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Original Memoirs

* THE BENIGN PSEUDO-TRACHOMA OF SCHOOL CHILDREN

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During the past ten years the people of New York and, to a lesser extent, of the whole country have been much worked up over the subject of trachoma. The excitement began when the United States Immigration authorities, anxious to find some excuse for getting rid of a very inferior class of immigrants—many of whom from the ravages of the disease were likely eventually to become public charges—made the perfectly proper ruling that, as trachoma was contagious and dangerous, all immigrants afflicted with it should be refused admittance to the country.

A little later the medical inspectors of public schools, eager to show the utility of their work which was then in its infancy, discovered that from ten to twenty-five per cent. of the children were suffering from an eye disease which was declared to be identical with the trachoma of immigrants. Without immediate and radical treatment, it was said, many of these unfortunate children would undoubtedly become blind or be seriously handicapped for life. A similar condition of affairs was at

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once discovered in all parts of our country; the daily papers were devoting space to it, and it became a matter of serious concern to parents everywhere.

The disease is now placed in the same category with other infectious diseases; children infected with it are, in the discretion of an inspector or a school nurse, treated at school or sent to this or that dispensary on pain of being excluded from attendance at school. They are followed up at home during vacation, and in very large numbers, subjected to what is practically compulsory operation at the hands of department surgeons, in whose choice the parents have no voice, and whom they cannot hold responsible for any unfortunate result. More and more the tendency is everywhere evident to establish departmental standards of treatment to which outside physicians must conform, and to establish departmental hospitals and dispensaries which the children must attend no matter how inconvenient.

No one questions for a moment the very great value, both present and potential, of the medical inspection of schools if it can be kept reasonably free from fads and red tape, and no treatment would be considered too rigorous if we were sure that these unfortunate children were really suffering from a dangerous infectious disease. But, as I shall show you, there is great doubt in the minds of many competent men as to whether the disease in question is really trachoma at all; as to whether it is really infectious or not; as to whether it causes any serious present or future inconvenience to the patient; and, finally, whether he does not derive much more harm than benefit from the prevalent modes of treatment.

Trachoma was a term first employed generations ago to designate any and all diseases of the conjunctiva which were characterized by roughening of the inner surfaces of the lid. It has been known since the time of Celsus, who has left behind a description of the disease and its sequellæ which is unmistakable. It first attracted attention in modern times when the remnants of Napoleon's defeated army returned from Egypt and Syria, when it rapidly spread over Europe in an epidemic form.

An entire ships crew or a regiment would be entirely incapacitated within a few days by an infection very much more severe than anything we have seen in this generation. In fact, the descriptions read more like those of gonorrhoeal ophthalmia than trachoma as we know it.

The disease as it occurs in Egypt to-day includes not only trachoma but all the acute infections of the conjunctiva, aggravated by sun and dust and ignorance and filth, under the obsolescent term Egyptian ophthalmia. Since Neiser discovered the gonococcus and gave us a practical method of identification, we have been able to eliminate one disease from those once included under the head of trachoma. This is often the only way of distinguishing, for actual experiments show that a virus which has lost its strength by age or dilution or drying may produce a disease of a chronic type that is clinically identical with trachoma. The same may be said of acute conjunctivitis which, till the isolation of the Koch-Weeks bacillus, was often confounded with trachoma.

Different observers have from time to time identified bacteria which they considered the etiologic factor in trachoma, but unfortunately they do not agree in their identification. The very fact of this disagreement makes it entirely possible that there are several distinct germs which can cause the clinical symptoms of trachoma, just as bacteriology has enabled us to differentiate several distinct forms of acute conjunctivitis which are often clinically alike. Within the past year Greefe, of Hamburg, has discovered a new organism which, if his claims be substantiated, will finally settle the bacteriology of trachoma; but until that time we must base our diagnosis on a clinical picture.

Symptoms.—The inoculation of suitable material into the normal eye is followed shortly by an acute conjunctivitis. The eye becomes red and irritated with a profuse, watery, mucopurulent secretion. When the lids are everted the conjunctiva of the upper lid in particular is seen to be markedly thicker than normal and instead of a pale, smooth, translucent membrane it presents a pile like that of a piece of red velvet. This

thickening is chiefly caused by an inflammatory hypertrophy of the normal papillae of the conjunctiva and frequently the heavy lid acquires by its very weight a characteristic droop.

The subjective symptoms, too, are very marked: the patient is acutely uncomfortable by day or night: his eyes run constantly and feel as though filled with sand, while he goes about with bent head and half closed lids to avoid the intense photophobia. Often he is entirely incapacitated from work of any sort. An acute conjunctivitis tends to run a course of a week or two and then get well; not so with trachoma.

Week after week, month after month, and sometimes year after year, the same symptoms continue. As the lids are turned from time to time, it can be seen that the papillary hypertrophy is gradually being replaced by scar tissue and, as this process extends, the symptoms gradually subside. Finally, in the most favorable cases the conjunctiva of the upper lid is entirely replaced by a thin, white, smooth cicatricial membrane. This is the ideal result in any case of true trachoma and the patient is considered as functionally cured. Unfortunately, however, this does not happen in every case. Whether aggravated by filth or neglect or over-treatment, areas of active hypertrophy are commonly seen alternating with areas of scar tissue in various stages of contraction. The course of the disease is prolonged materially and the final result is not a smooth, thin scar, but a ribbed irregular one which entails on the patient for the rest of his life a series of characteristic sequelae. Through this action the lid becomes gradually incurved till, in exaggerated cases, the eyelashes are turned directly against the cornea and, on everting the lid, a pronounced angle or furrow is seen parallel to the lid margin. This in-turning of the lashes is called *trichiasis* and of the lid itself *entropion*. The conjunctiva of the globe and especially the outer layer of the cornea, which is conjunctival in its structure, are exposed to continuous friction from the rough and incurved lid, which very commonly results in a constant succession of corneal ulcers, with all the misery they cause. Less often a condition of *pannus* results, in which the corneal epithelium reverts to its

conjunctival structure, becomes thick, red and opaque and the conjunctival vessels can be traced clear to its middle. This pannus often clears up completely in time, but the other sequelæ remains as permanent disabilities. The entropion tends to increase with time and, if marked, can be relieved only by operation; the trichiasis necessitates operation or weekly epilation of the eyelashes. The ulcers may heal without leaving scars, but unless very superficial, leave permanent opacities behind, which may easily ruin the eyesight for any but the coarsest tasks.

