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ATROPHIC RHINITIS.*

BY PRICE-BROWN, M.D., TORONTO.

In selecting Atrophic Rhinitis as the subject of my paper, I was guided not only by the importance of the subject itself, but also by the fact that so little attention, as a rule, is paid to it by the general practitioner. Sufferers themselves, likewise, often ignore it, and remain practically without treatment until it has reached a stage in its development, when cure in any real sense has become impossible; and when the most that can be accomplished is arrest of progress, with relief of the most urgent symptoms.

This is the disease which, beyond all others, has for generations been known by the name catarrh, as significant of nasal discharge, accompanied by foul odor. It is needless to say, however, that catarrh is not a disease, but merely a symptom; and even as a symptom it differs widely both in character and degree, according to the pathological condition to which it owes its origin.

Among the many definitions of atrophic rhinitis which are given by leading authors upon the subject, no one, I believe, is so terse and comprehensive as that recently advanced by Wyatt Wingrave who says that:—

“It may be defined as a progressive and persistent form of dry rhinitis, characterized by a shrinkage of the mucous membrane, which tends to invade contiguous chambers, and is accompanied by the formation of crusts with more or less fetor of a special character.”

Of all the names, such as ozena, fetid coryza, dry catarrh, cirrhotic rhinitis, or the most recent one, atrophic ethmoiditis, suggested by Woakes, none is so suitable I think, as the one which is

the title of this paper; rhinitis being the term invariably applied to inflammation of the mucous membrane of the nose; and atrophica being significant of shrinkage of normal tissue wherever found.

The histological observations of Lennox Browne, and Bosworth, and Wingrave, more particularly the latter, open up a wide field for thoughtful study. The results of the recent microscopical examinations are summarized by Wingrave as exhibiting the following changes in every well marked case of atrophic rhinitis.

1. Transformation of the columnar ciliated and special olfactory cells into stratified squamous epithelium.
2. Disappearance of the hyaloid basement membrane.
3. The presence of special hyaloid bodies and pigment masses (first brought to the notice of the profession by Burnett).
4. Changes in the glands.
5. Changes in the lymphoid tissue and blood-vessels.
6. Changes in the bone.

Apart from the shrinkage which takes place in the various layers and in all the constituents of the nasal mucous membrane in this disease, perhaps the most striking features are the changes of the surface epithelium on the one hand, and the rapidly increasing number of hyaloid bodies on the other.

In the normal state the mucous membrane of the inferior turbinated bones, the lower half of the middle turbinals, and the lower two-thirds of the septum, is covered with ciliated epithelium, the special object of the cilia being to propel the serous and mucous discharges of the nose toward the anterior and posterior choanæ; and thus prevent their accumulation within the nasal cavities. In the atrophic condition, however, these cilia are gradually, and when the disease becomes severe, permanently destroyed—their place being taken by a layer of flat squamous epithelial cells in a state of constant desquamation. Below this we have stratified cuboidal epithelium in several layers; and then the adenoid or hyaloid layer beneath, with shrunken blood-vessels and acinous glands and cavernous sinuses almost obliterated. So that in place of a dozen square inches of the ever moving velvety cilia, we have a flattened

* Read before the Ontario Med. Assoc., June, 1894.

smooth surface, deficient in blood supply and clinging closely to the irregularities of the spongy bones.

About the hyaloid bodies, their distinguishing feature is the fact that, although the entire turbinated cushions shrink continually in direct relation to the progress of the disease, these hyaloid bodies increase in numbers as the disease advances. Wingrave describes them as small, round, refractive, homogenous masses embedded in the interlobular tissues of the glands, in the adjacent lymphoid tissue and sometimes in the stratified epithelium. Their size varies from the 2000th to the 800th of an inch. Latterly they break up into minute refractile bodies resembling spores. The question of the nature of these is still *sub judice*. Some pathologists believe them to be the parasites of atrophic rhinitis.

As I said before, the rest of the changes in the mucous membrane and turbinated bones are those of constant contraction, permanent shrinkage. The adenoid or hyaloid membrane which, in hypertrophic rhinitis remains intact or increases in dimensions, in this disease shrinks gradually out of existence.

The gland follicles become crowded with lymph corpuscles of a low inflammatory type, blocking their lumen, often producing complete disorganization of the acini without ever developing into true hyperplasia. The capillary blood-vessels disappear. The cavernous sinuses become less and less distended. A general fibrosis contracts the vessels, and finally they, too, shrink away, involving the underlying spongy bones in the common atrophy.

Incidental pathological changes occur in a majority of cases. Out of sixty recorded, the faucial and pharyngeal tonsils had in fifty-six entirely disappeared; while in the remaining four they were small, thus indicating a peculiar relationship between the surrounding lymphoid structures and the atrophic disease.

Perforation of the cartilaginous septum is also of not very infrequent occurrence. It is, however, generally believed to be not so much the direct result of the atrophic disease as of digital picking, the region being so easily accessible to the finger. In my own experience I do not remember a single case of perforated septum co-existent with atrophy, in which I could not

trace the origin of the perforation to the period of childhood. When it comes under the notice of the physician the margin of the perforation will usually be found coated with tenacious mucus, overlying a layer of proliferated epithelium. Very rarely will there be any indication of recent ulceration.

Etiology.—Perhaps there are few subjects in medical science upon which there exist so many differences of opinion, as upon the origin of atrophic rhinitis. Bosworth, as is well-known, makes the statement that purulent rhinitis, "he believes to be in every case a cause of, or the primary stage of, the atrophic form." There are few, if any, other writers who support him in this extreme view, while many, if not all, believe that it may sometimes be the cause. The more general opinion among the profession is that it usually occurs as a sequel to hypertrophic disease. J. N. Mackenzie goes so far as to affirm that: "Atrophy appears to be always a secondary affection . . . resulting from previous inflammatory thickening." Seiler while acknowledging that it frequently results from hypertrophy, also says that: "It may be of the atrophic variety from the start." Drake claims chronic purulent inflammation of the accessory sinuses as the cause. Gottstein holds that defective development of the turbinated bones is responsible for the disease. And Sajous, while accepting some of the causes already named, very justly says that an unusually dry atmosphere, the inhalation of tobacco smoke, or an abnormal patency of one or both nasal chambers, may any of them be the proximate cause of atrophic disease. Added to all these, as well as the parasitic origin already mentioned, Mayo Collier has recently thrown out the plausible suggestion that it may yet be discovered: "That the initial disease was degeneration of the nerve ganglion and nerve fibres supplying the parts.

Personally I have seen a number of cases which I could trace back to purulent rhinitis of childhood; others, where I had reason to believe that the atrophy was a sequel to hypertrophy; several, in which a certain amount of hypertrophy in one nostril accompanied atrophy in the other; and more than one in which the breathing of a dry atmosphere was the presumptive cause.

Usually when patients have presented themselves for treatment, they have already been

sufferers for years; but from the histories I have so far been able to obtain, I believe many cases occur from neglected colds, particularly when associated with deviated septum. In these cases mild hypertrophy is the result, producing stenosis and accumulation of mucus, which by its constant presence produces a certain amount of pressure upon the posterior ends of the middle and inferior turbinateds. This compression at any one time may be small; yet we must remember that these subacute attacks of rhinitis often last for many weeks; and that one cold follows another for a long time before the parts affected are submitted to thorough examination and the result ascertained.

One reason why I believe that many cases arise in this way, is the fact that in so many instances the atrophic condition is most marked in the deeper portions of the nasal cavities; that is over the posterior ends of the turbinateds; while in front we have still existing the septal deviation.

The period when atrophic rhinitis usually comes under observation is that of early adult life, say between 15 and 30 years. 44 out of Wingrave's 60 cases occurred during that period. He also gives a remarkable disproportion in the sexes, 49 females to 11 males. In my own case book I find a record of 17 cases, 9 of whom were females, to 8 males.

The symptoms of this disease are very characteristic and too well-known to require a close delineation. They consist of dryness of nose and throat, more particularly the throat; and this quite frequently when the patient can breathe without difficulty through the nose. The shrinkage of the tissues makes the cavities wider, permitting the accumulation of mucus, and nasal breathing at the same time. The normal serous discharge, designed by nature for the saturation of the air of respiration, becomes limited, and finally disappears, leaving the air dry and foul by the time it reaches the throat. With the diminution of serous fluid, there is increase of mucus, which, mixing with the increased exfoliation of epithelial cells, clogs up the nasal passages, finally encrusting the parts. The widened cavity in its turn makes forcible expulsion of the deposits by the breath impossible; and the consequent retention produces the characteristic fetor. The intensity of this fetor varies according to the

severity of the disease and the length of time it has existed. In long standing cases, anosmia is of frequent occurrence; while in a large number the sense of taste is likewise impaired. As before mentioned the faucial and pharyngeal tonsils usually become atrophied, the contiguous sinuses and antra may be involved, and even the eustachian tubes may become victims to the disease.

In speaking of the origin of the peculiar fetor, Wingrave offers a new theory. He tells us that as the normal mucus membrane is a transformed epidermal structure, having with its glands a common origin with the skin, so in atrophic rhinitis, we have a structural reversion in the stratification of the surface epithelium to the primitive type; and in the glands we have established a perverted function. The mucus membrane is converted into cutaneous structure with a corresponding change in secretion. Following out his argument, he speaks of the various odors produced by different portions of the skin, such as the feet, the axilla, the prepuce, etc.; and granting the cutaneous change produced by atrophic disease, we have an odor established within the nasal cavity—having a kinship with all the others.

Diagnosis.—Except in its earliest stages, it can rarely be mistaken for any other disease. A careful and thorough examination should always definitely place it *per se*.

Prognosis.—Most writers agree that at the best the prognosis in atrophic rhinitis is a very doubtful quantity. Excluding, of course, malignant and specific diseases, it is more hopeless than any other affection of the nasal organs—that is, so far as complete and permanent recovery are concerned. Frankel, of Berlin, says:—"A cured ozena is unknown to me." Bosworth says:—"In the advanced stages, characterized by fetor, and in which the turbinated bones have almost entirely disappeared, I have not seen a case cured." Sajous says:—"Atrophic rhinitis is perhaps the most unsatisfactory of the nasal affections to treat successfully."

All agree, however, that much can be done to ameliorate the symptoms and make life comfortable; and I believe when taken early, and the treatment carried out persistently and faithfully, a cure in some cases can be accomplished; while in the more severe cases, freedom from crusts can be insured, fetor can be kept under control, and

the general health and comfort of the patient can be vastly improved.

Treatment.—The initial step is always to thoroughly cleanse the nasal and naso-pharyngeal cavities. That is, to remove completely all incrustations wherever found. It matters little how this is accomplished, or what local agents are used, so long as the mucus membrane remains unbroken and the eustachian tubes uninjured. The drugs used are legion, and the methods many. Among the best, however, are simple alkaline and antiseptic solutions, such as Dobell's. The alkali has a solvent action upon mucus, while the carbolic acid has a tendency to neutralize the decomposition going on. This, or any similar fluid, may be used by the post-nasal spray syringe. The point of the instrument, being passed up behind the soft palate, the solution is thrown through the nasal cavities with considerable force. At the same time it loosens the accumulations which so frequently form in the vault of the pharynx. We should always be careful to have our solutions at a blood temperature, and should also fill the instrument a number of times at each sitting.

The method of using the nasal douche, and recommending the patient to pass one or two quarts of hot medicated water through the nose, up one nostril and down the other, is advised by some rhinologists. Bosworth, in his recent edition, tells us that our patients should be instructed to follow this plan out daily. There are unbelievers, however, and I am one of them. With such oft-repeated and copious irrigations, there is always the well recognized danger of frequent floodings of the eustachian tubes. If we flood the tubes we flood the middle ear likewise; and run the serious risk of inflammatory action, and subsequent deafness. Of course, if the patient while using the douche, assumes the right posture, with the head bent forward, and takes the precaution to elevate the palate, and so force the fluid round the septum and out through the other naris, without entering the post-nasal pharynx at all, then the eustachian tubes escape. But granting this to be fully accomplished, the entire object of cleansing has not by any means been secured. The tenacious plugs of foul mucus in the pharyngeal vault have not been touched, much less removed. Hence I believe that this dangerous and ineffectual method of cleansing, should only be used

under exceptional circumstances, in cases under the direct control of the experienced physician.

