the furniture in the operating room, excepting one small table for dressings, was manufactured by the Scanlan-Morris Co., of Madison, Wisconsin, and has proven to be very satisfactory. Since opening the hospital, Dr. D. M. Gordon, of Lucknow, has kindly donated an additional porcelain-top instrument table.

It is estimated that building, grounds and furnishings are worth in the neighborhood of \$15,000.

A Ladies' Auxiliary of nearly three hundred members has greatly assisted the Board in furnishing linen and many other necessary supplies. The hospital has accommodation for twenty-five patients, and is open to all physicians in Wingham and the surrounding country. Over sixty patients have been admitted since the opening in February last, and at the present time twelve patients are under treatment in the institution.

Miss Katherine Stevenson, of Orangeville, a graduate of Buffalo Hospital, is Lady Superintendent. She is ably assisted by Miss Eva Kelly, a graduate of St. Joseph's Hospital, London, and Miss Annie Densmore, a graduate of Bellevue Hospital, New York. In addition to these nurses, two probationers have recently been added to the nursing staff.

Wingham is justly proud of its hospital, and the opinion is freely expressed that before long it may be found necessary to enlarge the building for the accommodation of patients.

To Dr. J. P. Kennedy, who took the initiative in the matter, largely belongs the credit of its successful establishment.

If a patient gives a history of "sprained wrist" that has remained feeble and painful in spite of appropriate treatment for sufficient time, and if the wrist presents thickening and tenderness at its radial aspect, a diagnosis of fracture of the scaphoid should be entertained. Colles' fracture must be excluded, by the relation of the two styloid processes and the location of the deformity. Fractures of the radius and scaphoid may, however, co-exist.
—*American Journal of Surgery.*

Clinical Department.

Two Cases of Injury of the Ear Caused by Lightning. WILLIAM C. BRAISLIN, M.D., in the *Brooklyn Med. Jour.*

Observed cases of traumatism of the membrana tympani caused by lightning stroke are considered interesting enough to report in some detail. On the 30th of July, 1905, during a severe thunder-storm, a large bathing pavilion at Coney Island, crowded with bathers seeking shelter therein, was struck by lightning. Five persons were killed, one of these being a young man who, with the two ear cases about to be reported, was just entering the shelter between the couple. All the fatal, and most of the injured, cases were in the immediate vicinity of the base of a large flag-pole which projected high above the roof. All had just left the salt water, and were still in wet garments.

CASE I.—Isaac G., aged 27 years, was first seen at the Brooklyn Eye and Ear Hospital on August 1, 1905, when he applied for relief of ear symptoms. Two days before he, his wife and several other persons were shocked by lightning, five of them fatally. This man was unconscious for three hours, and had suffered from painful burns and shock. On regaining consciousness he noted a fulness in both ears, roaring tinnitus and impairment of hearing in both ears. The hair was burned from the left side of the occiput. A seared burn appeared on the back of the neck, thence across the left shoulder-blade and down the left arm to the elbow. The burned area on the shoulder was a superficial, irregular mark, the size of a spread hand, purplish red in color.

Ear Symptoms.—These were noticed by both the patients immediately on regaining consciousness. In Case 1 the symptoms of tinnitus and impairment of hearing left the right ear within three or four hours, but became more marked in the left, and so continued until seen by the writer. In this case pain was also felt on the back of the auricle and at its attachment to the head. On the morning following the injury a blood-stained discharge from the left ear appeared, and was present at the time the patient came to the hospital. Examination of the drum revealed a perfectly round perforation 1-8 inch in diameter, slightly anterior to and below its centre, its edges reddened and raw as though a loss of its substance had occurred

at this point. The remainder of the drum membrane was pale. The following day the membrane presented an appearance of uniform redness, except at the margin of the perforation, where it was somewhat everted, raw and swollen. Healing proceeded uninterruptedly.

Mrs. G., wife of Case 1. Injured at the same time and manner as her husband, but less severely; was only momentarily unconscious. She immediately noticed that her hearing was defective; also a roaring tinnitus in both ears, worse in the left. She was examined on August 2. The drum membrane presented a small perforation, now sealed with a scab of fresh, blood-red, but dry extravasated serum. The perforation was in the centre of the drum just behind the umbo. The right ear in both cases presented no visible lesion.

As an explanation of the ear injuries, it is supposed by the writer that both were due to the presence of water in the ears, as both had just left the surf. Water, being a well-known, excellent conductor of the electric fluid, it is believed that a small charge of electricity followed a track of moisture in the external auditory canal, and thus in each case caused a perforation of the drum in finding its way to the Eustachian tube. Examination of these cases with Hartmann's set of tuning forks disclosed no lesion of the nerve or sound-perceiving apparatus, and both cases healed promptly under dry dressings, with only an inconsiderable impairment of hearing.

A CONVENIENT way in which the anesthetist may carry, all sterilized and ready for instant use, his hypodermic solutions, is the following: Shallow, wide-mouthed, half-ounce bottles are sterilized, labelled and filled. Over the mouth of each bottle is then stretched, and hermetically fastened, a cover of sterilized rubber (dam). Before the narcosis is begun the anesthetist disinfects his syringe and sets these bottles in a dish of sublimate solution. This sterilizes the surface of the rubber. When a solution is wanted the needle of the hypodermic syringe is simply thrust through the rubber and as much as is needed is drawn into the barrel. The puncture hole closes without leakage. The covers of the bottles need to be changed only occasionally.—*American Journal of Surgery.*

Therapeutics.

Treatment of Nocturnal Enuresis.

George F. Butler, M.D., Chicago. If possible, remove any condition, or group of conditions, that may be found in each individual case to contribute to the malady. Nocturnal enuresis is a symptom only. The patient should be toned up with tonics, the best, perhaps, in these cases being the arsenates of iron, quinine and strychnine, given in small tonic doses—about 1-200 gr. of the strychnine and 1-60 gr. of each of the others, three times a day.

Exercise in the open air and in the sunlight, and even change of climate, is advisable in some cases. Cold baths, especially cold sponging over the spine and inside and outside the thighs; cold compresses to the perineum, and in obstinate cases, general massage are beneficial.

All sources of irritation, such as thread-worms, must be removed.

The urine should be tested, and if found to be abnormal, proper remedies should be given.

The diet should be regulated, care being taken with the evening meal, which should be light and easily digestible. No tea or coffee should be drunk. Strong animal diet is objectionable. Flatulence should be prevented, if possible. One-twelfth gr. to 1-10 of menthol, alone, or with the sulphocarbolate of soda gr. 2 1-2 will usually ally the flatulence.

Watch out for nocturnal fits, and if they occur, solanine gr. 1-67, upward, increasing the dose until the patient feels some irritation in the mouth or throat, will well replace the bromides. Suitable doses for the age should be administered, and proper hygienic measures instituted at once to stop the convulsions.