True trachoma, then, is a disease which often extends over a period of many years, entailing during most of this time the most acute misery and, in the great majority of cases, leaves the patient with more or less permanent disability. When we consider that in certain stages it is very infectious and absolutely incurable in any true sense of the word, we can readily understand the fear of it. The best termination we can hope for is the speedy formation of a thin, smooth scar, and this we hasten by the use of such remedies as nitrate of silver and blue stone, applied daily to the everted lids, since they tend to limit the hypertrophy and make the scar uniform. Occasionally it is advisable to reduce the hypertrophy by operation, such as expression with the roller forceps, or multiple scarification, or friction with a stiff brush or coarse gauze, or even with sandpaper. These measures are all palliative, not curative, and the results not brilliant by any means.

Observers long ago noted a type of trachoma which was quite different from this one, being characterized by the presence of greyish white, translucent granules, situated below the surface of a conjunctiva otherwise perfectly normal. On account of their gelatinous translucent nature they appear like frog spawn or sago grains. This form of the disease appeared to run a benign course and was at first considered a separate entity under the name "trachoma folliculaire," in contradistinction to "trachoma papillaire." So many cases were observed, however, in which the two types were mixed that this distinction was later abandoned, and for many years they have been re-

garded as modifications of the same disease, which is malignant or benign according to the predominance of the papillary or the follicular type.

Microscopic study teaches us that these follicular enlargements are not all specific, since they are simply exaggerations of the adenoid tissue of the conjunctiva which occur in many other conditions. These granulations should properly be regarded as a particular form of reaction of the conjunctiva to irritation of some sort. It may and does occur in trachoma, but is more pathognomonic than are the enlarged glands in the neck pathognomonic of syphilis or tuberculosis. These conjunctival glands may enlarge as the result of non-infectious irritation by chemicals, such as atropin, or by the continued irritation of foreign bodies, such as dust and smoke.

A sharp distinction should then be made between papillary trachoma, which cannot be too darkly painted, and the follicular type which, when pure, may result from several etiological factors is, as a rule, not at all contagious, and runs a very benign course. No such distinction has been made in our public school work, and we see children—occasionally only, it is true—with real infectious papillary trachoma allowed to mingle freely with other children on the playground and in school, so long as they are under treatment; while a very large number, who have a pure follicular type and are perfectly harmless, are treated as though they had a dangerous infectious disease.

Let us consider for a moment follicular trachoma as it appears in children in America. It is commonly attended with no subjective symptoms. It is the regular thing for both parents and children to attend the clinics with an aggrieved air, because an inspector or a nurse has accused the child of having a disease of which he has been entirely unconscious, and which would not have been discovered except by routine examination. This entire lack of subjective symptoms is in strongest possible contrast to the acute misery of a child with papillary trachoma. On eversion of the lids we find many of the pale, frog spawn granules, evidently below the surface of the conjunctiva, which though thrown into folds is often perfectly shiny and pale.

These are chiefly found in the loose conjunctiva of the lower lid and upper fornix; the inner surface of the upper lid, which is the point of election in true trachoma, escaping entirely except in the worst cases. There is frequently no discharge. The condition has been the same, possibly, for months before detention and may, if untreated, remain unchanged for months to come, always distinguished by the same lack of even the slightest discomfort. It occasions none of the symptoms of acute trachoma, the corneal ulcers, the pannus, and the like, and is followed by none of the sequelæ. The follicles finally atrophy and disappear without leaving, clinically at least, any trace of scar tissue, and there occur none of the inversions of the lids, the corneal opacities which invariably remain after a true trachoma.

Microscopically these follicles are found to be composed of adenoid tissue. In the loose conjunctiva of the lower lid and the fornix of the upper these lymphatic glands are very numerous, while in the closely adherent conjunctiva of the upper lid itself they are not only fewer but have less room for enlargement. Hence, the localization of the follicles, their enlargement being due to chronic irritation which may be either bacterial, chemical or mechanical.

This latter faction I take to play a very important role among our school children. If this is true, we should expect the disease to be very much more common in dry, dusty, windy regions, like our western plains; and it is. We should expect to find it more common in the city than in the country, and, in the city itself, we should expect to find it much more prevalent in the densely populated wards than in those less thickly settled; and it is. Here the children play in the dirty street by day, and eat and sleep and study in smoky, over crowded, ill-ventilated rooms. The disease is more than twice as prevalent among the boys whose work and play keeps them out of doors, as compared to the girls, whose tastes are more domestic and tend toward cleanliness. I have before called attention to the frequent presence in the eyes of these children of foreign bodies, such as eyelashes, bits of gravel, and the like, which in one of

us would cause intolerable annoyance, but to which these children have apparently acquired a complete immunity. Underfed, anemic and often overworked, at the age when glandular enlargements are common in all parts of the body, one can pick these children out by their general appearance without looking at their eyes. They are exactly the type of children who have enlarged tonsils and adenoids, enlarged glands in the neck and axilla and groins, and our follicular trachoma may, for all practical purposes, be called "conjunctival adenoids."

There is absolutely no proof of contagion in these cases, except that it often involves several in the same family and is common in crowded districts. Fuohs, sanest of ophthalmologists, says "It is not yet certain whether follicular catarrh is propagated by infection, like trachoma, or is merely the result of the contamination of the air by dust, exhalations and the like. On the other hand, it is quite satisfactorily established that, under certain circumstances, follicular catarrh can arise without any infection whatever; but trachoma can never originate without infection. A further and more important distinction between the two is the course. Follicular catarrh is not associated, or only to an inconsiderable extent, with papillary hypertrophy of the conjunctiva; it never leads to shrinking of the conjunctiva or pannus or any of the other sequelæ. It is a disease perfectly devoid of danger and one which, without any treatment, finally gets well and leaves no trace behind. The question with regard to the relation of the different forms of blenorrhœa trachoma and follicular conjunctivitis to each other will first receive a definition solution through the medium of bacteriology." Greefe's recent studies have possibly put the differential diagnosis on a scientific basis and we may soon hope for a simple and practical microscopic technique. So far, at least, the trachoma bodies have not been found in the type of disease presented by our school children.