The anterior nasal spray, however, produced by compressed air on a good hand atomizer, is a valuable adjunct to the post-nasal treatment; but in the majority of instances the two combined are not sufficient to thoroughly cleanse the parts from crusts. They remove a large portion of the accumulations and loosen other parts; but some they have comparatively little effect upon. The work to be completed requires the use of the cotton probe by the anterior nares, and the curved cotton holder to the pharyngeal vault. In first treatments, especially, this should be done in a painstaking and thorough manner; and always by the aid of anterior and posterior rhinoscopy with a good reflected light.

This first step having been accomplished, it is generally conceded that the next one is to stimulate the atrophic membrane to a better performance of its natural function of secretion.

To this end Gottstein recommends plugging the nostrils for twenty-four hours with cotton tampons. This entails a good deal of discomfort to the patient for that period; but on their removal a flow of mucous follows as a result of the pressure stimulation. When the flow subsides, the nasal cavities are cleansed again and fresh tampons inserted. The whole procedure being repeated as frequently and for as long a period as required.

Woakes uses Gottstein's plugs for the purpose of applying powders of a stimulating character to the diseased mucous membrane.

Sajous and MacKenzie advise the use of the galvano-cautery at a white heat passed rapidly over the surfaces.

Lennox Browne also favors the same plan with subsequent insufflations of iodol or iodoform.

Bosworth recommends its use with great caution, as a disease attended by constant contraction would hardly appear to call for much use of a destructive agent. He says, however, that when applied so lightly as to be merely stimulant in its action, a good result is sometimes accomplished by it.

Shurly and Bryson Delaven recommend the galvanic current as a valuable means of treatment—the positive electrode being applied to the nape of the neck, while the negative, wrapped in absorbent cotton, is passed over the mucous membrane.

The strength of the current from 4 to 7 milliamperes, and the time from 6 to 15 minutes. The seance should at first be daily; subsequently on alternate days.

Other methods of treatment are the use of stimulating sprays after cleansing, such as those of thymol, creosote, sol. arg. nit., etc., of varying strength and frequency, according to the indications attending each distinctive case.

I cannot close this branch of the subject without briefly referring to a new method of treatment, inaugurated during the last two or three years by the Italian school of rhinologists. It consists, after thorough cleansing of the nasal passages, in vibratory massage of the mucous membrane. Braun, of Trieste, was the originator of the plan, and he claims to have met with very marked success in the treatment of a large number of cases. It was discussed quite exhaustively at the Laryngological Section of the International Medical Congress at Rome a few weeks ago, and was endorsed by a number of enthusiastic supporters. Still it has its opponents, among whom was Prof. Chiari, of Vienna, who said he "had never seen any better results from this treatment than from ordinary painting of the throat." So far, this method of treatment does not seem to have obtained any foothold either in England or America, although if successful on the Continent it will soon, no doubt, be used by the English speaking peoples.

The massage is produced by an olive pointed probe, wrapped in cotton wool, and passed into the nostril to the various points requiring treatment. The instrument is held between the thumb and fingers like a pen, and the vibrations are produced by the tetanic contractions of the muscles of the arm and forearm of the operator, as he presses the point of the probe against the mucous membrane he is operating upon. By practice, these contractions are said to number about 400 per minute.

The mucous membrane of the nose covers about 40 square centimetres, and the space operated upon will be about one square centimetre at a time. Braun says he makes the time for each vibratory application anywhere from a quarter of a second to a minute, and the whole period of treatment about five minutes to each nostril. Of

course, the earlier treatments are preceded by the application of a sol. of cocaine.

As might be expected, the treatment, however beneficial to the patient, is both difficult and fatiguing to the operator—the latter particularly, as in each case it has to be practised regularly a large number of times. To overcome this difficulty, and at the same time to make the system of vibration more regular and rapid, various electro-motive instruments have been made, from which their originators claim to have produced even better results than by manual vibration.

As this method of treatment appears to be plausible, I have commenced to try it on two cases, but they are both too recent to bear reporting upon.

On looking over the history of my own cases, I find that my treatment has gradually undergone a change as the result of personal experience, becoming more thorough in its manipulation, and, at the same time, more mild in character, than it was during the earlier years of practice.

With the post nasal syringe, the anterior nasal spray the cotton holder soaked in albolene, and the post nasal curved cotton probe saturated with the like fluid, I usually succeed, at the first sitting, in thoroughly cleansing the nasal cavities and the post pharyngeal vault. This use of the cotton holders requires, of course, the use of the anterior and posterior rhinoscopes. Although this preliminary treatment necessitates both care and patience, yet it is comparatively painless and is almost always bloodless. Even when the green offensive incrustation is thick and putrid, we rarely meet with any ulceration; and often, while the contracted mucus membrane clings closely to the irregularities of the shrunken turbinateds, its surface with all the irritation of cleansing, remains still unbroken.

Sometimes after removing the incrustations as thoroughly as possible, I would find a thick layer of tenacious epithelium, projecting from the lower border of the middle or inferior turbinated bones, which would defy all efforts of ordinary cleansing. If this persisted through several treatments, severer measures would be required. Occasionally a solution of arg. nit. 10% would be sufficient; but I have usually found the best results from singeing the proliferations with the galvanocautery. This cauterization was never carried to

the extent of destruction of the whole epithelial coating. As a result, the pale, bloodless, stringy epithelium would give place to a pinkish membrane of more healthful character.

One peculiarity of formation I have remarked in several instances; and in each case it was confined to the side affected by the more marked atrophy. This was the attachment by cicatricial band of the greater part of the inferior border of the middle turbinal, either to the upper part of the lower turbinal or the external wall of the middle meatus. These special instances seemed, in my mind, to owe their origin without doubt to a previous hypertrophic condition. In the treatment of these cases, I have under cor. separated the attachment by galvano-cautery with marked advantage to the progress of the case.

Formerly, after thorough cleansing of the nares and pharyngeal vault, I would use one of the many stimulating sprays so freely vaunted for the treatment of atrophic rhinitis. I cannot say, however, that my patients derived any perceptible advantage from their use. It always seemed to me, that the more you stimulated the shrunken, withered, pallid membrane, the less serum would be secreted, and the quicker would the surface dry. It must also be remembered that anything like successful treatment of atrophic rhinitis, is a matter requiring years of careful and systematic management; and that the daily application of stimulants for all this period could scarcely fail to have an injurious effect upon any mucus membrane.

For years now I have usually, as second treatment, applied nothing but the blandest of simple carbo-hydrates—one of the many refined petroleum extracts. At first I used petrolene, and latterly as they came into the market, liquid albolene or glycolene or benzoinol. They are essentially bland and unirritating, soothing to the mucus membrane, and protective from atmospheric influences. The best means of applying them is by means of any good atomizer, capable of throwing an oil spray. In this matter atomizers differ materially. A large number of those in the market, while they will throw an aqueous solution with a satisfactory degree of atomization, have too small a bore to throw the hydro-carbous efficiently; and hence I find the best way to secure a good instrument is to test it with either albolene or glycolene before completing the purchase.

I may close with a few words relative to the results of my own personal treatment. In cases of recent origin, before shrinkage had developed to any great extent, the crustation being limited, and with little odor, treatment has sometimes been productive of permanently good results. The pallor of the mucous membrane would be replaced by the normal pink color, the crust deposit would cease and the odor likewise. This would be after office treatment, lasting over a number of weeks; but in each case the patient would follow out the same line of treatment at home for weeks or months afterwards as required. The first case is an exception to this rule:—

CASE 1.—Nov., 1886, Mrs. B., wife of a blacksmith, æt. 65 yrs., was referred to me by her physician for treatment. She had been suffering for several years from what she called “chronic catarrh” with “spitting of scabs.” On examination I found offensive crusts in the posterior nares and naso-pharynx with some pharyngitis sicca in post pharynx. After cleansing there was pallor of mucous membrane and some shrinkage of posterior ends and middle and inferior turbinates. After a few weeks’ treatment the tendency to crustation seemed to cease. The intervals between treatments became longer, and on last of January or ten weeks from first consultation, she came to the office for the last time. In her case I prescribed no home treatment, as I was under the impression that she would not carry it out successfully. My instructions were to return for a treatment whenever the catarrhal symptoms gave her any trouble.

I did not hear of her again for more than four years and my impression was that the disease had probably returned and discouraged her about the efficacy of treatment. But in Mar., '94, she came back with laryngeal disease as a sequel of grippe which she had suffered from during the winter. I was glad to find the nose and naso-pharynx in a perfectly healthy condition. The woman said that she had never been troubled with her catarrh since I last saw her. Her present subacute laryngitis soon passed away.

CASE 2.—Aug., 1889, Miss W., æt. 22 yrs., was referred by her physician. I found a large perforation of the cartilaginous septum. The middle and posterior nasal cavities and vault of the pharynx were filled with foul greenish gray

crusts. The post pharynx was dry and covered in its upper portion with similar incrustations. The palate was soft, flabby and disorganized, and the patient suffered from an irritable laryngeal cough. She remained under treatment at that time for a month; and on returning home faithfully followed out the directions. Since then she has come to the city for treatment at my office for a few days once or twice a year; and each time I have noted material improvement. Crusts now never form. Dryness and odor rarely occur. The turbinated cushions are gradually filling up and the discharges are more serous in their character. The cleansing sprays are still used, but far less frequently than formerly; and the disease is so completely under control that the closest observer, without direct inspection, would fail to detect its presence. To crown all, she has been so well both in health and spirits for the last year, that she capped the climax by marrying a prominent Bachelor of Arts only a few months ago.

CASE 3.—June, 1890, Miss L. C. æt. 14 yrs, was sent to me for treatment. She had a definite history of purulent rhinitis extending back to infancy. There was no septal perforation; but the disease was of a severe character and the odor exceedingly offensive. She remained under treatment for a number of weeks and on returning home to a distant village, carried with her explicit instructions for home treatment. These she faithfully followed out.

Last fall she came to the city to attend college. On examination I found very great improvement, and I believe there is very fair prospect of ultimate recovery. One nasal passage has already resumed an apparently normal condition; and in the other, the turbinateds have lost much of their shrunken character. The chief difficulty was that she had not been able to thoroughly clear the pharyngeal vault. Since then I have had her use the post-nasal syringe. She can manage it very well, and will continue to use it as long as required.

CASE 4.—June, 1890, P. McD., æt 20 yrs., was referred by his physician. History of purulent rhinitis from childhood. Toward adult age it had assumed the atrophic form, with foul breath, excessive crust formation and hoarseness. On examination, I found the characteristic nasal signs,

but the usual atrophy of the faucial tonsils was not present. They were instead enlarged and spongy while the uvula was thick and long. The young man was strongly built and athletic, and in great measure followed an out door life.

Together with the regular nasal treatment, I removed a portion of the uvula and reduced the tonsils by several cautery operations. For a while he followed out the home treatment prescribed, but he desisted as symptoms abated, contenting himself with occasional visits to my office at long intervals. Latterly there has been no nasal crusting, the deposit being limited to the pharyngeal vault. This he says is expectorated about once a week and is gradually getting less. On last examination about a month ago, the crust was smaller than ever, and I have good reason to believe, that in another year or two, the post-nasal pharynx, like the nasal cavities, will be entirely free from mucus accumulations and the patient will be cured.

The few brief histories I have given are extracted from a record of seventeen cases in private practice, and are among the most successful that I have treated. I have purposely taken them from my earlier years of special work, as those of more recent date being only in their infancy of treatment, would be unreliable so far as prognosis is concerned. My main object in dwelling upon them is to prove that great benefit can be obtained by persevering painstaking treatment, carried out by the patient under the careful supervision of his physician. Atrophic rhinitis is one of the most loathesome and hopeless of diseases when allowed to take care of itself, and it is astonishingly prevalent; but thanks to the methods of treatment that medical science has placed at our disposal, it is in all instances capable of a definite measure of control. In a few cases, I believe, we are justified in expecting a permanent cure; and although in the majority, the outlook is less hopeful, yet there is no reason why sufferers should continue to be either a discomfort to themselves or a nuisance to others.

A YOUNG man has recently died at Shoreham from the effects of a mouthful of carbolic acid with which he rinsed his mouth in mistake for vinegar.

GASTRECTASIS.

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For the sake of precision it is best to define exactly what is meant by the term gastrectasis.

By it is meant not merely a large stomach, for, as is well known, this organ may be found with a holding capacity of several pints without disturbance of secretion, sensation, motion, or absorption. Physiologically, the stomach is beyond criticism, but anatomically it is extravagant in size. Such are not instances of dilatation; their origin is sometimes surrounded in mystery, and the condition is called megalia.