Disciplinary influence, but not scolding or punishing, should be brought to bear on the hysterical and mentally weak. Every indulgence that will minister solely or greatly to nervous excitement and emotional exaltation must be refused.

Be careful not to overlook organic diseases of the central nervous system or tumors in the pelvis.

Encourage the child to exercise his will power to overcome his trouble. It is a good thing to begin early to develop a child's self-control. That which most easily becomes a habit is the exercise of the will.

The child should pass his water the last thing before getting into bed, and if possible empty his bowels in the evening instead of in the morning. He should be properly clothed, so that he will be neither too hot nor too cold when asleep. The night-gown should be unirritating, the bed clothing not too heavy, and the mattress moderately hard.

He should never lie on his back during sleep. By attaching a spool or other body to the back he will turn over on his side, even when asleep, because the pressure of the spool will disturb him when he lies on his back.

Of drugs employed, atropine and strychnine meet with most favor. If the urine is concentrated asparagin, 1-30 gr. to 1-15 gr. every one or two hours; arbutin, 1-67 gr. to 1-30 gr. every half to one hour, or lithium benzoate, 1-6 to 1-2 gr. every hour or two, in plenty of water, will be found to be beneficial.

In the use of belladonna or its alkaloid, atropine, the drug should first be given in small doses, gradually increased, until the pupils are moderately dilated.

The physiologic action of the drug may be maintained for two or three weeks until the habit of "wetting the bed" has been completely overcome, after which the quantity may be gradually diminished.

It is a good plan to give two doses daily, one after supper, and the other the last thing before going to bed. In this way the maximum action of the drug may be obtained at the desired period.

Strychnine should be given in small doses, preferably the arsenate, from 1-400 to 1-137 gr. several times daily; and perhaps the best way to give both strychnine and atropine in these cases is hypodermically.

The fluid extract of *rhus aromatica*, a drachm of it being given in diminished doses during the day; or ergotin, 1-6 gr., or cantharidin, 1-5000 three or more times daily (the latter particularly if due to atony), are often helpful.

For nervous children, and especially those who have had chorea, arsenic in full doses is one of the best remedies that can be employed. Indeed, in such cases the treatment applicable to chorea will prove markedly beneficial.

Very often enuresis is a chorea of the bladder. Many cases will be found to exhibit hyperesthesia of the urethra, especially of the prostatic portion, when it is explored with a bougie. This will subside under daily applications of euophen suspended in pure fluid petrolatum, and the enuresis will be cured.—*Medical Herald and Review of Reviews.*

The Treatment of Chronic Bronchitis in Old People. The chronic bronchitis of senility, accompanied not infrequently by an unhealthy state of the mucous membrane of the upper air passages, is dependent in part upon vascular degeneration and disturbed blood supply; but also to a very considerable extent upon a toxemia, which is almost universally present in old people.

One finds in the aged incompetent kidneys, imperfect digestion, incomplete emptying of the colon, lessened activity of the glandular secretions in the digestive tract; also one finds that the skin is harsh, dry or sodden, lacking in elasticity and in the natural activity of its glands, showing in fact a poor blood supply and also the effects of intoxication. In the lungs one expects to find a degree of emphysema, comparatively fixed chest walls, and therefore imperfect respiratory movements, all contributing to a lessened oxygen intake. One will usually find in addition that the heart is strained to propel a lessened quantity of poorly oxygenated and over viscid blood through narrow vessels. These facts, without further enumeration of details, may suffice to show that the respiratory function is overtaxed in the aged, that the resistance is lowered and infection made easy. Chronic bronchitis increases in the winter largely for the reason that delicate old people seek the warmth and confinement of the poorly ventilated house. Really the best method of treatment is hygienic and consists in systemic elimination while increasing the resisting power of the individual. A practical way of carrying out this method of treatment is to prescribe from two or three times a week a hot air cabinet bath, to be followed by sponging in salt water (not emersion in the tub); the regular irrigation of the colon, that the patient may escape the disadvantage of the absorption of toxic material, which so easily occurs in old people, upon the importance of which Professor Metschnikoff has justly insisted. Then the patients should sit in rooms thoroughly ventilated, with windows open even in winter. If too cold, furs may be worn, but pure air is absolutely requisite. The writer has had the pleasure of seeing, with scarcely an exception, improvement in all cases of chronic bronchitis in the aged subjected to this treatment; in many complete relief, although it will be seen that the treatment must be repeated year after year. Not only is the cough relieved, but the energy, usefulness and happiness of the patient are all equally advanced. It is occasionally necessary to advise the drinking of tar water or the use of small doses of potassium iodide. Cough mixtures

are particularly forbidden. The principles involved in this method are not limited in application to old people.—C. G. S., in *N. Y. S. J. M.*

The Treatment of Puerperal Eclampsia.

The treatment of eclampsia is still a theme which admits of much discussion owing to the various modes of ideas as to the real nature of its pathology, and as long as this latter is obscure and beyond the present state of our knowledge, so long will the condition be treated in as many ways. It has been called a disease of theories.

It is not intended to go into the etiology of eclampsia, but under the term of eclampsia it may suffice to say that there are probably at least two classes of cases, viz.:

1. Where the kidney is primarily inflamed, and the case is one of poisoning due to imperfect elimination of toxins, the disease being really uræmia occurring during pregnancy; and
2. Where the production or absorption of toxins is excessive, the disease showing itself in degenerative changes in the liver and kidneys.

From the time of Bouchard it has been supposed that all pregnant women suffer more or less from the retention of certain poisonous substances in the blood. Evidences in support of this are seen in the many disorders that may occur during the time of carrying. The tendency of to-day is to group a number of conditions under the general term, "toxemia," and to suppose that it arises from auto-intoxication. It is probable that any deviation from the path of the simple or hygienic living during pregnancy, especially when associated with a predisposition to or an actual disease of the kidney, and when there is in addition perhaps a highly nervous temperament or history of shock, that then the economy may lose its balance and break down. In these circumstances the products of metabolism are not eliminated, and some one or more of the disorders of pregnancy are liable to supervene.

Of the variety of conditions that may be grouped in this connection are excessive vomiting of pregnancy, nephritis, albuminuria, persistent headaches, visual disturbances, and the like.

The treatment of eclampsia is divided into the Prophylactic and the Curative.

THE PROPHYLACTIC TREATMENT.

The prophylactic treatment of eclampsia, a subject of considerable importance, is one which is bound up intimately with what should be the routine treatment of normal pregnancy.

Much might be said about the hygienic treatment of pregnancy, and the need for it in all cases. It would be a good thing if the public and the profession alike realized that many lives would be saved if pregnant women would present themselves to their family physician on one or more occasions during the last two or three months of pregnancy for examination, for then, not only would the state of the urine as to the presence of albuminuria, but also other indications of a faulty economy, be brought to light, and, further, many cases of acute illnesses be prevented. It might well be urged that this "pregnancy visit" should become a custom. Cases of chronic nephritis would receive special attention, and the warning symptoms of a much more grave condition, as eclampsia, would come under notice and be the more readily dealt with.