Clinically, we can make some very safe and practical rules. True trachoma is always characterized by distinct papillary hypertrophy of the conjunctiva, followed by distinct scarring, and any patient who manifests either of these symptoms should

be treated as an object of suspicion. The presence of follicles alone is of no significance, but when accompanied by conjunctival discharge, the latter would arouse a suspicion of some communicable infection, though not necessarily trachoma. No child who is even suspected of having trachoma should be allowed to run at large with other children, but it is difficult to follow the reasoning which excludes such a child from a well-ordered school room and then turns him loose in the far more intimate association of the street and the home.

Treatment.—Follicular conjunctivitis being harmless and self limited, though extending over a long period of time, the treatment should be of such a kind that the eyes be left, when all is over, in at least as good condition as similar untreated eyes, and this cannot be said of many of the methods in vogue at present. Enlarged glands in the conjunctiva should be treated on the same principles as similar glands in other parts of the body. Instead of a mere routine of local applications, attention should be paid to a child's health, his feeling, and the conditions under which he lives. This cannot be done in a dispensary, but should be a regular part of any school inspection worth the name. Internal treatment is often called for, chiefly tonics like iron, cod liver oil, and especially the iodine preparations.

The benefit to be derived from local treatment depends far more on the persistency and regularity of home applications than on the choice of any particular drug. I have used simple solutions of boric acid, astringent solutions of zinc sulphate, and preparations of silver, both organic and inorganic, and applications of iodine and glycerin, all with good results in some cases and poor ones in others, depending largely, as it has seemed to me, on the amount of home discipline. One cannot get good results when the mother is careless and dirty, or when the child is so spoiled that each application, no matter how painless, is made only after a rough and tumble fight. Applications which are to be made at home should be painless and clean.

At present I am using an ointment of copper citrate, put up in a small tin tube with a pointed end, which is covered and kept clean when not in use by a screw cap. The mother is taught

how to pull down the lower lid and squeeze in a portion of ointment twice a day, which is rapidly diffused through the entire conjunctive sac. The method is cleanly, inexpensive, and economical. It does not hurt the child in the least and makes an appeal to the imagination of the mother far beyond that of lotions and drops. At any rate, I have reason to think that the treatments are better carried out at home and the results better on the average than any method I have tried.

Applications of blue stone I have long since discarded in this condition. In this form copper is not only an astringent but a cold caustic, and it was used with the idea of hastening the formation of the smooth, white scar, which is the ideal result in true trachoma. Its use in a condition which would get well in time without any treatment without the formation of scars, seems to me extremely illogical. I have the same feeling about the usual operations, to which a number of important objections can be raised.

The usual operation forced on these children is known as "expression" with some such instrument as the roller forceps. The lid is everted, one blade applied to the inner and one to the outer surface of the fold, and the conjunctiva milked under very firm pressure. The soft granules burst through the delicate conjunctiva, which sustains a multitude of small and occasionally some large lacerations. The reaction is considerable, requiring ice cloths for some hours, and there is a tendency for the raw surfaces to grow together, unless the surfaces are carefully and painfully separated for a number of days.

Such an operation is without any permanent benefit and with many potential dangers. If done on the theory that the disease is infectious, it is a failure. No possible operation short of a clean dissection of the conjunctiva of both lids and the eyeball could accomplish such a result. No one would think for a minute of treating any known infection, such as a gonorrhoeal ophthalmia, by any such means. Operations actually increase the danger of infection, granted it was there before, because it excites for a long time more or less secretion from the bruised conjunctiva. Every one of the minute slits in the conjunctiva

heals with a deposit of scar tissue and great care is necessary to prevent the formation of permanent adhesions. Operation is urged on parents as a radical means of removing permanently, at one time, a dangerous infection, and appeals to an instinct said to be characteristically American; but, in our public practice at least, the pressure for room is so great that these children are rarely kept in the hospital more than a day or two, and sometimes not at all. In all the cases permanent scars are left, and in many, permanent adhesions of the conjunctival folds, in which sometimes a whole row of vesicles develop, so that it is possible to pick out the children who have been operated upon by the characteristic deformities left behind. Moreover, the operation is not final, for it only removes the adenoids which are large enough to be caught by the rolls and leaves behind a mass of minute ones which eventually become enlarged in their turn. I have seen child after child who gave a history of being operated on every year for two or three years, and still had a mass of frog spawn granulations. Even after operation, the child must be subjected to about the same local treatment that would have been curative had the operation been omitted. There is another fact that is very often lost sight of when considering the advisability of operation. These children are invariably of the strumous lymphatic type in which there is a small percentage of sudden death from anesthesia alone. Here in New York the season for harvesting the annual crop of adenoids is marked by some known and some suppressed fatalities from "status lymphaticus." This is a chance which must be taken in operations which are imperative, but it is a most distressing occurrence whether in public or private, and when it occurs in the performance of a trivial operation which might have been avoided, it is doubly lamentable.

I have endeavored to demonstrate to you that real trachoma is comparatively rare in school children, but that when present it is a dangerous infectious disease against which no measures of isolation and no rigors of treatment are too severe. Follicular pseudo-trachoma, on the contrary, is very common in school children, is not contagious, except possibly when complicated

with some other disease causing discharge, gets well spontaneously after a time, whether treated or not, and leaves behind no malformations or sequela. It should be treated in the simplest possible way, since this yields results, slow but satisfactory. The use of strong caustics is inadvisable and often distinctly harmful. Operative treatment does not lessen the supposed danger of contagion, but rather increases it; does not guarantee against recurrence, nor render unnecessary the routine of local applications, and very often causes permanent deformities in the lids which are worse than the results in the untreated disease. I append a number of formulæ which I have been in the habit of using from time to time.

Zinc Sulph,	Gr. 1.
Vin. Opii,	M. 10.
Aq. q.s.	Oz. ½.
M. sig.: One drop in each eye t.i.d.	
Tr. Iod,	
Glycerin,	
M. Sig.: Apply once a day to everted lids with a swab.	
Cupri. citr.,	Gr. 6.
Petrolat.	Oz. ½.
M. Sig.: Use in the eye night and morning.	