Another condition is easily mistaken for gastrectasis, and that is a displacement of the stomach downward, or gastro-ptosis. This is often associated with wandering or movable kidney, and sometimes with Glenard's disease, or entero ptosis. The "oblique stomach" is also often mistaken for dilatation, with which it is often associated. True gastrectasis, or dilatation of the stomach, includes an increase, often progressive, in size, with hypertrophy, at other times with thinning of the muscle coats, and accompanied with more or less profound disturbance of the functions, and frequently by the stagnation of food and the almost invariable presence in excess of lactic acid, and sometimes of the fatty acids and the other products of fermentation.

Gastrectasis is often seen to be the direct result of pyloric or duodenal stenosis, but more often such is not the case. Of this latter class the cause is not always apparent. Undoubtedly it sometimes depends on obstruction, the result of traction that accompanies displacement of the right kidney, the intestines, or the stomach itself; an obstruction may be occasioned by abdominal tumors or old inflammatory tissue after peritonitis. However, there remains a large number of cases that occur without the association of any obstruction that can be made out by the most careful study before and after death.

These are believed to result from long-continued fault in innervation, leading to diminished muscle tone and consequent relaxation. In these cases the hypertrophy of the muscle coats probably

never occurs, but in those cases that come about as direct result of stenosis there is usually at first muscle increase, and sometimes the gastric walls become so powerful that the movements of the stomach may be observed distinctly through the abdominal parietes, in the vain endeavor of the organ to empty itself. The mucous membrane may be intact. It is sometimes thinned, sometimes atrophied, and occasionally inflamed. In all cases the digestion is impaired, in some it is abolished; usually the food is tardy in leaving the stomach. In a few instances, when pyloric insufficiency exists, the contents are too rapidly discharged, while in others, and for the most part, the movement is so slow that there occurs food stagnation, which is the most serious condition met with in gastrectasis. Stagnation usually depends upon obstruction, particularly upon stenosis. When such is the case, the condition is at first not continuous, but intermittent, gradually becoming constant. Stagnation does occur when no obstruction can be made out, but it is uncommon in such cases. This retention of the food and the fermentation that goes therewith are potent factors in the establishment of chronic gastric catarrh. But this pathologic state is not very frequent in gastrectasis unassociated with stagnation of food. Dilatation of the stomach in greater or less degree is an extremely common affection. However, it must be admitted that it generally escapes unnoticed, and patients receive treatment for resulting conditions, and often the stomach is not suspected as the source of trouble. This is true, because there may be an absence of that symptom-complex which is habitually referred to dyspepsia. More often there are dyspeptic symptoms that are believed to depend upon functional disturbances only, and the diagnosis is not made.

A diagnosis of gastrectasis is not possible from symptoms alone. By external palpation it may be discovered by the succession sound extending below the navel, and by careful immediate, or mediate, percussion, and by conjoined percussion and auscultation. Assistance may be had by distending the colon with fluid or with gas. Further evidence may be obtained by inflating the stomach with gas by means of a rubber bulb attached to a stomach tube, previously introduced, or by giving separately small portions of tartaric

acid and the bicarbonate of soda in solution. Gastrodiaphany, suggested by Max Einhorn, is useful, and much may be learned from the employment of the stomach tube in the hands of a practised person.

Stagnation of food is a very important symptom when present. An excess of lactic acid will usually be found. In some instances, hyperchlorhydria exists, which is particularly true in the early history of cases, but in many cases hydrochloric acid is absent, a state of affairs that is particularly apt to occur when there is long-continued food stagnation.

There was referred to me two years ago a middle-aged man, who desired to know what climate he should seek for the relief of his supposed consumption. I have rarely seen a man more emaciated. He had some stomach symptoms, a poor appetite, eructation of gas, regurgitation of food, and a sense of weight in his abdomen ever present. Such symptoms as are often found in the tubercular. He was constipated, the urine very scant and dark colored, low in urea and containing much indican. The skin was muddy, sallow and loaded with secretion. The picture of emaciation, anæmia and toxæmia, suggested malignancy rather than tuberculosis. The patient stated that he had been losing flesh and having dyspepsia for ten years. He had lost sixty pounds in weight, and now weighed one hundred and fifteen pounds.

On the 30th of September, 1892, a complete examination of the stomach contents was made, when it was found necessary to pass the end of the tube thirty inches beyond the teeth in order to completely evacuate the stomach. Then were removed a few ounces of disintegrated food, showing a trace of hydrochloric acid, a large amount of lactic acid, with excess of peptones and imperfectly changed starches. On careful inquiry it was found that the patient had been in the habit of regurgitating a large part of each meal for relief, and had thereby established a habit that doubtless assisted very much toward his emaciation. The patient was allowed a diet of lean meat and "zwiebach," and was treated by gastric faradization. He was urged to overcome the habit of regurgitation, and was successful. Improvement was immediate, and on Oct. 10th he showed better digestion, but with an excess of

hydrochloric acid. Regular treatment of the stomach was discontinued about the first of December, although it was occasionally practised for two months thereafter, at the expiration of which time he considered himself perfectly well, and enjoys good health at this writing. His stomach is still large, but its chemistry is correct, and the symptoms of gastrectasis have disappeared. This was a case in which no stenosis of the pylorus was present, and is an instance of the striking improvement that sometimes may be accomplished.

As an example of gastrectasis with pyloric stenosis, the following is quoted briefly: A motor-man, aged 27 years, presented the history of probable peptic ulcer some years since. He now complained of great loss in weight, weakness, loss of appetite, vomiting a large amount of sour material, eructation of gas, with pain and sense of tension in the abdomen. Examination of the stomach was made March 24, 1894, and revealed the lower border of the organ twenty-eight inches from the teeth. The contents was of the consistency and color of tar, of a disgusting odor, and although nothing had been eaten for several days, four pints of remnants of food, some of it taken weeks before, were found. In spite of the fact that there was a large amount of lactic and other organic acids present, free hydrochloric acid was found.

Great relief was experienced from the use of lavage, but the stomach emptied itself with the utmost difficulty, and the stagnation of food still remained a constant condition. Here was undoubtedly cicatricial stenosis following peptic ulcer, and the patient was informed that he would have to content himself with the moderate improvement to be obtained from lavage in the early morning, depending upon the absorption from the stomach for nutrition, or else submit to an operation.*

In cases depending upon imperfect innervation in which the dilatation has not too far advanced, long-continued treatment not only affords temporary relief to the patient, but sometimes results in the restoration of the stomach to its natural size and function.

*From inquiries just made, I learn that this man has so far improved as to enable him to resume his work as motor-man on a trolley car.

The well-known benefit arising from the lavage enables some patients to lead a reasonably comfortable existence without further treatment save the adjustment of the diet to the needs of the patient, and amount and variety being determined by the information gained from examining the gastric contents. Besides this, every effort should be made to improve the general health and innervation of the patient. It is commonly observed that these victims continue to do fairly well so long as they do not overwork, and so long as they in other respects lead exemplary lives. Every excess, every over-strain, long-continued cold, or damp weather depresses them, and food stagnation with its train of symptoms supervene.

What I consider as an essential of treatment is gastric faradization. The external application of electricity is useless, and the supposed benefits a delusion. Of the several contrivances employed for discharging the current so that it will directly influence the gastric walls, those most commonly used are either Einhorn's or another first described by myself in 1887—where the button can be swallowed by the patient more easily than the tube, and where emptying the stomach is unnecessary. Dr. Einhorn's instrument is perfectly satisfactory. Personally, I generally employ the other form of instrument. The faradic current with a good coil and a large battery, producing a stimulating current, succeeds best in improving the muscle strength. When there is much irritation or catarrh, it may be necessary to use the continuous current. Either form is potent in re-establishing the gastric secretion.

Something is to be gained by drugs in certain instances, but their field of usefulness is limited. Hydrochloric acid on the one hand and alkalis on the other are beneficial. Sometimes large doses of nux vomica and physostigma assist. Antiseptics accomplish little. The diet varies much in different cases, and should be as liberal as practicable under the circumstances. The meals as a rule should be far apart, and the study of the stomach contents a few hours after the ingestion of food should be the guide as to the amount and character of the food allowed. Patients generally lose flesh during the course of active treatment by lavage, but after improving the local conditions and discontinuing the treatment the gain in flesh and in other respects is sometimes astonishing and almost invariably satisfactory.

Reports of Societies.

ONTARIO MEDICAL ASSOCIATION.

(Continued from July number.)

EVENING SESSION.

The first paper of this session was read by Dr. J. E. Graham, the amphitheatre of the Normal School being well filled by medical men, lady practitioners and students in medicine. The subject of Dr. Graham's paper was "Some Remarks on Chronic Diseases." He made special reference to Bright's disease, the anæmias and tuberculosis. Treatment of these cases required a great deal of patience and tact. Strict attention should be paid to the patients diet, clothing, and general environments. Cases of parenchymatous inflammation of the kidneys were quite amenable to treatment. Prognosis was fair even after œdema occurred, even in apparently chronic cases; he knew of one case in which, contrary to the general teaching, the patient did best on nearly a complete meat diet, after having tried the milk diet with unsatisfactory results. Regarding anæmia, the gastric form, he had seen helped very much, in fact, cured, by lavage of the stomach every second day and the exhibition of arsenic. In another case of a woman aged 65, with a dilated heart, who had nausea, vomiting, diarrhœa, and considerable emaciation, accompanied by elevation of temperature, making the case suspicious of being one of pernicious anæmia until the blood corpuscles were counted and found not diminished in numbers. It was found that there was a diminution of urea in the urine, although no albumen nor sugar were present. Here the anæmia was due to the poisoning of the urea. Rest, careful dieting, administration of iron and arsenic produced a great improvement. Cases of other varieties of anæmia were referred to where treatment, based on a careful observation of the condition present, led to recovery. Regarding tuberculosis, most patients must be treated at home, and this could be done very satisfactorily by attention to the above-mentioned precautions, particularly in the first stage. As to medicine in these cases, he recommended the use of creosote as being the most helpful. The points to be observed in treating all chronic affections were, first, the necessity of more hopefulness in treatment; second, greater care to make an early diagnosis; third, to make a practical use of all the more recent discoveries in pathology and management of such diseases.

Dr. Bruce Smith followed, and pointed out very good results that followed examination of the stomach contents. He also referred to the causation of anæmia, and in its treatment he knew of

nothing better than the old Bland's pill after the bowels had been opened with a saline. He believed in pernicious anæmia that complete rest should be enjoined on the patient, and it was necessary that the functions of the body should be naturally performed before the administration of medicine. He would give arsenic in small doses first with a compound tincture of gentian. He spoke highly of the use of the stomach tube in dyspepsia, and he had found good results follow the use of a glass of hot water containing half a dram of soda half an hour before breakfast in gastric catarrh. He, too, spoke very highly of creosote in the treatment of pulmonary tuberculosis, administered with nux vomica. These patients did best, he thought, in the country where the air was pure and they could obtain lots of cream. Cream was much better than cod liver oil.

The "Symposium of Influenza" came next, Dr. L. H. Sweetman opening the discussion, his paper dealing with its general features. He spoke of its causation, its usual symptoms, its tendency to cause cardiac asthenia or pneumonia more particularly. He referred to the many cases of sudden death during convalescence. Regarding treatment, the big point was rest. He did not advise the use of the coal tar product for the fever except phenacetin in small doses. He also recommended modes of treatment for the other forms of the disease.

Dr. Lett, of Guelph, spoke of its nervous phenomena. This form was very common owing to the tendency of people now-a-days to become the subjects of nerve strain as a result of the tremendous activity of the age. He referred to the various neuralgias, neurites, paralyses, and mental affections, such as melancholia, occurring with la grippe.

Dr. Gregg spoke of the thoracic phenomena seen in this disease. There was a great tendency towards bronchitis, pneumonia and tuberculosis. The bronchitis in such cases attacked the right side more than the left. He spoke of a form of pneumonia which he had seen with indefinite symptoms. It did not run a normal course—the onset was insidious, there being no chill, there was no cough, and no râles, perhaps; but the temperature might run high, dyspnœa be present, and some dullness on percussion, the character of the pneumonia being modified by the poison of the influenza.

Dr. Harrison, of Selkirk, in speaking of the digestive phenomena of the trouble, gave a history of his own case, the principal features being dizziness, loss of appetite, bilious vomiting, with increased pulse and respiration, and some rise in temperature. It made him very ill. He got up, went out in the cold, and in two days was attacked by the thoracic form of the trouble, which he was not yet rid of. To his remembrance in his early

days in England the coryzal form was most common. He found stimulants good in many cases, especially strychnia. Nux vomica was useful in the stomachic form.