At present it is only when the results of a toxæmia have been in existence some time that patients seek medical advice, a stage reached beyond which the ordinary hygienic regimen will often fail to divert from a threatening eclampsia.

The prophylactic treatment consists in a nutritious and simple diet with regular meals, exercise in the open air, avoidance of a hot atmosphere, suitable clothing, avoidance of tight clothing, and regularity of the bowels.

CURATIVE TREATMENT.

Whitridge Williams says: "In the presence of actual eclampsia chloroform should be administered during the convulsive attacks in the hope of cutting them short, after which comparatively large doses of morphine should be given hypodermically, beginning with a quarter of a grain, and repeating it if necessary until three doses have been administered. Diuresis by the application of hot packs should be brought about. One drop of croton oil in one drachm of olive oil should be put into the mouth if the patient is unconscious. A thick cord or folded towel should be used as a gag. Food or medicine should not be administered by the mouth as long as the patient is unconscious, as in many instances particles find their way into the air passages instead of being swallowed, and later give rise to and inspiration pneumonia. When convulsions have once occurred, the pregnancy or labor, as the case may be, should be

terminated as soon as is consistent with the safety of the patient."

Edgar places the maternal mortality at from 25 to 35 per cent., and says: "no single treatment suffices. Many cases recover, no matter what the treatment, and many die, in spite of treatment. A combined treatment answers best, fulfilling the following indications:

1. To control the convulsions.
2. To empty the uterus under deep anæsthesia by some method that is rapid and that will cause as little injury to the patient as possible.
3. To eliminate the poison or poisons, which we presume cause the convulsions.

Edgar believes morphine to be harmful, and administers chloroform by preference to veratrum viride or chloral.

Norris thinks chloroform preferable to morphia in controlling the convulsions, while a drachm of chloral in an enema repeated three or four times if necessary in the twenty-four hours is always indicated. He practises venesection in the full-blooded *primi-gravidæ* when the pulse is strong and full and the face cyanotic. Norris relies on a very aggressive medical treatment to combat the spasms and eliminate the poison, and then, after sufficient dilatation of the os has occurred, to rapidly deliver with forceps so as to terminate labor.

The practice of the Rotunda Hospital is described by De La Harpe. Veit's treatment by large doses of morphine is adopted, whereas induction of labor is never performed, and forceps are only applied in very exceptional cases and when the head is already in the vulva. The treatment consists in:

1. Morphine, half a grain hypodermic injection, followed by a quarter of a grain, and given, if necessary, every two hours up to two grains and until sleep is obtained.
2. A large amount of water is given to drink, or, if unable to drink the stomach is washed out by three or four pints.
3. Two ounces of castor oil with three or four minims of croton oil.
4. The lower intestine is washed out by a rectal saline.
5. Diaphoresis is induced by covering with warm blankets.
6. Lying on side to prevent the saliva running down trachea.
7. Digitalis and atropine are given when necessary, on account of the weakening of the circulation and respiration.
8. Saline injections with phlebotomy in cases of plethora.

The statistics with this treatment show a mortality in the

hospital of 16.9 per cent., whereas during the period before it was adopted, from 1889 to 1892, it was 35.3 per cent.

Robert Jardine, who advocates the treatment of puerperal eclampsia by saline diuretic infusions, says that by prompt purging with salts, the use of diuretics, and a milk diet, cases of marked dropsy and the albuminuria of pregnancy, when they have reached the stage of severe headache, and presumably, he says, within an ace of having fits, can be saved from having eclampsia by this treatment. He quotes six such cases with satisfactory results. On the other hand, he says, when the fits are occurring, diuresis cannot be established quickly enough in the ordinary way, absorption by the stomach is almost in abeyance, and, even if it were normal, a good many hours would have to elapse before the action could be set up; hence, he says, the drugs must be given subcutaneously. For instance, in a comatose patient he pours four tablespoonfuls of salts into the stomach through a tube, gives an infusion of two pints, and applies a hot pack.

In the matter of the obstetric treatment, Jardine does not interfere if labor has not begun. During the first stage dilatation is left to nature if the fits cease, but if they recur he says the uterus should be emptied as quickly as possible. During the second stage delivery should be effected at once and under deep chloroform narcosis.

The mortality in the Glasgow Maternity Hospital, previous to fifteen years before (writing in 1901), by treatment with chloroform, chloral, bromide, veratrum viride, and morphine, was forty-seven per cent. Since the saline infusions have been added to the treatment the mortality has fallen to seventeen per cent. in over thirty cases.

The brief narration of the practices of the above authorities sufficiently exemplifies some of the variations in the manner of treatment; it will now be instructive to consider in turn the different parts thereof, and give as far as possible their respective merits.

Chloroform.—This is used by itself, or else as a means of controlling the fits until morphia has begun to act. Herman can see no use for it, as there is no indication beforehand of an oncoming fit, and also during a fit the patient is unable to inhale it.

Morphia.—This inhibits metabolism, and so stops the formation of fresh poison, while large doses remove a state of spasm of the renal arteries, and so favor urinary secretion. Morphia

is given as long as a patient is restless. Veit has treated sixty cases by this method, with two deaths. Löhlein, in 325 collected cases, reported a mortality of 13.8 per cent. Herbert Spencer thinks highly of it, although Horrocks has not seen any good come of it. Herman uses it in preference to administering chloroform, as he thinks it safer to have the patient under its influence for several hours, and at the same time admits of the patient being put into a deep sleep without the presence of the doctor.

Chloral.—Like chloroform, but less powerful in its action, chloral is given to control the convulsions. It is administered in an enema in drachm dosage, and this may be repeated three or four times in the twenty-four hours if necessary.

Veratrum Viride.—Hirst depends largely upon veratrum viride for the relief of the arterial tension and the spasmodic contraction of the arterioles. It is given hypodermically in 10-minim doses every half-hour, after the first dose of 20 minims of the fluid extract, until the pulse is lowered to 60. It has been largely used in America, and by its administration the mortality is said by some to be as low as eight per cent.

Pilocarpine.—In the hope of obtaining diaphoresis when other means have failed, pilocarpine is used by a few. But each writer recognizes the danger involved in its exhibition in producing œdema of the glottis. It is given hypodermically in a one-sixth grain dose.

Cathartics.—Nearly all authorities recommend that the bowels should be opened by purgatives—in the hope of removing much fluid from the system, and thereby ridding the tissues of poison, and also of lowering the arterial tension. Some, however restrict this form of treatment to the “pre-eclamptic” stage, while most administer powerful purgatives during the convulsive stage. The drugs most commonly used are calomel, castor oil, croton oil, and magnesium sulphate.