* TREATMENT OF TYPHOID FEVER

By J. C. BLACK, M.D., C.M., Regina, Canada

To understand the treatment of a disease it is essential to understand something of its etiology, pathology and nature of the germ causing the disease.

Typhoid fever is a general infection with characteristic lesions of the intestines due to a specific bacillus (Stergel). Certain predisposing features make individuals more liable at one time than another to this disease. It occurs in adolescence and the young, but rarely in the old. It is a disease of the temperate zones and is more abundant in the autumn. Drainage and other

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conditions affecting the surroundings of persons may influence the predisposition; as given a case in a household and the chances of infection of other members are greater among the poorer classes where crowding is more common and isolation and disinfection are less efficient. Barneger states that typhoid is common among trackmen on railroads.

The lesions of typhoid are found chiefly in the lymph vessels and glands of the mesentery. The Pylers patches become infected and generally break down about the last of second or the third week of the disease and cause ulcers of the intestine. Ulcers are also occasionally found in the large intestine about the hepatic flexure. The liver, spleen and kidneys are generally found enlarged, red and swollen. There is also often a general catarrhal condition of the lungs.

The bacillus typhi abdominalis, the specific organism of the disease is a motile bacillus and is found both within and without the human body. It occurs in the lesions of the intestines and in the intestinal contents especially during the second and third weeks of the disease. It also occurs in the spleen, liver and kidneys. The lungs, parotid and post typhoidal abscesses may also contain the organism. Patients after recovering from an attack of typhoid may discharge the germ for years and one woman has been known to discharge the living germ eighteen years after an attack.

The amount of destruction or disturbance in proportion to the constitutional disturbance is in the majority of cases slight and almost always partakes of a necrotic character and which suggests as pointed out by McFarland that in typhoid we have to do with a toxic bacterium whose disease producing capacity resides in the elaboration of toxic substances. Further proof of this was found by Berger and Frankel who separated from a bouillon culture a toxalbumin which they thought to be the specific poison. Klemperer and Levy also pointed out in certain cases dying with typical picture of typhoid yet without the characteristic post mortem lesions. The only confirmation of the diagnosis being the presence of the bacillus in the spleen.

The typhoid bacilli is very insistent and may thrive upon clothing, in soil and upon water for a long time. Cold has no effect on the germ, being virulent after freezing and thawing several times. "Carbolic acid in strengths that prove destructive to most organisms and to animal tissues have little or no effect upon this organism." (Stergel.)

The first thing in treating a disease is prophylaxis. This includes methods of three distinctive kinds.

I.—General protection to the community at large and prevention against disease. To do this must supply pure water and make an adequate disposal of sewage. This is a municipal function. Besides pure water and disposal of sewage, inspection of food is important, *e.g.*, milk and other kinds of food. One of the most frequent causes of infected food is the common house fly.

II.—Certain especial individual measures.

The danger comes from typhoid bacilli which comes in excretions, as the sputum, stools and urine. Stools and urine should be regularly disinfected by carbolic acid or chloride of lime. Bed linen and body linen should be put in 1 to 20 carbolic. The utensils used as spoons, urinals, etc., should all be disinfected by strong solution of carbolic. The bed and floor should be scrubbed with corrosive sublimate and the room should be fumigated by formalin after it is vacated by the patient.

III.—*Protective Inoculation.*—In the United States Army Medical Service they claim to have prepared an antitoxin which renders immunity for fifteen months.

In the treatment of the patient himself it behooves to conserve his strength in every possible way as the disease is self limited and there is no way yet known of aborting or cutting short the course although some of the profession claim to "check the disease."

To conserve the strength of the patient we must make him as comfortable as possible and give him every benefit of hygiene by putting him at absolute rest in a bright, airy room and covering him lightly with a sheet and blanket. The diet should be as simple as possible and plenty of water should be given as it prevents meteorism and washes out the kidneys. McCrea says:

"There is no doubt that we can reduce the severity of an attack by giving large amounts of water. At least 100 oz. per day should be given. The diet should be mainly of milk. Four to six ounces of milk diluted with two ounces of lime water may be given every four hours.

To reduce the temperature the patient should have the hair clipped and have a well fitting ice cap applied to the head. Cold sponges or tub baths should be given when the temperature is above 102 2-5. Sponges should be given at intervals of two hours or if tubs resorted to at intervals of four hours. The baths should be given with friction as this greatly stimulates the circulation as it first causes a contraction of the peripheral circulation and afterwards dilatation so that the reduction of temperature goes on for some time after the bath has been given by the warm blood being brought to surface and the cold blood being carried to the internal viscera. The baths further aid digestion, quiet the patient and induces sleep, causes deep breathing and so lessens the tendency to pneumonia, increases oxidization and aids elimination by stimulation of the skin.

The bowels should be moved easily every second day. Purgatives should never be given as this would be breaking one of the fundamental laws in the treatment of inflammation as rest of the inflamed part is always indicated. As the small intestine, chiefly the ilium is the seat of the most disturbance we can see that purgatives would stimulate the parts instead of resting them. McCrae says: "It is interesting to note in many of the patients who have diarrhoea early in the attack has followed the taking purgatives. Further he says "the less interference there is with the bowels at any stage, the less trouble there will be from intestinal disturbance." To cause a loose, gentle movement of the bowels about the best that can be given is a small glycerine enema. This by its hygroscopic action will cause secretion of fluids in colon and will stimulate the large bowel a gentle movement and will also act as a lubricant to any hard fecal masses.

Of medicinal remedies I think we require none with the exception of alcohol and heart tonics when indicated. I think

alcohol in the form of whisky or brandy given in doses of Oz. $\frac{1}{2}$ every four hours does good in all cases as it increases the loss of heat, removes blood from the congested internal organs and lessens the resistance to the work of the heart. Through its narcotic action it counteracts the nervous phenomena of fever and induces quiet and rest and this in turn diminishes the demands made upon the strength of the patient. It acts as a food and is very easily assimilated and so lessens the drain made upon carbohydrates and fats. By its diuretic action it eliminates the toxins of the disease. Blackader claims it has some germicidal action.

Among the other drugs that are used are intestinal antiseptics and antiemetics.