Dr. A. H. Wright's paper referred to the influence of la grippe on the pregnant and puerperal woman. Influenza, he said, might cause abortion in the pregnant woman, especially in severe cases, where the temperature was high and the prostration great. The danger was still greater where thoracic complications were present. Severe gastro-intestinal catarrh accompanying this disease was a serious complication, and frequently terminated pregnancy. The high temperature might lead to the death of the fœtus. The influenza itself might be transmitted to the fœtus, but he did not consider this likely. Menorrhagia and metrorrhagia were not uncommon accompaniments in this disease. Influenza uncomplicated induced abortion less than any other of the infectious diseases. During labor, this disease was a serious complication, its tendency being to weaken the expulsive efforts of the uterine and abdominal walls. Dr. Wright had collated ten cases of influenza made up of lying-in woman of the Burnside Lying-in Hospital. All recovered without any serious symptoms in from two to five days. Perfect rest in a dry, warm place was the best treatment; the influenza germ loved moisture and cold. On the whole, this class of patients stood influenza well.

Dr. McDonagh spoke of the phenomena of influenza as seen in the nose and throat and adjoining cavities—the antrum, the ethmoid sinus, frontal sinus, etc. He pointed out the characteristic features seen where each of them was involved. The effects of the poison were also noticed on the nervous and muscular structures of the parts involved. The sense of smell was often lost.

Dr. Fox, of New York, then gave an exhibition of lantern slides, illustrating syphilis of the skin, principally, in its various forms. The first slide showed an immense nævus immediately below the eye on a patient's face. The second slide showed the appearance of the face after its removal. The operation had been a brilliant one, as the nævus had been completely eradicated. The patient himself was present, whom the members examined. The result was extremely good. The other slides which had been prepared by Dr. Fox were excellent, and the views of them upon the canvas were splendid illustrations of all the various forms of the cutaneous syphilides. A vote of thanks was tendered to Dr. Fox for his interesting and instructive lecture.

Thursday morning, June 7th.

Dr. Harrison, of Selkirk, in the chair.

Dr. E. E. King read a paper on "Uncured Gonorrhœa: causes and consequences." He dealt

with the unfortunate result of an infected person marrying, and the great care that should be taken in examining to see if the disease has been wholly cured. He dwelt on the difficulty of getting these patients to follow directions and to appreciate the real dangerous character of the trouble. He read certificates furnished by physicians to the husband of a patient of his who had taken the precaution before marrying to secure documentary evidence as to his freedom from this disease, when a careful examination would have shown that the disease was still lingering. He characterized the giving of such certificates as actionable malpractice, only the nature of the affair relieved the culpable physician from having the matter aired in a court of law.

Dr. W. H. B. Aikens asked that Dr. King be more specific as to the character of injections he prescribed.

Dr. Campbell, of Seaforth, liked the paper and thought the subject important. In his practice he had not had a case of disease of women produced by this cause. He thought no man ought to marry when afflicted with this disease, and physicians ought to be careful about giving certificates in relation thereto.

Dr. Harrison thought it was by reason of his being a country practitioner that he had not seen these cases. At an American medical convention he attended, it was recommended there that there should be circumcision in the case of all male infants as a protection against syphilis and gonorrhœa, but considering that only one in a thousand is afflicted with the troubles, he did not think that all should be deprived of their foreskins. If reports were true as to the results of city education, he thought the persons in the city ought to be very much interested in the paper read.

Dr. King, in reply, was pleased to state that the percentage of cases in cities was not so high as was sometimes reported, though more frequent than imagined. The disease was one alike neglected by patient and physician. It would take too long for him to indicate the treatment. There were cases of uncured gonorrhœa, not permanent in their symptoms, and a person might have the dregs of the disease locally situated and not be thoroughly aware of it, having had it so long he had become used to it. Too often when such a patient comes to the physician, he gets just the advice he wants,—he wants you to tell him he is all right. The urine had to be carefully examined for shreds; without doing this, one could not safely give a certificate.

Dr. Graham Chambers read a paper on the treatment of morphia poisoning by permanganate of potash, giving a report of experiments. These experiments were made with the view of comparing the results with those obtained by Dr. Moore,

who had himself taken three grains of morphia and followed it by a few grains of permanganate of potash, suffering no ill effects. Dr. Chambers had made some experiments on dogs, having given as high as six grains to a dog at one dose hypodermically, followed by ten grains of permanganate of potash, without marked change in the animal's condition. The inactivity of the alkaloid he believed was due to the oxidation of the morphia by the permanganate of potash. The Doctor presented to the Association some reactions of permanganate solution and morphia solution, the permanganate solution becoming decolorized.

Dr. Lett said the subject was important, and if permanganate of potash does all that is claimed for it, the discovery would be hailed with satisfaction. Dr. Chambers in his paper had referred to Dr. Moore's experiment, but Dr. Lett thought before that could be relied on, it should be ascertained whether Dr. Moore was a morphia eater. Dr. Chambers' experiment with a dog produced a condition similar to what Dr. Lett had seen produced by strychnine, so he did not think the test could be relied on. The test for the detection of morphia shown by Dr. Chambers he thought very delicate. He wished to know how to get rid of the products in the urine, so as to detect a very small portion of morphia.

Dr. Cameron thought if there was much organic matter in the stomach that the permanganate would lose its effect in oxidizing the matters there, before having an opportunity of operating on the morphia itself.

Dr. McLaughlin reported the case of a woman patient coming under his observation where permanganate of potash was used hypodermically and did no good.

Dr. Chambers, in reply, said, with regard to the action of the permanganate on food stuffs, it was a disputed point, but that from experiments made by himself it appeared that they would not interfere with its action. There was a difference in the quickness of its action when such were present. As to its action on alkaloids as inquired about by Dr. Cameron, he said some work had been done. He had made experiments with strychnine and found the permanganate was decomposed by the strychnine, but he thought it was of doubtful utility in poisoning by this drug. As to detection of morphia in urine, his method was to make it alkaline and then evaporate down. The best test was the iodic test.

SURGICAL SECTION.

Thursday morning, June 7th.

The first paper in the section was presented by Dr. Welford, of Woodstock, entitled "Fractures and Dislocations of the Vertebrae." His plea was for operations in these cases before degenerated

changes take place in the cord. He reported two cases he had had where considerable relief was afforded by operation. He maintained that if they had been operated upon earlier, there would have been a good chance for complete relief. The first case was a fracture-dislocation. All above the sixth were dislocated forward. The right arch of the fifth was fractured. Spicula of bone protruded into the canal, but did not puncture the membranes. On the sixth day he was called. Pulse was 155, temperature 104, and respiration feeble. Although some relief was afforded, the patient succumbed. In the second case, there was a fracture-dislocation between the eleventh and twelfth dorsal. The posterior arches were removed. The sheath was adherent to the arches, so that the marrow was exposed. The patient gained some power in the right leg and foot, and a return of sensibility two and a half inches below where it was prior to the operation. There was no improvement on the left side nor in the bladder nor rectum.

Dr. Peters agreed that the operations should have been done earlier. Degeneration took place in such cases in three days. Every spinal injury was not favorable for operation. Where it was known that the fracture-dislocation had severed the cord across, operation was useless. If there was a history of motion and sensation for a short time after the lesion, hæmorrhage was likely the cause, and improvement would take place without operation.

Dr. King presented a blacksmith who had sustained an injury to the back while working under a buggy. The props slipped, and buggy fell on top of him, bending him forward so that his head was brought between his knees. Both clavicles were anteriorly dislocated, and a knuckle presented in the neighborhood of the eleventh dorsal vertebra. There was consideration separation between the eleventh and twelfth. There was no impairment, however, of motion or sensation. But there was difficulty in getting the bowels to move.

Dr. Spencer thought that the patient presented had not sustained any injury to the spinal cord, that there was no effusion of spinal fluid, but that hæmorrhage had probably taken place.

Dr. Welford closed the discussion.

Dr. N. A. Powell then interested the Association with an illustration of his method of photographing pathological specimens, and also of procuring photographs of operations while in progress. He also showed an ingenious device for making the flash in taking photographs by the flash light.

Dr. Meek, of London, reported four cases of abdominal section. The first was for dermoid cyst of the ovaries, the second for hæmatosalpynx, the third for suppurative appendicitis, and the fourth for cancer of the pylorus-cholecystenterostomy.

He had good success in all. The history of the cases were very interesting.

Dr. Bingham read a paper on "Appendicitis," in which he discussed the classification and treatment. He also gave the report of a case. In the first type of this trouble the symptoms were mild, being usually associated with accumulated masses of fæces in the cæcum. Recovery usually followed. The second class was where the disease progressed to suppuration. These cases required to be closely watched, for there was great danger of perforation and general peritonitis. He thought this not likely to occur within four or five days; perforation sometimes took place in the intestine, bladder, or externally. The third class was the relapsing appendicitis. Operation in these cases might be left till the subsidence of the acute attack.

Dr. McKinnon and Dr. Whiteman discussed the paper.

The next paper was by Dr. J. D. Gibb Wishart, the subject being, "Empyæma of the Antrum." This was the history of an obscure case; it was difficult to diagnose because few of the symptoms were referable to the antrum; the pain was outside the orbit, the patient failed to lie on the diseased side; the reverse being usually the case. Then the character of the discharge was white like casein, instead of yellow, as is usually the case. Drilling was performed through an upper molar cavity, and the antrum washed and drained.

Dr. Price-Brown discussed the paper.

Both sections then adjourned. About two hundred of the members were then conveyed to the Royal Canadian Yacht Club on the Island, where the city members entertained the outside members to luncheon. A very enjoyable social time was spent.

The Association re-assembled at 4 p.m., to listen to a paper on "Gastrectasis," by Dr. Stockton, of Buffalo. He defined the meaning of the term, and spoke of its effects on the functions of the stomach. For its relief, drugs were of not much service. He recommended the use of lavage and faradisation of the stomach walls. He showed Einhorn's button, which the patient swallowed for the electrical seances, a cord being attached to the electrode to withdraw it when the treatment was over. Dr. Stockton also showed an ingenious device of his own for the electrical treatment. It consisted of an electrode on the end of a stilette which was introduced through the stomach tube, which had previously been inserted to convey the salt water needed. At the end of the treatment, the electrode could be withdrawn, then the salt water, then the stomach tube.

Dr. Doolittle gave the history of a severe case where he had used Einhorn's apparatus with good success.

Dr. Hingston thought such treatment was unnecessary, if the patient would observe three rules,—first, to eat less; second, to eat more slowly; third, to refrain from drinking at meals.

Dr. Davidson said that the precautions referred to by the previous speaker, were not sufficient in his idea, when the disease had become established. He favored the treatment by lavage and electricity.

Dr. W. H. Hingston, of Montreal, then read a paper on "Cancer of the Breast." He referred to the various theories with regard to the causation, inclining to the microbe or the inflammatory. He advised that the axillary glands should not be removed unless affected. In dissection after the primary incision, the finger was better than the knife to enucleate the mass. If the pectoral muscle were affected at all, he advised its entire removal. The stitches should be put in back from the line of incision, so as not to cause any undue irritation to the edges. He advocated removal even up to half a dozen times if necessary.

Dr. E. E. Kitchen, of St. George, gave a graphic account of the great International Congress held at Rome to which he was a delegate.

Dr. J. F. W. Ross read an interesting paper on "Papilloma of the Ovary," reporting two cases. The disease usually attacked both ovaries. Two varieties might be spoken of, the first being applied to the growth before its rupture of the capsule, till which time it might be considered as non-malignant; the second, its condition after rupturing the capsule when it might be looked upon as malignant. He advised early operation. He presented sketches and water colors of the pathological specimens. He also presented a cyst of the broad ligament which he had just removed.

Dr. McPhedran read a paper on "Diuretin," and cited several cases where it had been useful. These were cases of arterio-sclerosis and chronic cardiac diseases. He had found diuretin very helpful in relieving the symptoms where œdema was present, or where there was mitral incompetence. In large doses, its effect was similar to poisoning by salicylic acid.

EVENING SESSION.

The first paper was by Dr. Primrose on "Sprains." He went into the pathology, diagnosis and treatment of these cases. He presented the history of some cases. His plan of treatment consisted in swathing the joint with a large quantity of cotton batting and bandaging over this very firmly. Massage was useful. Passive movements should be used where there was danger of adhesions at the end of 8 or 10 days, especially if accompanied by a Pott's or Colles' fracture.

The Secretary then read a communication from the Secretary of the Prison Reform Association regarding the establishing of a Home for inebri-

ates. The Association passed a resolution in favor of this movement.