Saline Diuretic Infusions (Saline Injections). The injection of saline solution under the breast or into the abdominal wall is a fairly direct method of diluting the poisoned blood, and is, on the whole, less disturbing than the more direct venous injection. Saline infusion is a most powerful, though slow, diuretic; it also acts as a cardiac stimulant and as a diluent to the poison.

The advocates of this form of treatment do not use it to the exclusion of drugs, as morphine or chloral, where restlessness or fits occur, or where the saline does not produce a

marked effect, although Jardine discontinues the use of morphine.

The saline solution consists of one drachm each of acetate of soda and chloride of soda to a pint of water. This solution, sterilized and at least 100 deg. Fahr., is run into the cellular tissue beneath the breast, or after delivery into the lax abdominal wall. The object of the treatment is primarily to "get the kidneys to act." In eight cases quoted by Reginald Dunlop, where saline infusion was used, diuresis was equal to or in excess of the normal quantity within twenty-four hours.

Saline treatment also benefits collapse, as may be seen not only in cases due to hemorrhage, but in those where, after a lengthy operation, there has been practically no loss of blood. Infusion treatment is not recommended when the patient is very œdematous, or if there has been marked cyanosis with high arterial tension, or if there be much pulmonary congestion, as in these circumstances the result might be cardiac failure or œdema of the lungs, both of which conditions would be fatal.

Longridge adds another beneficial effect to the diuretic action induced by the sodium acetate infusion, and that is that as the alkalinity of the blood is much diminished in eclampsia which he (Longridge) has himself observed, this salt solution tends to restore it to the normal degree.

Venesection.—This is an old treatment. Ramsbotham speaks of it as "our great reliance, the lancet a sheet anchor." Whitridge Williams recommends it when the cessation of the fits do not follow delivery. He removes 500 c.c. of blood, and injects 500 c.c. of saline, in order to dilute the remaining poison. Most authorities only employ venesection on occasion.

Emptying the Uterus.—The question of emptying the uterus or not comes now to be considered. There is considerable divergence of opinion upon whether the pregnancy or labor should be terminated or not at once.

In this connection, speaking of forced labor in convulsions, Denman says: "If the patient should die when no attempts were made to deliver, the omission is always regretted; or, if she should be delivered by art and die, the operation is lamented."

"Atropos, with remorseless cruelty,
Spoiled at once both fruit and tree;
The hapless babe, before his birth,
Had burial, yet not laid in earth.

—Milton's *Elegy on the Marchioness of Winchester.*

Ramsbotham recognized that "emptying the uterus will usually stop the fits—at any rate, for a time." He recommended hastening delivery where labor had begun or turning before the first stage, but, while advising this, he warns the attendant to proceed with care, and not to add another source of irritation by manual efforts. Ramsbotham mentions that the evacuation of the uterus does not always stop the fits, though they become less violent.

Boxall, at Leicester, in 1905, maintained—and the meeting was more or less in general agreement with him—that: "If, under treatment, no improvement is effected within a week or ten days, and in every case where serious complications threaten, means should at once be adopted to terminate the pregnancy. But," he says, "although evacuation of the uterus will cause the albumen to diminish, it is liable to aggravate the danger temporarily; therefore, it is usually a mistake to resort to this measure until some endeavor has at any rate, been made to effect improvement in the condition of the patient, and, even in severe cases where the woman is within the last month or so of term, it is better to allow forty-eight hours' preparation, unless eclampsia threatens, or such symptoms as visual disturbance or paralysis indicate imminent danger to the retina or brain."

Veit and Charpentier advocate the administration of large doses of morphine, but do not interfere obstetrically until the cervix is completely dilated, and then employ forceps or version. Dührssen, Zweifel, and most American authorities, on the other hand, advocate emptying the uterus at an earlier period, provided it can be done without serious injury to the mother. The question as to the advisability of early operative interference can be decided by determining the proportion of cases in which the convulsions cease after the birth of the child. "Statistics bearing upon this point," writes Whitridge Williams, "have been adduced by Dührssen, Olshausen, and Zweifel, who noted cessation of the seizures either immediately or soon after delivery in 93.75 per cent., 85 per cent., and 66 per cent. of their cases respectively." Zweifel reports a mortality of 28.5 per cent. under expectant treatment, and 11.5 per cent. under active treatment.

Hartz says that the attacks cease after parturition in between 65 per cent. and 93 per cent. of the cases.

Herman asks with reference to emptying the uterus in eclampsia—Will it stop the fits? and Will it do good? Herman brings forward 1,642 collected cases as recorded by Schauta, Dührssen, Zweifel, Olshausen, Auvard, himself, and others where pregnancy had been terminated, and in 813 the fits ceased

after delivery, *i.e.*, 49.5 per cent.; and in 829 the fits continued after delivery, *i.e.*, 50.5 per cent. Herman then gives the mortality in cases of eclampsia as follows: Mortality in cases delivered naturally, 20 per cent.; mortality where emptying of the uterus was accelerated, 25 per cent. Herman, however, does advise the induction of premature labor in cases of advanced kidney disease not tending to improvement as a prophylactic of puerperal eclampsia.

Hirst follows the same line of treatment as Herman, and says that increasing experience tells him that the rapid evacuation of the uterus is not the proper treatment. He is better satisfied when the treatment is directed solely to the eclampsia, without regard to the uterine contents, until such a degree of dilatation of the os is secured spontaneously that delivery can be accelerated without violence. He employs premature induction of labor as a prophylactic, as does Herman.

Contrary to these views, Bumm decides in favor of active treatment. He bases his opinion on a comparison of the various modes of treatment, which included 112 cases, and which extended over three periods at the Hallé Clinic. They may be seen as below:

Periods.	Cases.	Treatment.	Deaths.	Mortality per cent.
1882 to 1895	47	<i>Narcotic</i>		
		Chloroform.....	12	
		Morphia.....	31	
1895 to 1900	43	Chloral and Morphia.....	4	15
		Morphia with free use of diaphoretics.....	43	
1901 to 1903	25	Venesection and Transfusion.	7	13
		Emptying Uterus at once....	25	Two hopeless
			3	12

The uterus was emptied at once after the first or second fit if the patient was in hospital, or, if admitted, within half an hour.

The operations were: Abdominal Cæsarean, vaginal Cæsarean section and delivery by forceps and version.

Sir Haliday Croom, at the Edinburgh Obstetrical Society in 1904, reviewed the subject of Cæsarean section for eclampsia, quoting a series of 54 cases which had been collected by Koettlitz and Streckelsen with a maternal mortality of about 50 per cent. He (Croom) recommends the emptying of the uterus because the fits cease in most cases when the operation is completed. Croom mentions the means by which this can be accomplished, and they are:

1. Dührssen's cervical incisions.
2. Rapid dilatation of the cervix by Bossi's dilator.
3. Dührssen's vaginal Cæsarean section.
4. Abdominal Cæsarean section.