As we have seen that the bacilli are not forced in the feces to any extent until the second and third week, and also that the Pyer's patches do not break nor ulcers form until about this time, I think we can safely conclude that the germs up to the end of the second week have lain beneath the mucous membrane in the Pyer's patches and lymphoid tissue, so that antiseptics, if they were strong enough could not possibly affect them. It is also true that the germs are found throughout nearly the whole body, so if you could kill the few in the intestines there would be many left in the spleen kidneys, liver, etc.

It has already been shown that typhoid's disease producing capacity resides in the elaboration of toxic substances so if you could kill all the germs at the end of the second week you would still have the toxins to contend with, and if the body does not develop enough antibodies, it must succumb to the disease. We all know that it is about this time that the greatest battle is waged, as it is about this time that the temperature is highest.

The chief internal antiseptic used is salol. This drug acts by being converted in the intestines into carbolic and salicylic acids. If this drug could be of any use in killing off the few typhoid germs in the intestinal canal, it would have to be given in quantities large enough to produce a quantity of carbolic acid in the intestinal canal strong enough to destroy the animal tissue of the intestines, and then it is doubtful if it would materially hurt the

germs. If you don't give it in quantities that large, it is of no use and the carbolis and salicylic must be excreted chiefly through the kidney which is already overburdened by the havoc caused by the disease, so we see that salol is not only useless but harmful.

Chlorin is another drug much used for this purpose. Its action is purely local. It enters into chemic combination with all kinds of organic substances taking from them hydrogen and forming HCl. If water is present it will set the oxygen free in the form of ozone, which is also a strong irritant. Strong oxidizers or reducers tend to produce chemic changes in all organic matter, body tissues as well as bacteria, so we see as the typhoid is very insistent the animal tissues would get the worst of it but chlorin luckily does not get a chance to act long as it is quickly rendered inactive by the foreign matter which is found in the intestinal canal.

Sollman says, "It has now been proved that complete asepsis of the intestine is impossible owing to the ready absorption and consequent danger of general poisoning, the sensitiveness of the intestinal canal to irritating agencies, and to the fact that ferment action is diminished by all antiseptics."

The soda bicarb which is usually administered with salol if given for a long time renders the stomach contents alkaline and so impairs digestion, makes the stomach more accessible to bacteria so that distension and meteorism is more prevalent.

Of the antipyretic drugs quinine and the coal tar products are the ones mostly used. The temperature is only one of the symptoms of the disease so why use drugs to diminish the temperature which have also a toxic action, when it can be much more efficiently done by hydrotherapy. Since hydrotherapy has been introduced instead of drugs into the New York hospitals the mortality has dropped from 16 to 2.5 per cent.

Quinine has a toxic action upon all protoplasm and an inhibition of ferment action. Its chief harmful action on a typhoid is due to its hindrance to digestion and therefore to the nutrition of the patient. "It hinders the action of ferments and absorp-

tion of the products. A favorable action which it might be supposed to possess as a bitter is largely counterbalanced by the unfavorable actions mentioned; consequently the utilization of food tends to be lessened when even small doses are used continuously." (Sallmon.) Quinine causes a marked hyperemia of middle ear so we can readily see it predisposes to otitis media.

The coal tar products, phenacitin, phenagen and acetanilid, are more to be feared than quinine on account of their action on the heart which they first accelerate and then depress. They also retard digestion and are irritants to the kidneys.

We therefore see that all the drugs instead of sustaining the body against the ravages of the disease aids the disease in the metabolism of the body. If a drug has to be given as a placebo I would advise dilute HCl in small doses, as this aids rather than retards digestion.

To briefly summarize the treatment I would say, (1) Absolute rest in bed; (2) Act as simple as possible with large amounts of water; (3) Hydrotherapy to reduce the temperature; (4) Leaving the bowels alone as far as possible and using enemata if necessary; (5) Drugs only when indicated; (5) Constant vigilance to recognize complications.

It cannot be repeated too often that there is no routine treatment. The patient as well as disease must be considered, and the words of Oliver Wendell Holmes kept in mind: "If a doctor has science without common sense he treats a fever, but not this man's fever."

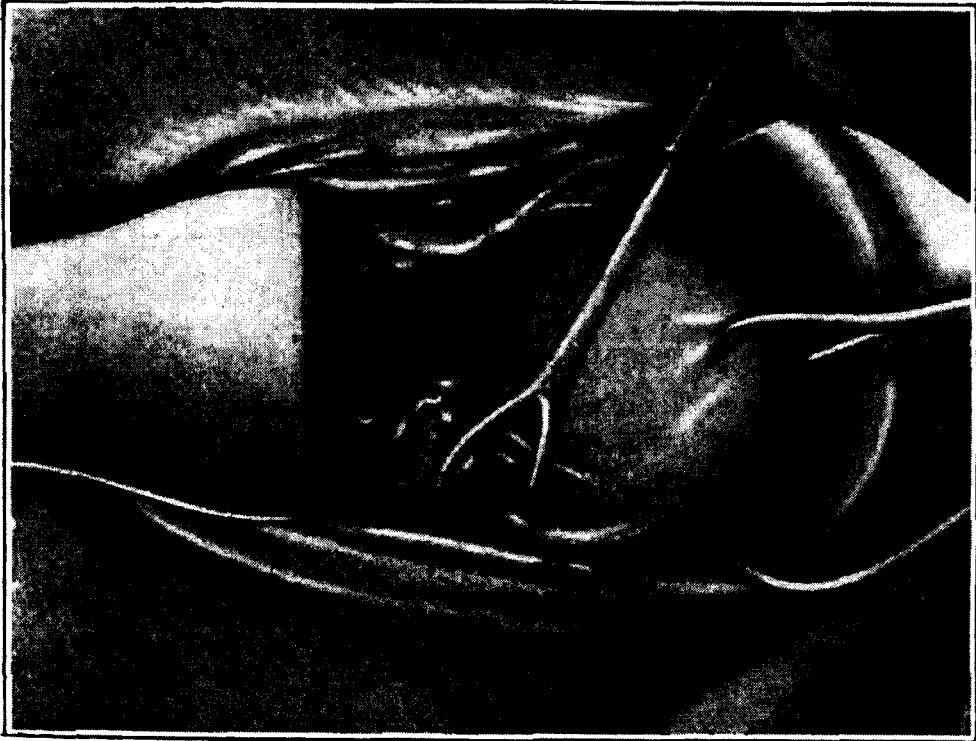


FIG. 1.—Uterus delivered beyond the vulva, showing access to ovaries and tubes and easy entrance into the pelvic peritoneal cavity. The bladder is lifted up by the anterior speculum.