Dr. McKinnon introduced a motion recommending the establishment of a Home for epileptics. This was unanimously supported.

Dr. E. Herbert Adams introduced a resolution favoring the establishment of a Home for sufferers from pulmonary tuberculosis. This was also unanimously carried.

Dr. Johnston then presented the report of the special committee appointed to report on the matter of lodge practice:—"The special committee on lodge practice begs to report that in their opinion the time has arrived when this Association should pronounce its judgment on the evils of club, lodge or contract practice, or engaging to do work any rate below that fixed by the legal tariff of the district, and should take some decided action in, first, calling on all members of the association to cease making, after the end of the current year, any further engagements to do such work; second, that the secretary of this Association communicate at once with the Medical Council and urge that body to issue a circular to each member of the College of Physicians and Surgeons, informing him that any medical man persisting after this year in doing lodge or club practice shall be considered guilty of unprofessional conduct as defined by the statute in such case made and provided."

Certain phases of the question were warmly discussed, but the resolution carried unanimously.

The report of the Committee on Nomination was adopted. The following gentlemen were elected as officers of the Association for the coming year: President—Dr. R. W. Bruce Smith, Seaford. Vice-Presidents—First Vice, Dr. A. A. Macdonald, Toronto; Second Vice, Dr. A. B. Welford, Woodstock; Third Vice, Dr. W. J. Saunders, Kingston; Fourth Vice, Dr. Forest, Mount Albert. General Secretary, Dr. J. N. E. Brown, of Toronto. Assistant Secretary, Dr. Charles, Temple, Toronto. Treasurer, Dr. J. S. Burns, Toronto.

The General Secretary, Dr. Wishart, then gave his report.

Dr. Harrison, President of the Dominion Medical Association extended a hearty invitation to all the members to attend the Dominion Medical Association to be held in St. John's, New Brunswick, in August.

The President-elect, Dr. R. W. Bruce Smith, was then installed, and after a neat speech, in which he thanked the Association for the honor done him, he declared the fourteenth annual meeting of the Association adjourned.

THE mortality from tuberculosis in the United States is about 450 per day.

MICHIGAN STATE BOARD OF HEALTH.

The Michigan State Board of Health held its quarterly meeting at the office of the Secretary, in the Capitol at Lansing, July 13, 1894. The meeting was called to order by President Frank Wells of Lansing. Prof. Fall, of Albion, Dr. Vaughan, of Ann Arbor, and Secretary Baker of Lansing, were present. The regular business, including the auditing of bills and accounts, was transacted.

The Secretary presented a tabular statement showing the small-pox in Michigan since Jan. 1st, 1894. The statement showed that in the State there had been 26 outbreaks at 21 places, with a total of 88 cases and 23 deaths—26 having recovered and 39 still remaining sick, at nine places.

In the 26 outbreaks there have been, on the average, to each outbreak only 3.4 cases, and .9 of one death. In nine of the thirteen outbreaks which are now over, the infection was restricted to one house in which the first case occurred.

President Wells said that he had long noticed that the weekly Health Bulletins, published by the State Board, show that of the twenty-eight diseases reported upon by the regular observers around the State, rheumatism is usually at the head of the list as causing the most sickness in Michigan. Mr. Wells raised the question whether there was anything that this Board could do in the way of publication of information which might tend to lessen the amount of sickness from rheumatism. Dr. Vaughan said he knew of nothing tangible yet relating to the restriction and prevention of rheumatism, which could be imparted to non-professional people. Rheumatism is a term used for many aches and pains. He thought no work should be undertaken now which will interfere with the tremendous effort being put forth by this Board for the restriction and prevention of tuberculosis, the most important of all diseases.

Doctor Baker said, that the State Board has already done much for the creation of knowledge respecting the causation of rheumatism, which knowledge is essential to a proper action for its prevention. But we must wait for an advance in two lines of investigation not much entered upon by this Board—that of bacteriology and that of physiological chemistry. Several times in the past, it has seemed that facts were going to crystallize into a tangible theory; but just as appearances were most favorable, ideas of medical investigators regarding the causation of rheumatism have changed. Much has been learned from the Sickness Statistics collected and published by this Board. Curves have been made showing that rheumatism has a direct relation to meteorological conditions. The facts in the office show that tonsillitis follows the cold atmosphere and that rheumatism follows tonsillitis. It is quite probable that if rheumatism is a germ disease, tonsil-

litis prepares a soil favorable to the reproduction of the germ, and a way for its entrance into the body. We are waiting for the bacteriologists to find the specific organism. So far as I know only the pus-forming germs have been found in connection with rheumatism, and it is quite possible that they are the cause of the disease; if so its increase following the sore throats caused by "raw" cold weather is explained by the facts on record in the State Board of Health Office. Diagrams exhibiting the rise and fall of rheumatism by seasons of the year, prove that its course is similar to that of small-pox, consumption and other diseases known to be caused by germs, and known to enter the body by way of the air-passages. Secretary Baker suggested that a committee might be appointed to investigate the subject, and report to this Board at some subsequent meeting.

Dr. Vaughan said that at present, all is speculation as to the causation of rheumatism, but he thought it quite probable that Dr. Baker's idea of the causation of rheumatism may be nearly the proper explanation; but that he would explain rheumatism as being a result of an over-exertion or unusual destruction of the cells of the body in trying to protect the body from an attack of germ disease; in other words, it is an over-drugging on the part of nature in order to throw off an attack of some germ disease. The uric acid, which is not excreted rapidly enough, and which accumulates in the body and causes the rheumatic pains, is formed by the action and destruction of cells.

On motion of Prof. Fall, it was voted that Dr. Baker prepare and read at a future sanitary convention a preliminary paper on the causation, restriction and prevention of rheumatism.

The Secretary presented an invitation from the Common Council for the Board to hold one of its Sanitary Conventions in Charlotte, the council having appointed a committee to confer with the Board. After consideration a committee of the State Board was appointed to meet with the local committee at Charlotte, and make arrangements for the proposed Convention.

A petition signed by the President and Trustees, and a large number of the prominent citizens of Union City, asking for a Sanitary Convention, was read and considered. A committee was appointed to visit and make arrangements for a convention at Union City.

The Board authorized the Secretary to reprint the leaflet on the restriction of typhoid fever to the number of 10,000 copies; also a modified form of the pamphlet on restriction and prevention of small-pox.

For a few years past Prof. Vaughan has been engaged in some very important experiments in the State Laboratory of Hygiene, at the University. These experiments relate to subjects of very great importance to the public welfare. One pur-

pose is to accomplish the end which at one time it was thought had been reached by Dr. Koch, namely: The preparation of a substance which can be introduced into the body, and which shall antagonize germs of disease such as those of consumption. Prof. Vaughan is now able to prepare a substance which there is reason to believe may be similar to the one normally used by the human body in battling with the germs of disease. His experiments are not yet conclusive as to the usefulness of this substance for the cure of disease, but they tend to prove that by its use immunity to the contraction of germ diseases is enhanced. The substance consists of the nuclein of cells, and since it is probable that the spleen is the organ in the body which takes the most active part in battling with germs of disease, he has given special attention to the preparation of "nuclein" made from the cells of the spleen.

Prof. Vaughan has presented this subject before the Medical Society in this country, and he now goes to the International Congress of Hygiene, which meets in September, this year in Budapesth, Hungary, where he expects to meet the scientists engaged in this and other lines of scientific work, who will be there from every civilized country. From the discussions which will there take place, he expects to gain much knowledge which will enable him to continue and extend his exceedingly important work. He goes as a delegate from the Michigan State Board of Health, and the Board expects Prof. Vaughan to contribute, for the welfare of humanity, fully as much information as he will receive. This is not Prof. Vaughan's first trip across the ocean. His first one was some years ago for the purpose of studying bacteriology in the laboratory of Prof. Koch. Three years ago he attended the International Congress of Hygiene which then met in London, England. His present trip is regarded as of much greater importance in connection with public health work.

Secretary Baker, as Committee on Climate, etc., presented the subject of the "Decrease of the Amount of Carbonic Acid Gas in the Atmosphere," and remarked that some twenty years ago he had asked the Board to authorize a series of regular and accurate chemical analysis of the atmosphere, with a view of determining whether there was any change in the amount of the carbonic acid in the atmosphere by seasons of the years, and by long periods of years. The subject is important now, and may become more so, in relation to the public health. Dr. Baker quoted from the *Chemical News*, London, August, 1893, as follows: "As evidence that the composition of the atmosphere is still slowly changing, it is stated that the last and most careful determinations of carbonic acid in the air have shown a decided decrease (0.05 to 0.03) in the last fifty years." On motion of Dr. Baker, the subject was referred to Prof. Fall, of Albion,

with request that he should report at the next meeting of this Board, relative to methods and cost of the proposed series of tests of the atmosphere.

HEALTH IN MICHIGAN, JUNE, 1894.

Reports to the State Board of Health, Lansing, by observers in different parts of the State, show the diseases which caused most sickness in Michigan, during the month of June (4 weeks, ending June 30), 1894, as follows:—

Diseases arranged in order of greatest prevalence in this month.	Per cent. of reports stating presence of disease.		
	June, 1894.	May, 1894.	Average for June, 8 years, 1886-1893.
Rheumatism.....	63	69	70
Neuralgia.....	53	58	63
Bronchitis.....	39	51	51
Diarrhœa.....	37	27	40
Consumption, Pul.....	36	40	59
Tonsillitis.....	31	46	39
Inflammation of Kidney.....	27	24	22
Intermittent Fever.....	26	25	44
Influenza.....	21	39	29
Remittent Fever.....	17	14	27
Inflammation of Bowels.....	16	15	14
Scarlet Fever.....	16	16	10
Whooping-Cough.....	16	10	12
Cholera Morbus.....	15	7	14
Pneumonia.....	14	27	17
Erysipelas.....	13	18	23
Measles.....	13	22	17
Pleuritis.....	12	14	15
Diphtheria.....	10	8	7
Cholera Infantum.....	7	4	7
Dysentery.....	7	5	10
Inflammation of Brain.....	6	4	5
Typhoid Fever (ent.).....	4	7	5
Puerperal Fever.....	4	2	4
Typho-mal. Fever.....	3	1	5
Small-pox.....	3	1	.05
Cerebro-Spinal Meningitis.....	2	1	3
Membranous Croup.....	1	4	1.7

For the month of June, 1894, compared with the preceding month, the prevailing direction of the wind was south-west (instead of north-west), the velocity was two miles per hour less, the temperature was 14.84 degrees higher, the rainfall was 4.70 inches less, the absolute humidity was more, the relative humidity was less, the day and night ozone were less, and the depth of water in the well at Lansing was three inches more.

For the month of June, 1894, compared with the preceding month, diarrhea increased, and pneumonia, influenza, measles, tonsillitis, erysipelas and bronchitis decreased in area of prevalence.

Compared with the average for corresponding month in the eight years, 1886-1893, the prevail-

ing direction of the wind was the same (south-west), the velocity was slightly greater, the temperature was 2.98 degrees higher, the rainfall at Lansing was 1.64 inches less, the absolute and relative humidity were more, the day and night ozone were less, and the depth of water in the well at Lansing was four inches more.

Compared with the average for corresponding months in the eight years, 1887-1893, scarlet fever and whooping-cough were more prevalent, and *erpsipelas*, intermittent fever, remittent fever, influenza, consumption, and bronchitis were less prevalent in June, 1894.

Including reports by regular observers and others, *consumption* was reported present in Michigan in the month of June, 1894, at two hundred and nineteen places; *scarlet fever* at eighty-nine places; *measles* at eighty-one places; *diphtheria* at forty-eight places; *typhoid fever* at thirty places; *small-pox* at thirteen places; and one case of suspected *typhus fever* at Gobleville.

Reports from all sources show *measles* reported at forty-nine places less; *diphtheria* at twenty-four places less; *scarlet fever* at nineteen places less; *small-pox* at six places more, and *consumption* at one place less than in the preceding month; *typhoid fever* was reported at the same number of places as in the month of May.

HENRY B. BAKER,

Secretary.

Lansing, Michigan, July 5, 1894.

Selected Articles.

BRIGHT'S DISEASE AND ANESTHETICS.

The term Bright's disease, though not framed upon anatomical or pathological conditions, is perhaps as comprehensive as any single expression that can be applied to this very complex disease, involving so many tissues.

Bright's disease is not only a disease of the kidneys, but a disease of the heart, and vascular system as well. Some have supposed it to be due to a diseased condition of the blood, others of the sympathetic nervous system. We all know where it ends, but no one as yet knows where it begins.