Cervical Incisions.—These must be considered dangerous on account of the risk of sepsis.

Bossi's Dilator.—The claims of this instrument have been much written about, both for and against. There is no doubt that under certain conditions this instrument does cause extensive lacerations, which may produce hemorrhage and sepsis.

Vaginal Caesarean Section.—This operation is both easy and quickly performed. It is specially suitable in cases of marked cervical rigidity.

Abdominal Caesarean Section has too high a mortality in eclampsia for it to be recommended.

Can the differences in the above conclusions be explained, backed up as they are by statistics? How is it that Herman's collected list, which includes cases of Dührssen, Olshausen, and Zweifel, together with those of Schauta, Auvard, and Herman, show little or no benefit with regard to cessation of fits or mortality when actively treated by evacuation of the uterus, whereas Whitridge Williams's list of cases (which comprise those of the first three operators in Herman's list, viz., Dührssen, Olshausen, and Zweifel) show a marked benefit accruing from emptying the uterus?

Bumm's figures, too, as quoted above, show conclusions quite opposite to those brought out by Herman.

It seems at least a fair comment to make on Herman's figures that, where several modes of treatment are employed by any one man according to the severity of the case (and there is nothing stated to the contrary in the account of his paper at my disposal), it is in the specially bad cases in which the uterus is emptied, and therefore a high mortality is likely to be ascribed to the operation and the latter to be condemned.—*Smallwood Savage, in Birmingham Medical Review.*

NITRATE of silver may be attached in full strength to the end of a probe, as for application in the middle ear, by heating the tip of the instrument and pressing it into the stick of caustic; a little of the latter will melt and form a bead on the probe when it cools.—*American Journal of Surgery.*

The Canadian Medical Protective Association

ORGANIZED AT WINNIPEG, 1901

Under the Auspices of the Canadian Medical Association

THE objects of this Association are to unite the profession of the Dominion for mutual help and protection against unjust, improper or harassing cases of malpractice brought against a member who is not guilty of wrong-doing, and who frequently suffers owing to want of assistance at the right time; and rather than submit to exposure in the courts, and thus gain unenviable notoriety, he is forced to endure black-mailing.

The Association affords a ready channel where even those who feel that they are perfectly safe (which no one is) can for a small fee enroll themselves and so assist a professional brother in distress.

Experience has abundantly shown how useful the Association has been since its organization.

The Association has not lost a single case that it has agreed to defend.

The annual fee is only \$3.00 at present, payable in January of each year.

The Association expects and hopes for the united support of the profession.

We have a bright and useful future if the profession will unite and join our ranks.

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Dominion Medical Monthly

And Ontario Medical Journal

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Published on the 15th of each month. Address all Communications and make all Cheques, Post Office Orders and Postal Notes payable to the Publisher, GEORGE ELLIOTT, 203 Beverley St., Toronto, Canada

VOL. XXIX.

TORONTO, AUGUST, 1907.

No. 2.

COMMENT FROM MONTH TO MONTH.

Vaccination.—At the recent meeting of the Ontario Medical Association, a warm discussion ensued on the reading of one of the papers, over the subject of compulsory vaccination. One gentleman assayed to defend his action in voting (as a member of the school board) against compulsory vaccination. While it may be said that the majority of the members present did not see eye to eye with him in his explanation, to our own way of thinking there was some excuse for his attitude. He did not see that the school board should do police duty for the provincial government, and we think his attitude in this regard well taken.

If vaccination be the all-important matter most of us think it is, then it should be placed under the control of the government. And the people who should insist on this are the members of the medical profession. It seems to us the intelligent minority, in any special walk of life, must ever legislate for the safeguarding of the (comparatively) unintelligent majority. Thus, in the question of any highly technical matter, where the welfare of a mass of people is concerned, the opinion of one or more experts, competent to judge of the matter in question, must ever be the guiding opinion. In the settling of any intricate legal

problem, we do not seek the opinion of the masses, as voiced by the ballot, but rather the cool, clear reasoning of the legal expert—the judge. The details of working out any great engineering problem are not left to the hazy notions of the “great unwashed” (so to speak), but rather to the expert engineer. So, too, in so vital a matter as public health—and in the case more particularly of universal vaccination—the ruling of those competent to give judgment in such a matter, must be the guiding principle.

Unfortunately, in the ranks of medical men, it cannot be said that all are of one united opinion on this subject. There are, we are told, actually practising in this city, certain medical practitioners (albeit not of the regular school) who profess to vaccinate their patients by administering the supposed vaccine in a dainty pill, which is taken by the mouth! A procedure which some people would regard as unsatisfactory as twenty drops of beer administered by a hypodermic syringe. However, it may be said that the overwhelming majority of intelligent physicians are long since agreed on the great benefit to humanity of vaccination.

If, then, such be the case, does it necessarily follow that such belief in universal vaccination carries with it a conscientious belief in compulsory vaccination? Not necessarily so. The existing conditions may not be such as to warrant the carrying out of such a seemingly high-handed procedure.

But granting that, properly carried out, the measure is an eminently desirable one. What is the proper course to pursue? As already indicated, it is the bounden duty of medical men to unite in insisting that such an important measure shall be placed under the control of either the federal, or at least, the provincial authorities, preferably the former, and quite outside the realm of mere party politics.

If such were the case, what might the duties of the government be in such a case?

1. To see that an abundant supply of *guaranteed pure* vaccine would be available at all times for any number of people. This would probably necessitate the establishment of a number of vaccine farms, under strict government supervision, from which vaccine could be procured at about cost price, or even free of charge.

2. To appoint a sufficient number of properly qualified physicians throughout the various townships and municipalities (even as coroners are appointed), whose duty it should be to see that all within their respective districts were properly vac-

cinated from time to time, and for which the physicians should get a proper fee from the government.

3. The compulsory vaccination of all children before the age of, say, one or two years.

4. The compulsory vaccination of all immigrants.

5. That all physicians acting in the capacity of health officer, should see that all are vaccinated in a proper manner, and that the vaccination wound is dressed and redressed sufficiently to prevent, as far as possible, any mixed infection getting into the wound.

6. That the practice of vaccinating one individual from another should be absolutely interdicted, and where discovered, made a criminal offence, thus preventing, as far as possible, the transmission of such diseases as syphilis and tuberculosis.

It may be urged that such a universal measure is altogether too Utopian in character, too wieldy for proper execution, and too expensive for the pockets of the people. To the first and second objections it may be urged that no measure which makes for the real welfare of the masses, should be beyond the reach of possibility; while as for the matter of expense, when we come to calculate on the one hand the cost of maintaining isolation hospitals and periodic quarantines, to say nothing of the incalculable cost to the nation in the number of human lives annually sacrificed, as against, on the other hand, the cost of maintaining such a system of national prevention as that roughly outlined above, it seems to us there can be no shadow of doubt as to the proper course to pursue.