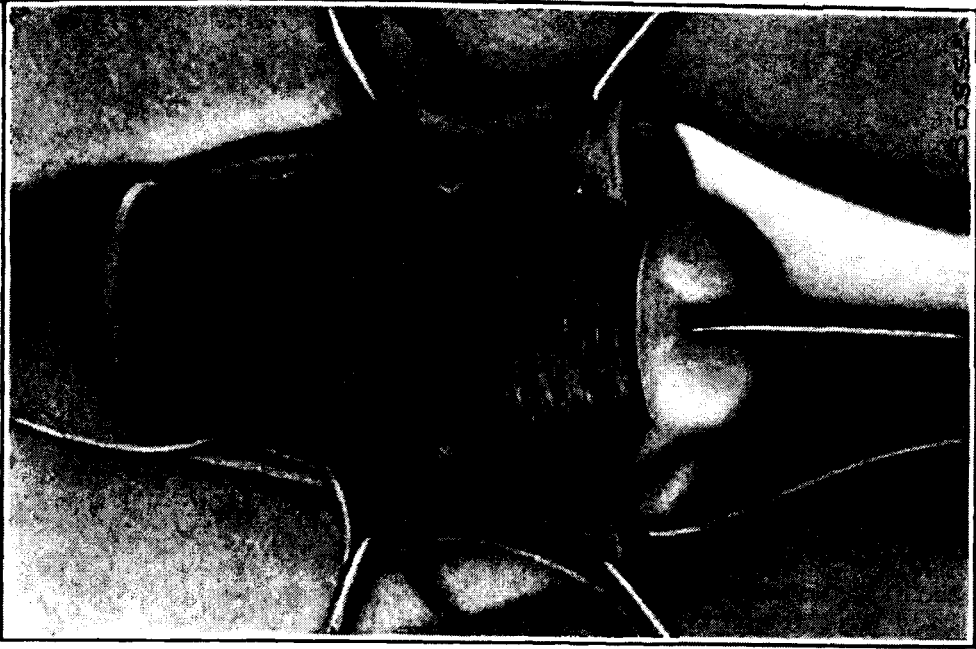


FIG. 2.—Showing vaginal flaps dissected free of the cervix and bladder and held to either side by forceps. The bladder is lifted up by the anterior retractor. Immediately below the anterior speculum is seen the smooth vesico-uterine fold of peritoneum. On either side, just below this peritoneal fold, are seen the two uterine arteries. (Bandler)

* SOME OBSERVATIONS ON VAGINAL CELIOTOMY

By SAMUEL W. BANDLER, M.D.

Adjunct Professor of Gynaecology, New York Post-Graduate
Medical School and Hospital

Vaginal celiotomy, which includes the anterior and posterior methods, has of necessity been practised for many years in the performance of vaginal hysterectomy. Anterior vaginal celiotomy first gained its real dignity when Mackenrodt and Dührssen began to perform vaginal suspension and vaginal fixation for the correction of retroflexions and retroversions. From that time on, this route found an increasing number of indications until it was used, and can be used today, as a path for the performance of almost any operation included under the phrase, "operation for pelvic gynaecological disease."

The posterior route has been used for years in the opening of pelvic abscesses. This, however, is strictly not a celiotomy, for, in a large proportion of cases, the pus is not in the peritoneal cavity, but is in the pelvic connective tissue posterior or lateral to the uterus. In the vast majority of cases of large pyosalpinges and tubo-ovarian abscesses opened per vaginam, adhesions in the cul-de-sac of Douglas practically wall off the peritoneal cavity. The posterior route is, of course, of value in the treatment of pelvic peritonities according to the method of Pryor.

This posterior path may be used to great advantage in the removal of small movable ovarian tumors which are prolapsed into the cul-de-sac of Douglas. Its main value is as a diagnostic aid, especially in differentiating intrauterine from extrauterine gestation. The operation is extremely simple; it takes only a minute to enter the peritoneal cavity by a longitudinal or preferably transverse incision. If no free blood or clots are found

*Reprinted by special permission from the Post-Graduate, Dec. 1909.

in the cul-de-sac of Douglas and if the tubes are normal, the exclusion of ectopic gestation is absolutely certain. If ectopic gestation is disclosed, the choice of operation, vaginal or abdominal, rests with the surgeon.

The early anterior vaginal operations, by Mackenrodt and Dührssen, were through a transverse incision plus a longitudinal of no great length or a long longitudinal incision. When, however, the indications for anterior vaginal celiotomy broadened, a long longitudinal incision joined to a long transverse incision became necessary, and today the method of entering the peritoneal cavity by the anterior route is no longer a haphazard procedure. It is a method which does no injury to any structure; it makes clean-cut wounds and nicely dissected surfaces and gives entrance into the peritoneal cavity through a space several inches in diameter. Fig. 1.

This method, aside from any value as a diagnostic step, can be safely used for the removal of small movable hard ovarian tumors, small fibroids of the uterus and large movable ovarian cysts. It may be used also in some cases of ectopic gestation where no active bleeding is going on.

Now, as to its application in radical or conservative operations on the adnexa. I do not consider the vaginal method advisable for the removal of pus tubes or of tubo-ovarian cysts adherent to the lateral pelvic walls, unless at the same time a hysterectomy is done, for without this latter step the operation is not so clean cut; finger dissection is rendered difficult; raw surfaces are left; the peritoneum is more extensively injured, the sigmoid likewise. It is difficult to stop oozing, and drainage, if needed, means incision of the posterior cul-de-sac.

Conservative operations on the adnexa, especially where little is felt on bimanual examination, as in cases of sterility, furnish no contra-indication, as a rule, because of adhesions or pus accumulations. However, I do not find the method well adapted to conservative operations, for it does not permit, in intraperitoneal operations, of nice adaptation, of clean cut edges, of cutting of the ligamentum infundibulopelvicum, all elements greatly to be desired in every case, especially in those where slight adhesions have produced marked suffering.