The nephritis is probably not the primary disease, but rather secondary to a chronic endarteritis, since it has been observed to follow in regular course upon the symptoms and manifestations of endarteritis, when disease of the kidney not only had not been suspected but could not be demonstrated. Usually, however, the two conditions are associated, and when a patient presents the evidence of arterial degeneration, even in its early state, diseased kidneys, either present or prospective, must always be suspected.

When a patient is found to have hypertrophy

of the heart with atheromatous valves or arteries, which may result in hæmorrhages upon the mucous or serous surfaces, irregular heart action, palpitation, vertigo, and headache; and more especially if there be œdema or bronchitis, with muscular debility, and a train of nervous symptoms, such as ill-temper, loss of memory, or even insanity. When these symptoms are grouped together, it behooves one to look to the kidneys for an explanation.

We may be disappointed in the search for albumin, or even for renal casts and epithelium, but we will generally be safe in making a diagnosis of Bright's disease. The presence of albumin is by no means constant, and when found is, if considered by itself, of little diagnostic value, as it may result from cystitis, from renal congestion due to pressure upon renal veins by the pregnant uterus or other tumor, from ingestion of food, muscular exercise, febrile action, surgical operations, and many other transient causes. But the albumin disappears when the cause has been removed. Again, patients with acute nephritis often pass large quantities of albumin with hyaline and granular casts, yet make a complete recovery.

Kelley has shown that hyaline and granular casts are some times present after abdominal operations, and subsequently disappear. It would seem from this fact that the anesthetic is in some measure responsible for their presence. He has also confirmed the statement that albumin and casts, often present with large abdominal tumors, are due to pressure of the tumor upon the ureters or renal veins, and it usually disappears after removal of the tumor.

Albumin appearing after operation is usually due to cystitis occasioned by concentrated urine. If albumen is suspected to be due to some bladder complication its source is easily determined by thoroughly emptying and irrigating the bladder, and then examining the urine that collects in the next few minutes. If one kidney is suspected of being diseased this may be determined, in the female, by catheterizing the ureters after Kelly's method, and examining the urine from each kidney separately.

If albumin is shown to be of renal origin, its presence is always significant of changes in the secreting tissues of the kidneys. If associated with tube casts and low specific gravity, with normal or increased quantity of urine, the surgeon must proceed with caution, and before operating see that bowels and skin are in good condition to eliminate products, which, after operation, the kidneys may not be able to care for.

The autopsy records of most hospitals show deaths from suppression of urine following anesthesia for surgical operations. The previous history of many of these cases show that examina-

tion revealed no sign of albumin, no casts, no renal epithelium, and yet the autopsy book shows that they had contracted kidney.

Most operators of much experience have had the misfortune of having patients die from suppression of urine from one to four or five days after anesthesia either by chloroform or ether; and in these patients Bright's disease was not suspected until revealed at the autopsy. A diagnosis of contracted kidney cannot be made in many cases by urinalysis, and heart and arteries should be carefully examined for atheroma or enlarged ventricle. If the urine is of high specific gravity, scanty and highly colored, with albumin or casts, and the heart hypertrophied, with pulse of high tension, the probabilities are greatly in favor of disease of the kidneys, and also of an autopsy following operation.

The cause of suppression of urine following anesthesia is as yet a matter of speculation. It has been supposed to be due to the suspension of oxidation caused by the surcharge of the blood by ether or chloroform, and by deprivation of oxygen during its administration. (Porter.) Carstens thinks that it depends upon poisoning of the solar plexus. Others attribute it to refrigeration of the body from exposure, rather than to the anesthetic. Again it is attributed to free sweating and unloading of the blood vessels of serum, thus concentrating the blood, and making it unnecessary for the kidneys to excrete water, consequently the solids remain in circulation, uremia and death resulting.

The actual cause may be found in the direct irritant effect upon the epithelial cells of the few remaining malpighian tufts of the foreign and volatile vapor circulating in the blood, and seeking every avenue of escape. Although both anesthetics are rapidly eliminated, it is a matter of common observation that the odor of ether, more than chloroform, can be detected in the patient's breath many hours after consciousness has returned, and while constantly diminishing in quantity in the circulation, nevertheless, if it be, in any degree, an irritant to the renal cells, this action is continued until it is entirely eliminated, which may be several hours. Authorities all agree that suppression of urine follows administration of ether in a certain number of cases, but many instances are reported in which suppression has also occurred after the use of chloroform in chronic parenchymatous and chronic intestinal nephritis.

Ether has been looked upon as the safer anesthetic, probably because death on the table has been less frequent than with chloroform. Death on the table is doubtless due to paralysis of the cardiac or respiratory centers, and inhalation of a large quantity of anesthetic seems not to be necessary. The more remote death due to uræ-

mia, after prolonged and profound anesthesia, while it may indirectly result from the action of the poison upon the nerve centers, is ostensibly due to retardation of the excretory functions of the various eliminatiug organs. Doubtless the quantity of the anesthetic is important and should receive due consideration in all cases of anesthesia, but especially so when the kidneys are known or suspected to be diseased.

Ether, like chloroform, during prolonged anesthesia, depresses the heart, hence in case of chronic Bright's disease, chloroform should receive the preference, if operation be imperative, because anesthesia can be more quickly induced, more easily maintained, than with ether, and with a very much smaller quantity of the drug, while during its administration a much larger proportion of atmospheric air is permitted, by which the natural functions of life are maintained.

The hypodermic use of morphine before giving ether anesthetic is certainly rational, notwithstanding the fact that morphine temporarily diminishes the secretions. It does not totally suppress them, and the anesthetic does; hence substituting morphine for chloroform diminishes the risk of suppression by diminishing very materially the amount of anesthetic required. The previous use of ethyl bromide may prove an advantage in those hazardous cases, as it produces unconsciousness and muscular relaxation much more quickly than chloroform, with which the operation may be continued.

If the case is one of undoubted contracted or large white kidney, avoid operation entirely, if possible, or use local anesthesia. If albumin and casts are due to pressure of an abdominal tumor, and no cardio-vascular changes can be found, it is comparatively safe to anesthetise. Select chloroform, and use salines soon after operation, that the bowels may relieve the kidneys of the work. If albumin and few hyaline or granular casts are found, use as little anesthetic as possible and operate quickly. If the urine be scanty, of high color, with high specific gravity and cardio-vascular changes, beware!—F. B. Carpenter, M.D., in *Occidental Medical Times*.

CHOLERA VACCINE.

Since the days when it was first sought to control the ravages of small-pox by means of inoculation, and subsequently of vaccination, no greater interest has attached to the question of inhibitive inoculation than that which has been aroused in India and elsewhere by the proposal to protect communities against cholera by some such preventive method. A brief account of M. Haffkine's process of anti-cholera inoculation, as practised in India, has appeared in the public press; but as

we are able to refer to the actual text of Dr. Simpson's report to the municipality of Calcutta on the subject, we are in a position to set out more definitely than has yet been done, what is the actual stage which has been reached in these experiments.

Since M. Haffkine arrived in British India he has inoculated not less than 25,000 people with the preparation which he alleges and believes to be preventive of cholera. Having succeeded in engrafting the cholera bacillus on animals, and in subsequently cultivating it indefinitely on them, he secures that which he calls—or rather, we think, miscalls—a “vaccine.” He then prepares two “vaccines,” one mild and the other strong; and he inoculates the human subject first with the mild vaccine, which produces some pain, discomfort, and fever for about a day; and then, after a lapse of about five days, a second inoculation with the stronger preparation is given, the immediate consequences being much the same as when the mild vaccine was used. But in the absence of the means of differentiating somewhat accurately between the effect of prevailing cholera on those who had submitted to the preventive inoculation and those who had not, the mere number of M. Haffkine's inoculations carried but little weight. When, however, the cholera season of 1894 began in Calcutta, M. Haffkine, with the aid of Dr. Simpson, was enabled to make some experiments which, to say the least, are of distinct interest and importance. He was able, in localities where cholera was actively prevailing, to induce some of the inhabitants to submit to his inoculations and to watch the result both on them and a number of other persons living under the same circumstances, but who for one reason or another had not been subjected to the inhibitive inoculations.

The results were watched with care by Dr. Simpson, on behalf of the municipality, and in his recent report to that body he gives some instances which appear striking. The following is one of these: “In Mungloo Jemadar's house a fatal case of cholera occurred on March 29th. On the 31st eleven members of the family, out of a total of eighteen, were inoculated. It so happened that cholera again breaking out in the house and attacking four persons, of whom three died, selected four of the seven not inoculated, while the eleven inoculated remained perfectly free.” Other examples of the same sort are given, and though the numbers included in each example are small, yet it is noteworthy that, whereas in each of them cholera did attack one or more of those who had not been inoculated, it failed to attack anyone of the inoculated. Such an experience is unquestionably of interest when it concerns a community such as that of Calcutta, where cholera is not only endemic, but where it also appears periodically in epidemic form. And hence Dr. Simpson urges

upon his municipality that they should for a while secure the services of M. Haffkine in order that he may continue his experiments.

Dr. Simpson wisely urges caution in arriving at any hasty conclusion. He properly refers, of course, to the very limited means as yet available for the formation of any final opinion, and he adds that tests such as those he records would have to be made “over and over again” before any ultimate conclusion could be arrived at. We may, therefore, trust to him for the caution needed in this respect. But another caution is also needed, Dr. Klein, repeating M. Haffkine's earlier experiments, has found that whilst intra-peritoneal injection of the bacillus of cholera in non-fatal doses did in the case of guinea-pigs confer an immunity against what would otherwise have been fatal doses of the same bacillus, yet the same immunity against the cholera bacillus was produced by the injection of a number of other and even of non-pathogenic bacilli, such as bacillus coli. And he drew the inference that whilst it was quite possible that all these different species were alike as regards their intra-cellular poison, yet this poison and any protection, whether evanescent or permanent, given against it must be distinguished from those poisonous substances which are elaborated by one or other of these species in nutritive media, including the medium of the human body. Having regard to these considerations, we trust that the greatest practical accuracy of observation will be observed in the experiments which can hardly fail to follow the appeal which has been made to the municipality of Calcutta by their able and untiring health officer, and under such circumstances the continuance and perfecting of the experimental measures adopted give promise of results which, in one or other way, will have interest for all scientific men, and especially for those who are concerned with the health and well-being of the population of India. But we cannot conclude these remarks without expressing one further hope—namely, that no inoculation experiments will be allowed to stand in the way of the active pursuit of those measures of sanitation by means of which alone Calcutta and other towns, whether in India or elsewhere, can ever be freed from the scourge of cholera.—*Ed. Lancet.*

CLINICAL DEMONSTRATIONS.

Mr. Jonathan Hutchinson was “at home” on the afternoon of the 27th ult. for his usual demonstration of clinical cases at his Clinical Museum in Great Portland Street. These “afternoons,” judging from the attendance of practitioners, are fast becoming very popular, a fact which is by no means surprising, considering the halo of attraction which environs all Mr. Hutchinson's work as a

teacher. His facile manner in demonstrating a case, and of endowing it with interest, by drawing upon his illimitable stores of clinical knowledge, are striking features of his wonderful capacity in this respect. Presumably it is not known yet to the profession in London that these demonstrations are perfectly free, that Mr. Hutchinson welcomes all practitioners who may wish to come, and that the meetings take place on Tuesdays until further notice, otherwise it could not fail to be the case that the rooms would soon be overcrowded.

Among the cases which came under notice on the 27th ult. was one of prurigo. The patient was an elderly man of 63. His whole skin was in a pruriginous condition, with scars in many places, and the case was described by Mr. Hutchinson as a typical one of prurigo. The man was evidently a "good scratcher." On inquiry the patient stated that the disease first troubled him when he was thirty years of age, and since then he had never been free from it. The irritation was always worse when he was warm in bed at nights, and was infrequently kept awake for three or four hours at a time scratching himself. The question of the duration of the disease was one of some importance. Mr. Hutchinson did not agree with Hebra's views on the matter, namely, that prurigo always began soon after birth and continued to the end of life. He (Mr. Hutchinson) had never met with a case of the kind, neither in private nor hospital practice. He had sought for cases diligently but without result, and even in the hospitals in Vienna he could not find a patient whose history supported Hebra's description in this respect. The probability was, however, that the disease never began quite without some exciting cause. Among such causes might be enumerated, attacks of scabies, jaundice, or the presence of lice in persons whose skins were naturally irritable. As the result of one or other of these abnormal conditions, scratching would follow, and then from this beginning the disease would continue and increase. There was one symptom, however, described by Hebra, which was very constant in prurigo, and that was enlargement of the glands in the lower part of Scarpa's triangle. The characteristic features of these enlarged glands were that the latter were quite indolent, showed no tendency to increase, and no inclination to soften and break down. But experience proved, according to Mr. Hutchinson, that when enlargement of the glands was present an unfavorable prognosis of the case could only be given. [In the patient under notice this symptom was marked.] It was a fact that many things increased the itching in these cases, and notably bile in the blood, and where diabetes was present. With respect to treatment, local remedies were only of use. Arsenic was powerless to effect any good. Strong

solutions of tar, that is to say, the liquor carbonis detergens without any dilution, will be found to be of most value. Strict instructions, also, should be given as to diet. All fish should be forbidden, and anything which was found to cause irritation of the skin avoided. On the other hand, among other things, plenty of green vegetable could be allowed. The patient, in this case, whose occupation was that of a wood sawyer, denied ever having been troubled with pediculi, but admitted having had several attacks of gout, a fact which would tend, Mr. Hutchinson said, to increase the irritation.