There are many street noises and noises especially at night in large cities which should be suppressed. Uncalled-for noises in and around the neighborhood of hospitals should be sharply dealt with, so that invalids and nervous individuals be freed from their constant irritation. Now that the "zone of quiet" is suggested for the Toronto General Hospital, one wonders why hospitals should locate on street car streets and on corners where these noises are sure to prevail. When the Toronto General Hospital becomes established on College Street it will probably be in a noisier spot than at present. Most people sleep from 10 p.m. to 6 or 7 a.m. That is a time when all unnecessary noises should cease. Why should bells ring out every hour of the night? Who wants to know what time it is when he is asleep? Of all the most unnecessary and vexatious noises, the regular ringing of bells or striking of town clocks every hour of the night is the most ridiculous. Certainly all noises in the vicinity of hospitals should be

governed, so that the inmates receive their quiet and rest accordingly.

The "**bitters**" habit is the new thing in drug addictions. It is said to be developing amongst athletes, golfers, etc. It is employed by those made thirsty by drastic exercise, we are told, though this would scarcely apply to the golfer, who needs a stimulating drink more for his staying powers than for his strenuousness. Soda water and quinine seems to have the first call. Vermuth is said to be the favorite at the golf clubs. Text-books state oil of wormwood to be a convulsive poison. When columba, gentian and chiretta are added to the materia medica of the athletes' bar, they will have quite a variety of "bitters" to choose from. As with alcohol, so with "bitters"; they are to be used and not abused. *Verb. sap.*

Montreal's fearful infant mortality is astounding. In 1906 in June, July and August there were 1,500 deaths in children under five years of age. This year the mortality has reached as high as 180 deaths in one week, and there is no let up. At that rate the mortality of last year will be eclipsed. Were these deaths to occur from diphtheria, scarlet fever, or some of the minor infectious diseases, there would be a persistent and long-continued howl. But because they mostly occur in June, July, August, or July, August and September, preventive treatment is not constantly on the job. Education in the care and treatment of infants should be continued all the year round, and the city should see to it that its health department should be specially provided with funds to carry on a campaign of education continuously and all the time. Until this plan be adopted ignorant mothers will lose their babies, and Montreal will be known as the worst place on this continent in summer time for poor children.

Canadian Medical Association.—When one calls to mind the fact that there were one thousand physicians in Toronto last year at the meeting of the British Medical Association, the wonder is will there be half that many in Montreal in September. Why not? Transportation rates have been arranged satisfactorily; the time limits are the usual dates allowed conventions; the *standard certificate plan will prevail*. If three hundred are present holding standard convention certificates, all will be returned home free. This applies only to delegates, their wives or daughters. There is to be a good programme. Dr. Davy Rolleston, London, Eng-

land, will deliver the address in medicine, Dr. J. George Adami the address in pathology, Dr. Ingersoll Olmsted, Hamilton, the address in surgery, Dr. McPhedran the presidential address. Then the meeting is to be an important one on account of the re-organization scheme now before it. As to entertainment, one may well leave Montreal to look out for that. Can you afford to stay away from participation in your own national medical meeting?

The anti-mosquito movement is world-wide in its interest as it is cosmopolitan in its import. In a note in these pages in April a concise history of malaria was given. What is being done the world over in the extermination of the mosquito seems a natural sequence to that note. A slight typographical error may be mentioned in that connection, as the discovery of peruvian bark was made to read 1840 instead of 1640. The mosquito problem has been of late years vigorously worked at in different English tropical colonies. The drainage of marshes has in some sections been undertaken on a large scale. In Klang and Port Swettenham in Silanger, Confederated Malay States, the abolition of the mosquito and malaria has been accomplished at the comparatively small expenditure of about \$2,000. At Ismailia, the Suez Canal Company has done admirable work. Greece has an Anti-Malaria League which will grapple with the disease very common in that country. Before the work of mosquito prevention was inaugurated in Honolulu it was next to impossible to secure a good night's rest on the Island. Now Hawaii is reasonably free from the pest. The United States has its American Mosquito Extermination Society. Considerable work has been done in the marshes on the south side of Long Island, at Jamaica Bay, at the south end of Staten Island, and in the Newark Meadows near Orange, New Jersey. The famous New Jersey mosquito will soon be a thing of the past. Nor is the cost of the work of drainage particularly expensive, the average being only about \$2.00 per acre. In the Adirondacks but little work has as yet been done, although the mosquito abounds there in vast numbers. According to the last monthly report of the Sanitary Department at Panama, where a prodigious engineering enterprise is being prosecuted, malarial fever was one of the two diseases giving the highest mortality, fifteen deaths from the disease having been recorded. It would seem, therefore, that Panama would be a fitting place for the American Mosquito Extermination Society to begin an active campaign. So far as

is known, Canada has taken no active step in the extermination of the mosquito.

Chloroform for Osler is no joke. Since Dr. Osler's famous address, made nearly two years ago, that distinguished *savant*, it is understood, has been more than once forced to travel incog. "Man's best work is done before 40," he said, which he meant was to be considered in a preparatory sense. But the newspapers got hold of a few fragments, and with the judgment and knowledge of which all newspaper reporters are seized where medical matters are concerned, that great address was "newspaperized." The real words of Dr. Osler on that occasion were: "The teacher's life should have three periods—study until 25, investigation until 40, profession until 60, at which time I would have him retire on a double allowance. Whether Anthony Trollope's suggestion of a college and chloroform should be carried out or not, I have become a little dubious, as my own time is getting so short."

News Items.

SOURIS, MAN., is to have a \$12,000 hospital.

DR. WM. BURT, Paris, Ont., is in England.

BELLEVILLE, ONT., will build a new Isolation Hospital, at a cost of \$10,000.

A NEW modern hospital to cost \$140,000, is to be erected in Calgary, Alta.

DRS. O. M. JONES, Frank Hall and R. H. Carter, Victoria, B.C., are in England.

DR. ATHERTON, Frederickton, N.B., has been attending the B. M. A. meeting at Exeter.

DR. SAMUEL JOHNSTON, Carlton Street, Toronto, now confines his work to anesthetics.

DR. JOHN MALLOCH has returned to Toronto, after two years' graduate work in England.

DR. H. B. ANDERSON, Toronto, has returned from several months' graduate work in Germany.

ON the 1st of August there were twenty-seven cases of smallpox in the Toronto Smallpox Hospital.

DR. A. PRIMROSE, we are glad to hear, is recovering nicely in Muskoka, from the effects of his recent operation.

THE deaths amongst children under five years of age in Montreal, have reached as high as 180 per week the present summer.