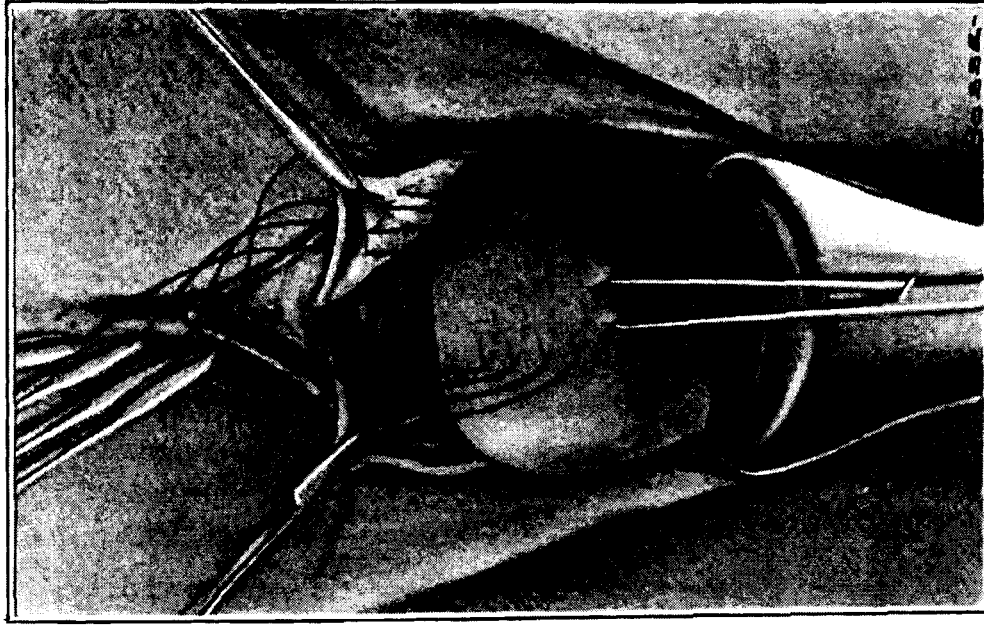


FIG. 3—Showing four fixation sutures, two of silk and two of chromic catgut, passed through the anterior wall of the scarified fundus uteri and through the edges of the dissected vaginal flaps (Fig. 2). The bladder is now within the peritoneal cavity resting on the post wall of the uterus. When the uterus is pushed back behind the vaginal flaps but anterior to the bladder, and the four fixation sutures are tied, the uterus has been fixed to the anterior vaginal wall and cystocele and retrodeviation are corrected.

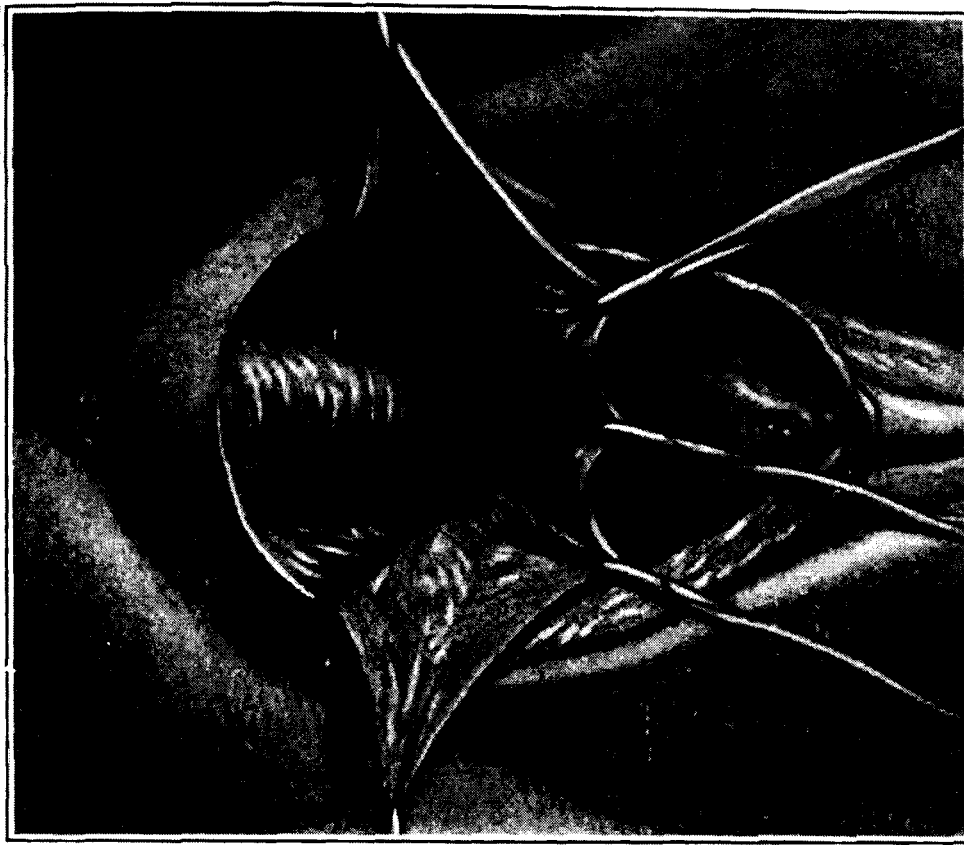


FIG. 4. The final step in the author's operation for prolapse of the uterus, showing dissection of a perineal flap extended upward by a thorough dissection of the entire posterior vaginal wall up to the posterior fornix. These flaps are to be resected. Union of the cut edges then resulting is made by interrupted chromic sutures for two thirds of the distance downwards. The denuded area still left is closed by the author's special perineal method. (Handier.)

Anterior vaginal celiotomy makes vaginal hysterectomy an operation of simplicity and ease, for at no step are we working in the dark. Every bit of tissue which is tied and cut is clearly exposed to the eye. The bladder and ureters are removed from points of danger and the shock, annoyance and fear associated with abdominal operations are obviated. Fig. 2.

As to the use of vaginal celiotomy in the correction of retro-deviation of the uterus, there is much difference of opinion. I do not use this method for retrodeviations, as such, for several reasons. In the first place, fixation of the uterus by the vaginal method should never be done in any woman who is to bear children. In such cases, only a vaginal suspension should be considered. Such operations are performed simply to correct the retrodeviation when the uterus is mobile. Vaginal suspension does not lift the uterus upward, a result much to be desired in those few cases where retrodeviation does produce marked subjective symptoms. When the uterus is not fully mobile, but is fixed to a greater or lesser degree by adhesions, the correction of the retrodeviation is not a factor of great importance. Then the indications for the abdominal or vaginal method come under headings mentioned above.