The next case was one of varices of the legs. This patient was an old man of 75, both of whose legs showed a good deal of staining, with chronic œdema, and a number of small varices. The integument also was at one or two spots just beginning to ulcerate. In answer to the question whether he was accustomed to stand for many hours in the day, the man replied in the negative, his occupation being that of a clerk, during which he sat at a desk. This patient also admitted a gouty history, and Mr. Hutchinson remarked that it was the part of all gouty inflammations to be attended with vascular enlargement. The most marked features of gouty inflammation of the skin were duskiness of hue, œdema, and venous turgescence. There were, however, many worse things than gout. Gout often was found associated with longevity. The teeth of gouty people were generally, also, very good, while the nails were sound and strong.

The next case was an interesting one of perforation of the nasal septum. The patient was a young man of about 27, with a clear, ruddy complexion, in whom there was a perforation of the nasal septum, together with some necrosis of the alveolus above the canine tooth on the left side. It used formerly to be supposed that a perforated septum was always an indication of syphilis, but such a view was entirely erroneous, and in proof the patient under notice was a very interesting example. Some years ago, both Sir James Pnget and Mr. Hutchinson pointed out in papers contributed to the medical journals that perforation of the septum occurred in tuberculous patients whose history was absolutely negative in respect to any syphilitic infection. The perforation in the present case was such that Mr. Hutchinson was able to pass a bent probe through one nostril and cause it to project through the other. The patient denied having had syphilis, and there were undoubted signs of his having suffered from tuberculous lesions. In the first place, there was a puckered scar on the cheek, just below the inferior and outer margin of the orbit, the result, in all probability, of a tuberculous periostitis with caries of the bone, followed by adhesion of the skin. Again, the little finger of the right hand was

merely represented by a stump, owing to exfoliation of the whole of the first phalanx. There was, moreover, thickening of the corresponding bone in the little finger of the left hand, and the patient stated that this finger recovered without any abscess forming, some years ago when his hands were affected. Over the middle of the metacarpal bone of the left thumb there was a deep cicatrised hole. All these lesions developed when the patient was about fifteen years of age. At that time he had been apprenticed to a saddler, and in the course of his trade he was required to hold between his knees a large contrivance, commonly seen in saddlers shops, for keeping the piece of work in position while the latter was being sewn. The result of the pressure applied by his knees was the development of a large abscess on the inner side of his right thigh, which, at the time, was opened, while on the left side, in the corresponding situation, a hard lump, freely movable, could now be felt, which was undoubtedly the calcified remains of an abscess. On inquiry, a strong family history of tuberculosis on his mother's side was elicited, a number of his maternal relations had died of phthisis. No lesion of the skin had developed in this case.

The last case was one of mercurial teeth. The patient, a young man of 23, came to show himself, whose teeth were typical of those which had suffered from the effects of the administration of mercury in early life. The enamel was defective, the teeth were thin and discolored, and the first molars, as was usually the case, wholly carious, while the bicuspid were fairly good. On inquiry it was elicited that he had had convulsions in infancy, for which so-called soothing powders were given containing mercury. Associated with convulsions it was common to find lamellar cataracts, and examination showed that in this patient this lesion was present, though not to a degree which interfered much with vision. There was no reason for supposing that the administration of the mercury had anything to do with the development of the opacities in the lenses.—*The Medical Press.*

A NEW METHOD FOR REDUCTION OF FRACTURES OF THE LOWER END OF THE RADIUS.

The particular method of reducing fractures of the lower end of the radius, to be described, has proved so satisfactory during the past few years in my services at the Pennsylvania and Polyclinic Hospitals and elsewhere, and in the hands of others to whom I have frequently demonstrated it, that I now feel justified in giving it wider publicity. The method is as follows:

The surgeon stands in front of the patient and interlaces his fingers beneath the supinated wrist

and palm of the injured member, so that his two index fingers lie crosswise beneath the lower end of the upper fragment of the radius. The palms of the surgeon's hands are then closed in upon the thenar and hypothenar portions of the patient's hand respectively, while the surgeon's thumbs rest parallel lengthwise upon the upwardly displaced lower fragment of the radius. The parts are thus firmly grasped by the surgeon while the following movements are made: The patient's wrist is excessively extended by carrying his hand upward. When hyper-extension has thus been secured the surgeon makes powerful traction upon the wrist in line of hyper-extension. While this traction is maintained the hand is suddenly carried into full flexion, and at the same time powerful downward pressure upon the upwardly displaced lower fragment of the radius is made by the surgeon's thumbs opposed by the interlaced index fingers beneath the lower end of the upper fragment.

The excessive extension of the first portion of the movement has always, so far in my experience, loosened or disentangled the displaced lower fragment, while the subsequent traction, flexion, and direct thumb-pressure have not yet failed to accurately force the lower fragment into its proper position. Separated epiphysis of the lower end of the radius is likewise easily reducible by this manipulation. For comminuted or complicated or very oblique fractures extension and moulding alone are called for in most instances.

Anesthesia is unnecessary for making a single effort at reduction by the proposed method. The patient does not anticipate what is coming, the two movements are made with lightning-like rapidity in a small fraction of a second, and, in nearly every case, perfect reduction has been accomplished before the patient realizes that he has been hurt. Should the manipulation fail to secure perfect reduction at the first attempt, I would not repeat the manœuvre until anesthesia had been induced, for the pain of repeating it would be intolerable. Failing in one effort, then, I would etherize and try again, first this, and afterward, if necessary, any other method that seemed advisable to secure perfect reduction. But thus far in cases that have been seen within a week of the accident I have never had to anesthetize since evolving the method mentioned; all have been reduced at the first attempt.

In cases older than one week, with displacement persisting, I anesthetized before making any effort at reduction. The new method may then first be resorted to, and will often be found the best means of performing refracture and reduction.

For making a diagnosis I have also found a modification of this method most useful. If the surgeon will take the hand and wrist in which fracture is suspected into his hands, as above

described, and, while the thumbs press firmly upon the lower end of the radius or first row of the carpus, make a series of gentle, quick, short flexions and extensions of the joint—rocking it through an arc of perhaps 25 or 30 degrees above and below the forearm as a horizontal plane—he will be astonished at the ease with which crepitus of the bone of the joint and of any small or large bony or cartilaginous fragment will be elicited. And, best of all, the diagnosis of these obscure fractures about the wrist can thus, after some practice, be brought out without giving unbearable pain to the patient. Indeed, I have often in this way, by the most gentle and practically painless manipulation, been able to clear up the nature of intricate injuries about the wrist.

By practising the method upon a normal wrist a sufficient degree of expertness can readily be acquired; by it joint crepitation can be brought out in any wrist. It is well, however, not to practice too much or too often upon the same extremity, as excessive stirring up of the joint contents might originate a synovitis.

In conclusion, the writer desires to say that he will be gratified to have reports of others who may be tempted to employ the method here put forth.—Thomas S. K. Morton, M.D., in *Maryland Med. Jour.*

NITRATE OF SILVER stains are easily removed by painting the part with iodine and then washing in dilute aqua ammonia.

FOR OBESITY.—Take no water or other fluid at any time, except one cup of any desired hot drink, just before rising from the table. Use no liquids while eating. Avoid sugar, nuts and pastry. Eat nothing between meals. Confine the diet to lean beef, mutton, chicken, turkey, fish, eggs, oysters, with one slice of stale bread well dipped, the bulk of the meal being of tomatoes, celery, spinach, turnips, cabbage leaf, but not the fleshy mid-rib, and fresh or dried fruits, cooked without sugar, such as apples, peaches, plums, prunes, prunellas. A little cheese is permissible; coffee, tea, skimmed milk or buttermilk after eating as stated. Exercise should be taken, running being most effectual, before breakfast or before going to bed.—*Times and Reg.*

DR. ANGELO DE BELLOMI, of Città di Amandola, Italy, July 22nd, 1893, says: "I am pleased to inform you of the successful results by the use of your Bromidia as hypnotic and sedative. I prescribed it for a lady suffering from severe vomiting due to pregnancy, and which threatened to cause abortion from denutrition. I had previously tried opium, chloroform, creasote, and oxalate of cerium, all without effect. I gave ten drops in a little sweet wine three times a day before meals.

The vomiting ceased the first day, four days later I was able to discontinue the use of bromidia, and now, after a month, there has been no return of the vomiting, and the patient is perfectly well.

I have found Bromidia excellent in delirium tremens accompanied by insomnia, also in the delirium of typhoid, and in bronchitis with neurasthenia following influenza. In a case of chronic nephritis, where all kinds of hypnotics, anti-neuralgics and analgesics had failed to give relief, Bromidia, in doses of a teaspoonful morning and evening, gave relief at once; and in a few days effected a complete cure. After such encouraging results, I am sure Bromidia has a brilliant future before it.

THE TREATMENT OF MYALGIA.—We know a large number of affections better clinically than pathologically. One of these is that condition of peripheral soreness or painfulness, sometimes an affection of the muscles themselves or of their fibrous sheaths, sometimes involving the fibrous structures of joints, sometimes the peripheral sensory nerves. In the absence of definite knowledge as to the precise nature of cases of the kind referred to, I am in the habit of grouping them together under the common designation of myalgia, and have found the following formula of service in the treatment of a large number:

R—Tinct. gauliac. ammoniat.,
Ext. cimicifugæ fluid.,
Ext. erythroxyli fluid., . . . āā f̄j.—M.

A teaspoonful to be taken three times a day before meals.

When constipation co-exists, an equal proportion of fluid extract of cascara is added. I can warmly commend the employment of this combination under the conditions indicated.—*Coll. and Clin. Rec.*

DISLOCATION OF THE ATLAS ON THE AXIS, WITH ROTATION—Dr. Cyrus Legg recorded the following phenomenal case in the *Lancet*: A young boy in playing leap-frog fell and struck his head in the angle formed by the trunk of a tree and the ground. His head was turned sharply to the left, when he was picked up and the chin lifted. The head was held immovably in this position. There was no pain on touching the lower vertebrae of the neck, but pressure against the upper two gave great pain, especially when it was made on the left side. Efforts of reduction of the dislocation by slightly lifting the head and twisting it to the right while the patient was seated proving of no avail, Dr. Legg laid the boy down, and while the body was held, succeeded in reducing the dislocation by a vigorous twist and jerk, the bone slipping back with a decided click.

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SUMMER COMPLAINT.

With the hot sultry season the usual quota of infantile diarrhoeas makes its appearance, and the white crape and drawn blinds too frequently remind us of its disastrous effects on the infant population of our cities and large towns.

Few medical practitioners there are, but will be called upon to treat numbers of these cases, and many will doubtless see their best efforts, at times, prove futile, and their little patient slip through their fingers, as it were, in spite of all that medical science can suggest.

It will not be inopportune at this juncture to briefly consider this subject.

Generally speaking, the cause of these troubles is some error in the diet of an infant or young child during the hot weather.

The disease cannot well be confounded with anything else, if we but keep in mind the following diagnostic points, as given by Goodhart: "The fever, vomiting, number and appearance of the stools, the age, season and locality of occurrence, and almost epidemic prevalence of the disease."

As regards the management of these cases much has been written but they still present a sad fatality.

In this disease, above all others, so much can be done to prevent trouble, that it becomes the duty of every physician, to do what he can, by advising those who have the care of infants he may be brought into contact with professionally,

as to the best means of escaping from these evils. Those who have the means of taking their little ones away from the city to the seaside or some watering place nearer home should do so; while less fortunate individuals may do much by regular bathing, good food, proper and clean clothing and beds, and by keeping the children during the day in the parks and public squares; an occasional, or still better, daily excursion, on a river or lake boat, combined with the above, will usually suffice to carry the baby safely over the dangerous period.