THE new medical building for McGill is to be situated opposite the Royal Victoria Hospital, and is to cost half a million dollars.

DR. D. J. GIBB WISHART, Toronto, is convalescing rapidly on his island in the Georgian Bay, after a second attack of erysipelas.

DR. R. B. NEVITT, Toronto, is suffering from glaucoma, and his many friends in the profession will hope for a speedy recovery.

DR. H. P. H. GALLOWAY, formerly of Toronto, but now of Winnipeg, has been appointed orthopaedic surgeon to the Winnipeg General Hospital.

DR. FRED MONTIZAMBERT, Director General of Public Health, has served under every Dominion government, and has seen forty-one years of service.

THE annual meeting of the Canadian Medical Protective Association will be held in Montreal some time during the meeting of the Canadian Medical Association, from the 11th to 14th September.

THE new King Edward Sanatorium for pay patients in advanced and far advanced stages of tuberculosis, will be opened the latter part of August. It is situated on the bank of the Humber river, near Toronto.

DR. WM. BAYARD, St. John, N.B., celebrated the 70th anniversary of his entrance on the practice of medicine on August 1st. Amongst other messages of congratulation was one from his alma mater, the University of Edinburgh.

LIEUTENANT-COLONEL CARLETON JONES, M.D., Director-General of Army Medical Service, Ottawa, is organizing a meeting of military surgeons, to take place in Montreal at the time of the Canadian Medical Association meeting.

DR. JAS. L. BRAY, of Chatham, Ont., has been appointed as Dr. R. A. Pyne's successor as Registrar of the College of Physicians and Surgeons. Dr. Bray is not by any means a stranger to the profession, being not only well known through Western Ontario, where he has practiced most successfully for many years, but has served several terms as member of the council, and is therefore well acquainted with the general busi-

ness of that body. We welcome Dr. Bray to Toronto, and feel that he will be not only an acquisition to the profession in our city, but carry out his new duties as Registrar of the College in an eminently satisfactory manner. Dr. Bray graduated at Queen's in 1863, and received not long ago his LL.D. in recognition of his long services to the profession.

DR. F. H. SCOTT, brother of Dr. Wallace Scott; Toronto, and son of the principal of the Toronto Normal School, recently secured the Gunning prize for research work, and has been appointed to the staff of University College, London, England, as a lecturer of physiology.

DURING the month of June in Ontario, there were 2,078 deaths, 100 more than in June, 1906. There were fifty-five cases of smallpox, no deaths; measles, 376 cases, 35 deaths; diphtheria, 125 cases, 20 deaths; scarlet fever, 195 cases, ten deaths; consumption, 143 deaths.

At a meeting of the Welland County Medical Association, held May 16, 1907, it was unanimously decided that, in view of the fact that the expenses of carrying on practice have been largely increased during the last few years, it was necessary to raise the fees sufficiently to compensate for increased expenses. It was the opinion of those present that this was simply in keeping with the general advance in wages that prevails at present in almost every walk of life. The old tariff of fees was adopted about forty years ago, when the cost of living and carrying on practice was not more than half what it is at present. The physicians of Welland County are simply following the example of other counties and cities, who have found it necessary to take similar action. Following is a list of some of the principal items of the schedule: Visit in town or village, 7 a.m. to 7 p.m.—\$1.50. Visit in town or village, 7 p.m. to 7 a.m.—\$2.00. Mileage in country—\$1.50 for first mile, 50c. each succeeding. Night visits in country—\$2.00 for first mile, 75c. each succeeding. Office consultation and prescription—50c. to \$1.00. Office consultation and medicine—75c. to \$2.00. Consultation fee, mileage extra,—\$5.00. Advice by telephone—50c. Confinement, natural, mileage extra, \$8.00. Confinements, complicated, mileage extra, \$12.00. Surgical treatment at office, \$1.00 to \$5.00. Opening simple abscess—\$1.00 to \$5.00. Administering anesthetics—\$5.00 to \$25.00. Suture of wounds—\$1.00 to \$10.00. Fees for surgical operations are practically the same as before. The new schedule of fees came into effect on June 1st, 1907.—*Welland Telegraph*.

Publishers' Department

GASTRO-INTESTINAL AILMENTS OF YOUNG CHILDREN.—As the hot weather approaches the usual number of cases of gastro-intestinal ailments will confront us, and if we be not alert the same mortality of old will occur among our little patients of one and two years. The keynote to success in the management of these cases is to see that correct feeding is enforced and to keep the alimentary canal as clean and nearly aseptic as is possible. If this be done much suffering can be obviated and many little lives saved.

Every medical man these days is capable of giving correct advice on infant feeding, the care of bottles, accessories, etc., if he will only take the time and trouble to make the mother understand how important it all is. The doctor's suggestions on this matter are too often regarded as simply platitudes and not thought of seriously until the child is in the throes of a severe illness. The following clinical reports are illustrations of my usual method of handling the more common but serious gastro-intestinal diseases we meet during the heated season.

Ethel G., aged ten months, suffering from cholera infantum; bottle fed. Was passing watery stools every few minutes. Temperature had been considerably elevated, but was now slightly abnormal. Mouth and tongue parched. Considerable emaciation and scaphoid abdomen. Circulation weak and respirations labored. In fact, an extreme prostrate condition. Treatment: I put four ounces of Glyco-Thymoline with eight ounces of water and gave it as a high enema, causing it to be retained as long as possible. This was repeated every hour or so until the bowels were thoroughly cleansed and the stools diminishing in number. Gave one-tenth grain of calomel every two hours until the discharges showed the characteristic greenish color. Also gave the following:

R Elixir Lactopeptine..... $\frac{5}{8}$ ij
 Glyco-Thymoline..... $\frac{3}{4}$ ij
 Oil Peppermint.....gtt. j

M. Sig.—20 drops every hour.

After eight hours the child was able to take nourishment and retain it. This consisted of cold, pasteurized milk diluted with an equal portion of lime water. Child was given all the cold water and lemonade she wanted. She made a good recovery.

Jennie M., aged fourteen months. Suffered from gastro-

enteritis with much fermentation. Bowels swollen and tympanitic. Fever of a remittent type due to autotoxemia. Child delicate and poorly nourished; still nursing the mother's breast. Mother herself in poor health and in no condition to nourish her child. Treatment: Put the little one on cow's milk diluted with lime water. Three times a week I gave a high enema of a warm saline solution and Glyco-Thymoline, equal parts. Also gave the above prescription, a teaspoonful every four hours. Child steadily improved under this treatment, and in six weeks was in a good state of nutrition and health.

A point that I wish to emphasize in these notes is that Glyco-Thymoline is a most excellent antacid and antiseptic and deserves special consideration in the stomach and bowel disorders of young children. It gives prompt and gratifying results.—H. B. BROWN, M.D., Waukegan, Ill., in the *Medical Summary*, July, 1907.

TORONTO'S HIGH WATER MARK.—Last year there were upwards of 800,000 visitors to the Canadian National Exhibition, Toronto. This year, with the special exertions that are being made, the extra cheap railway and steamboat fares, and the \$350,000 worth of new buildings, something that no other established annual exhibition has ever boasted, it is fully expected high-water mark, in the shape of a round million, will be reached.

STARCH INDIGESTION.—Digestive disturbances are due more frequently to failure of digesting carbohydrates than of other food products. Raw starch is particularly indigestible, the heat of cooking being necessary to break up the granules and to perform the first three of the five steps of starch digestion, after which the normal digestive juices will complete the work. The method of cooking is very important, as most cases of amyloseous dyspepsia are due to eating improperly cooked starches. Here is best seen the beneficial results of the extended steam-cooking, flaking and baking of cereal foods under the Egg-O-See Process. This process has been applied to both wheat ("Egg-O-See") and corn ("E. C. Corn Flakes") both of which products are welcome additions to the sick room dietary. Toast is considered more digestible than bread, as it is baked en masse and then dry cooked in slices. Under the Egg-O-See Process each flake of

wheat or corn, thin as fine paper, is toasted to a crisp and delicate brown, with the result that "Egg-O-See" and "E. C. Corn Flakes" are much more easily digested than toast. The Egg-O-See Cereal Co., Chicago, will send free on application full size packages of these foods to physicians.

THE STORMING OF BADAJOS.—There is always something suggestively educational connected with the brilliant spectacle given annually at the Canadian National Exhibition, Toronto. Last year we were reminded of Sir Walter Scott's most picturesque work, "Ivanhoe." This year we are to be introduced to perhaps the most striking incident of the Peninsular War—"The Storming of Badajos," in connection with which visitors are to be treated to an exceptionally fine military, musical and pyrotechnical display.

TRANSMISSIBILITY AND CURABILITY OF CANCER.—Dr. William Seaman Bainbridge, of New York City, after reviewing the evidence concerning the theories of heredity, congenital transmission, and contagiousness or infectiousness as causal factors in the production of cancer, concludes that the hereditary and congenital acquirement of cancer are subjects which require much more study before any definite conclusions can be formulated concerning them; that the contagiousness or infectiousness of cancer is far from proved; that the evidence to support this theory is so incomplete and inconclusive that the public need not concern itself with it; that the danger of the accidental acquirement of cancer is far less than from typhoid fever, syphilis or tuberculosis; that in the care of cancer cases there is much more danger to the attendant of septic infection, of blood poisoning from pus organisms, than from any possible acquirement of cancer; that the communication of cancer from man to man is so rare, if it really occurs at all, that it can practically be disregarded; that in cancer, as in all other disease, attention to diet, exercise, and proper hygienic surroundings, is of the utmost importance; that cancer is local in its beginning; that, when accessible, it may, in its incipiency, be removed by radical operation so perfectly that the chances are overwhelmingly in favor of its non-recurrence; that once it has advanced beyond the stage of cure, in many cases, suffering may be palliated and life prolonged by surgical means;

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that while other methods of treatment may, in some cases, offer hope for the cancer victim, the evidence is conclusive that surgery, for operable cases, affords the surest means of cure.—*The Boston Medical and Surgical Journal*, June 27th.

AGRICULTURALLY AND INDUSTRIALLY.—Both agriculturally and industrially the Canadian National Exhibition, to be held at Toronto, Aug. 26 to September 9, will be stronger than ever. Increased premiums, increased specials, increased accommodation, cannot fail to make it so. In every section the prize list shows noteworthy additions, while \$350,000 worth of new buildings will afford both exhibitors and visitors 108,000 square feet, or about two acres, of improved accommodation.

CODEINE SAFETY AGAIN DEMONSTRATED.—Dr. E. L. McKee, of Cincinnati, Ohio, speaking of Codeine, in the *Denver Medical Times*, says: "This drug, according to Butler, is one-fourth as toxic and effective as morphine. It is less depressing and more stimulant, does not constipate, cause headache or nausea, and rarely leads to the formation of a habit. Codeine seems to exert a special, selective sedative power over the pneumogastric nerve, hence its value in irritative, laryngeal, pharyngeal and phthical coughs with scanty secretion. Like morphine, it has proved of value in checking the progress of saccharine diabetes, and it has been used for long periods without the formation of the drug habit, inasmuch as when glycosuria was brought to a termination by dietary and other measures, the cessation of the use of codeine was not followed by any special distress. The effects of codeine on the alimentary canal are remarkable, in that it assuages pain as well or better than morphine, and nevertheless does not check the secretions or peristalsis notably, unless the latter is excessive, as in dysentery. The statement that codeine is simply a "little morphine," only differing from the latter in the size of the dose, is an erroneous view, as can be ascertained by any one who closely observes the action of the two drugs." Codeine in connection with antikamnia has stood the test of exhaustive experimental work, both in the laboratory and in actual practice, and they are now accepted as the safest and surest of this class of remedies. Therefore, "antikamnia and codeine tablets"



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afford a very desirable mode of administering these two valuable drugs. The proportions, antikamnia $4\frac{3}{4}$ grs., codeine $\frac{1}{4}$ gr., are those most frequently indicated in the various neuroses of the larynx, as well as the coughs incident to lung trouble, bronchial affections, grippal conditions and summer colds.

DR. HAMILL, who conducts the Canadian Medical Exchange, for the purchase and sale of medical practices and properties, wishes to state through our columns that all prospective buyers are bound legally and morally against piracy, publicity, or offering opposition before any offer on his register is submitted to them. In fact, prospective vendors through his office can effect a sale with a minimum of publicity and maximum of speed. A partial list of his offers will be found among our advertising columns.

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THOMAS W. FORSHEE, M.D., of Madison, Ind., writing, says: "It is a pleasure to me to add my testimony to the hundreds of other physicians in attesting the merits of Sanmetto. I have used it extensively in my practice since its inception, and without any failures where it was typical. For vesical irritation in both male and female I find it perfect. Not that every case is cured by it, but when I make failures I find them due to some mechanical displacement, or to tuberculous conditions. For prostatitis I have never found any remedy that approximated it. I have used it myself with remarkable success. It is not necessary for me to say that I shall continue its use where indicated."

SANMETTO IN PROSTATITIS, CHRONIC CYSTITIS AND ENURESIS.—I have had a very large experience with Sanmetto in prostatitis, so common in old men, also in chronic cystitis in both sexes, and find it prompt, efficient and reliable in these and all other cases of irritability of the genito-urinary organs. Have also used it with great satisfaction in enuresis; in fact, I think it will cure any case where no mechanical cause exists.—*Edw. J. Libbert, M.D., Aurora, Ind.*