When an attack occurs immediate removal to the country or some watering place with strict attention to diet may, in itself, be sufficient to effect a cure.

Its effect is sometimes magical. The resort chosen should be near at hand, lest the journey prove fatiguing, but the change of air must be decided.

Should this be impracticable the child may be kept in the parks, or on the boat during the whole day, selecting a cool, shady spot.

The clothing should be as thin as possible, but always with woolen next the skin.

Frequent sponging with tepid water, or, if there be prostration, a full warm bath, will be found of great service.

With regard to diet definite rules should be laid down, as many mothers are prone to great errors in this direction. The thirst may be quenched by cold filtered water, in moderate quantities, or even small pieces of cracked ice may be allowed.

If the child be at the breast, the intervals of feeding should be restricted to every two or three hours, and the duration of nursing may be shortened as may seem advisable; the practice of putting the child to the breast every time it cries cannot be too strongly condemned. With hand fed children, cow's milk forms the basis of most foods, and may be prepared in a variety of ways. A useful preparation may easily be made by adding two parts of whey, previously boiled, to one part each of good cows milk, and lime water.

Should milk disagree, it must be stopped altogether and whey, chicken or mutton broth, raw beef juice, or barley water substituted. The medicinal treatment should be begun by a purgative, of which there is none better, for this purpose, than the old-time castor oil, which is cheap, handy, and efficient.

Should the stomach be irritable, and reject the oil, enemata must be used, consisting of pure water, or of water to which one-fourth part of lime water has been added. The injection should contain from one to two pints, according to age, and is best given with a fountain syringe.

Let the child lie on its left side, with the buttocks raised on a pillow, and gently knead the abdomen during the operation.

Having by these means cleansed the intestine of as much of its irritating matter as possible, mild antiseptics are indicated, in small and frequent doses.

Of these perhaps the best are salol, hydrarg. c. creta, sodium, salicylate naphthalin, and calomel.

The increased peristalsis and tenesmus may be greatly relieved by small doses of Dover's Powder. A good linseed meal poultice with a little mustard in it, made large enough to cover the whole surface of the abdomen, adds greatly to the comfort of the child, and does much to effect a cure. Irrigation of the large bowel, as already mentioned, may be carried out daily, and generally, after it has been done once or twice, meets with but little resistance from the child. If, however, it cause much straining, it had better be discontinued for a day or two.

When prostration sets in, stimulants must be administered in the form of brandy, or what is well taken, sp. vin. rect., flavoured with syrup of orange and diluted with water.

Cleanliness is a most essential part of the treatment; all soiled linen must be immediately removed, and the buttocks washed clean.

Frequent sponging or the whole bath is to be continued throughout, and the child allowed to lie in a clean cool bed, and not nursed on a hot lap or shoulder.

In the later stages when the condition of ulceration is reached, astringents by the mouth are not of much use, with the possible exception of bismuth.

This is a drug which is given in too small doses by many men; Osler says a child of one year can take, with benefit, five grains every hour.

The daily douche should still be continued, but with the addition of some astringent in small quantities, such as nitrate of silver, or tannic acid. The strictest supervision of diet and general hygiene must be maintained, and mild tonics, as wine of iron and elixir of cinchona, continued for some time.

CANADIAN MEDICAL ASSOCIATION.

Elaborate preparations are being made in St. John, N. B., for the reception of the Canadian Medical Association on August 22nd and 23rd next. The gathering will probably be one of the largest the Association has ever had. From reports that come in from time to time it is believed that the profession of the Maritime Provinces will turn out almost to a man. From Montreal, Toronto, and parts further west there will be large delegations.

The following are some of the papers promised: "Cases in Practice," R. E. McKechnie, Nanaimo, B. C.; "A Year's Experience in Appendicitis," James Bell, Montreal; "A Case of Tuberculosis of Arm, of 14 Years' Standing, Cured by Inoculation with Erysipelas," W. S. Muir, Truro, N.S.; "The Treatment of Disease of the Ovaries and Fallopian Tubes," A. Laphorn Smith, Montreal; "Intestinal Antisepsis in Typhoid Fever," D. A. Campbell, Halifax; "The Use and Abuse of the Various Cautery Agents in the Treatment of Nasal Affections," E. A. Kirkpatrick, Halifax, N. S.; "The Present Status of Asthenopia," F. Buller, Montreal; "Eye-strain Headaches," J. H. Morrison, St. John, N. B.; "Note on Epilepsy," W. H. Hatfield, Halifax, N.S.; "Influence of Mind on Disease," J. A. McLeay, Watford, Ont.; "Miners' Heart," R. A. H. McKeen, Cow Bay, Cape Breton, N. S.; "Address in Surgery," S. F. Black, Halifax, N. S.; ————— E. A. Praeger, Nanaimo, B. C.; "Some Functional Derangements of the Liver," J. E. Graham, Toronto; "Treatment of Certain Forms of Uterine Hæmorrhage," F. T. Bibby, Port Hope; "Address in Medicine," Wm. Bayard, St. John, N.B.; "Ophthalmic and Aural Cases," Stephen Dodge, Halifax, N. S.

Papers will be read in the order in which they are received by Secretary. It is important that those intending to contribute papers should communicate with the Secretary at an early date.

Officers for 1893 4.—President—T. T. S. Harrison, Selkirk, Ont. Vice-Presidents—For Ontario, F. R. Eccles, London; Quebec, J. Stewart, Montreal; New Brunswick, J. Christie, St. John; Nova Scotia, W. S. Muir, Truro; Manitoba, R. Spencer, Brandon; North-West Territories, E. H. Mewburn, Lethbridge; Prince Edward Island, F.

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CO-EXISTENCE OF INFECTIOUS DISEASES IN THE SAME INDIVIDUAL.—Edward Carmichael, M.D., M.R.C.P., Edin., cites the following interesting case in the *Lancet* of May 19th, 1894:

The patient, a boy six years of age, had been ill for four days before I saw him, suffering from sore throat, vomiting, and a slight rash. I suspected it might prove to be a case of scarlet fever. The boy was still feverish, although no rash was to be seen, and accordingly I looked for desquamation. This soon appeared and confirmed the diagnosis. What puzzled me was the temperature still remaining high. Diarrhœa set in, then splenic enlargement, but there were no spots on the abdomen. The enlargement of the spleen became so marked and the anæmia so profound that I began to fear I had to do with an acute case of leucocythæmia. Dr. Claud Muirhead kindly saw the boy in consultation with me, and after examination was inclined to think it might be leucocythæmia, but thought I should still keep typhoid fever in view seeing the microscopic examination of the blood showed no very marked increase of leucocytes. After a prolonged illness the spleen began to diminish, the diarrhœa to cease, and a slow but steady recovery ensued, thus putting leucocythæmia out of the question. The interesting and, as I have said, unique point was that this boy infected his sister, whom we had to keep in the house, with a distinct and typical scarlet fever which set in about ten days after my visits began; and some weeks after the father, while helping to nourish the boy, went through a typical typhoid fever, with the usual temperature curve, rash, and diarrhœa, so that my diagnosis was that the boy had both scarlet fever and typhoid fever, that he gave the one to his sister and the other to his father. All three patients recovered. No defective drainage or

water or milk supply could be traced, but I found that a day or to before the illness began the boy had let a key fall through a grating of the street gutter, to recover which he lifted the grating, lay down and scraped among the *débris*.

THE FORMS OF PERITONITIS, THEIR RELATION TO APPENDICITIS, AND THE ETIOLOGY OF EACH.—Roswell Park, A.M., M.D., *Medical Age*, January 25, 1894, considers that failure of diagnosing the lesion of appendicitis is best explained upon the following grounds:

1. To the very common and early diffusion of pain with which many of these cases begin, even those where the phenomena subsequently become strongly localized. This is not always due to ignorance on the part of the patient, for many intelligent people are unable to indicate the place where they first feel the pain of which they so bitterly complain.

2. To the frequent insidiousness of the disease itself, and especially in many of those cases in which pus forms.

3. To carelessness in the first examination, and to failure to appreciate the real nature of the lesion in true appendicitis. This is purely a matter of ignorance, and concerns mainly those men—their number very rapidly diminishing—who diagnosticate all these cases as inflammation of the bowels.

4. To failure to recognize the induration or tumor in the right ileo-cæcal region, which failure may sometimes be well excused because of the distention of the abdomen, the acute sensibility of the part, and the pain which the slightest manipulation produces; in other words, to the impossibility of proper examination.

5. To the fact that some of these cases present, almost from the outset, common signs and symptoms of primary obstruction of the bowels, and that the diagnosis once made by the attendant is not altered to suit the other aspects of the case as they develop. This surgeon thinks that we must have charity for those who make this mistake, because to his knowledge it has been made by good and competent general practitioners.

Dr. Park has learned to believe that,—

1. There is no such thing as idiopathic peritonitis. Every so-called case has a definite origin, which, however, it may not be always possible easily to determine.

2. Many cases of non-traumatic peritonitis have their origin in the female pelvic organs, and are usually caused by the staphylococcus and streptococcus; but some of them are really cases of colon infection.

3. Those cases which depend upon perforation after ulceration, escape of gall-stone into the peritoneal cavity, and lesions of this general nature fall into the septic or putrid forms.

4. Peritonitis due to internal obstruction or strangulated hernia is usually due to infection by the colon bacillus.

5. Cases of peritonitis which do not originate in the manner already referred to, almost invariably proceed from the appendix vermiformis, and of all these a larger proportion are cases of pure infection by the colon bacillus.

6. The larger proportion of these are fatal unless surgical procedures are used.

7. In every case of peritonitis for which obvious cause is lacking, the ileo-cæcal region should be carefully examined, if suspected, should be explored, and this exploration may well be made under an anæsthetic with all conveniences at hand for the most formidable kind of operative procedure.

MEDICAL NOTES.—Never give ergot while there is anything inside the womb.

Hot water is an efficient, omni-present and reliable hæmostatic.

Sulphate of soda is a correct chemical antidote to carbolic acid poisoning.

In acute intestinal obstruction look to the small intestine; in chronic, to the large.

Repeated small rectal injections will relieve the intense thirst following abdominal operations.

Lavage of the stomach with pure water will often rouse the patient from the milder degrees of uremic coma.

Do not neglect the use of the arsenite of copper in the treatment of the acute watery diarrhoeas of infancy and childhood.—*Medical Summary.*

✦ **FATAL IVY POISONING.**—Five school boys (*N. Y. Med. Rec.*) died during the past week at Tarrytown, N.Y., the result of eating the root of *Rhus Toxicodendron*. The symptoms of the poisoning were: stupor, dilatation of pupils, nausea, thirst, feeble, irregular pulse, tremors, convulsions, and

finally collapse. We are not aware of any similar cases resulting in death.

MANAGEMENT OF SYCOSIS.—Clip the beard very close (*Medical Age*), when an excellent soothing application is Lassar's paste, made as follows: Starch and zinc oxide, each two drachms; salicylic acid, fifteen grains; vaseline, one ounce. Before application, the crust should be removed by soaking with oil and washing with soap and water.

LOCAL ANÆSTHESIA.—A mixture of ten parts (*Medical Age*) of chloroform, fifteen parts of ether, and one part of menthol, used as a spray, is recommended as an excellent and prompt means for obtaining local anæsthesia lasting for about five minutes.

FOR LARYNGISMUS STRIDULUS.—*Med. Press and Circular*—

R—Chloral hydratis, ʒss.
Potassii bromidi, ʒij.
Syr. tolutan, f ʒiv.
Aquæ menthæ piper, f ʒss.—M.
Sig.—ʒj every hour.

INSECT BITES (*Medical Age*):

R—Ammonia water, 45 minims.
Collodion, 15 minims.
Salicylic acid, 1½ grains.
One drop to be applied to each spot affected.

Books and Pamphlets.

EXTRACTS FROM JOHNS HOPKINS' HOSPITAL REPORTS. By Wm. Osler, M.D., containing:
I. A General Analysis of 229 cases of Typhoid Fever. II. The Treatment of Typhoid Fever. III. A Study of the Fatal cases. IV. Special Symptoms, Complications and Sequelæ. V. "The Typhoid Spine." VI. Typhoid Fever in Baltimore.

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TENOSUTURE AND TENDON ELONGATION AND SHORTENING BY OPEN INCISION; Advantages and Disadvantages of the various methods. Clinical lecture delivered at Jefferson Medical College Hospital, by H. Augustus Wilson, M.D.