The two most important indications, however, for the practice of anterior vaginal celiotomy, are to be found under the terms *crystocele* and *prolapse of the uterus*. Most important, I say, because no other methods in my opinion offer the same certainty of permanent cure. In both these cases my modification of the method first practiced for the cure of *retroflexion* and *retroversion* by Mackenrodt and Dührssen is used.

The uterus in these operations serves as a buffer. It prevents descent of the bladder to its former pathological seat, and it prevents subsequent prolapse of the uterus. The uterus can not prolapse so long as it is fixed to the anterior vaginal wall in *anteversion* or *anteflexion*. Fig. 3.

CLINICAL LECTURE

BY L. WEBER. M.D.

Professor of Medicine, New York Post-Graduate Medical School and Hospital

THE BISMUTH TREATMENT OF GASTRIC ULCER. ALSO NAMED PEPTIC ULCER.

Virchow's theory that gastric ulcer is caused by embolism of an arteriole with subsequent infarction, necrosis and ulceration of the mucous membrane still prevails.

Every one of the twenty or more cases of gastric ulcer which I have had under my care since 1865 have received the same kind of treatment, *i.e.*, bismuth and sod, bicarbonate with very small doses of morphine, *t.i.d.*, and fluid diet, enemata to relieve the bowels and rest in bed for a week or two.

Nearly all the patients were young women, often chlorotic, single or married, between 20 and 30 years of age, and not one of them was in perfect health at the time of the first attack. The four male patients between 25 and 40, I have records of—the last one under treatment now—gave a history of more or less indulgence in liquor and tobacco, and injudicious eating. The peptic ulcer, superficial or deep, small or large, of oval or irregular shape occurs most frequently near the lesser curvature in the posterior wall of the pyloric portion of the stomach.

I do not believe there has been a case of duodenal ulcer among my series of cases. About twelve of them were mild, and tenderness or pressure in the epigastric region was generally present, but to the left of the tenth or eleventh dorsal vertebra was more often absent. In doubtful cases the pain in the stomach elicited by an ounce or so of well salted broth before breakfast will help to clear up the diagnosis. In about six cases the usual symptom-complex was convincing at the first examination, and in three other cases severe hematemesis was the very first symptom of ulcer, while the sense of pain was almost absent. It is interesting to note that one of the latter

occurred in a patient lying in bed after recent confinement, showing at the same time unmistakable signs of secondary syphilis.

Nine of the patients had pulmonary tuberculosis before the first attack or developed it after. About one-half of the cases had relapses, which again yielded to the same treatment. The three cases which began with severe hemorrhage from ulcer, required repeated saline infusions to overcome shock and prostration, and prolonged treatment afterward for secondary anemia. Local peritonitis or subsequent signs of peritoneal adhesive troubles, I have had to contend with in only one of my series, concerning a male who passed out of my observation after a year's treatment. Death attributed to ulcer has not occurred in any of them so far as my records have gone. The treatment ordered in every case has been rest in bed until the acute symptoms had passed, fluid and soft diet of lukewarm skimmed milk, farinaceous soups, egg albumen, water and later on farina, fine hominy, etc., Subcarbonate or hydrate of bismuth gr. xv, with sod. bicarbonate gr. xv, and morphine one thirtieth gr. t.i.d. in the mild cases; bismuth gr. xxx and sod. bicarb. gr. xv, and morphine gr. one-twelfth to gr. one-sixth in severe cases to be continued for two weeks or longer until the patient is convalescent. In duodenal ulcer we shall have recurrent intestinal bleeding, pain in the right hypochondrium after eating, gastric crisis.

In more or less severe abundant hematemesis a large icebag is placed over the pit of the stomach, no food nor medicine by mouth, ergotin hypodermatically, adrenalin 1/100 in drop doses on the tongue, ligatures around the thighs; eventually surgical help will be required.

THE SASKATCHEWAN MEDICAL JOURNAL

HARRY MORELL, M.D., C.M., *Chairman of Publication Committee*

All communications relating to this publication should be sent to the
Saskatchewan Medical Journal, Regina, Saskatchewan, Canada.

Box 1106.

Editorial Notes

We pointed out in our last issue, that up to the present time, the Council of the College of Physicians and Surgeons of Saskatchewan had never rendered a report of their proceedings, nor had at any time caused a medical register to be printed as required by the Medical Profession Act, Section 61, Chapter 28.

Saskatchewan
Medical
Council

How long are we to wait for this report? A movement on foot is hinted at, whereby the medical organizations at Moose Jaw, Saskatoon and Regina, take up this question and formulate a plan to demand full publicity to all proceedings of the Council.

It does seem strange that no report of any kind whatever has been published since this Council was organized.

Some time ago the Council of the College of Physicians and Surgeons of Ontario had to face and bring before its members certain questions. For instance, insinuations that petty grafts were reported by some at least of the members of the Ontario Medical Council, were made at the special meeting held at Toronto. Dr. E. A. McColl, of Belleville, stated to the council that he had heard ugly rumors flying about, in which

Ontario
Medical Council

the word graft was used in connection with charges made by the members of the examining board. Dr. Hart told of two members from the same place, one of whom had charged \$28.80, while the other charged \$65; the mileage of one being submitted as \$143.90, while that of the other examiner was only \$65. Dr. Moorehouse said he had no hesitation in saying that some members had charged double. The finance committee was instructed to make investigation and report in July.

The Council have also before the Ontario Legislature certain amendments to the Medical Act. Included is one asking for power to erase from its register at once members who have been convicted for disgraceful and unprofessional conduct. The law as it now stands provides that his name be *expunged* at a regular meeting of the Board.

Evidently the question of Inter-Provincial Registration is interesting to those in Great Britain as well as ourselves. We clip the following from "Canada," an English publication: "We have more than once drawn attention to the chaotic condition of medical registration in Canada. At present, since education is under provincial control, the medical diploma entitles the holder of it to practise only in the province in which he passed his examination. Some years ago Dr. Roddick tried to bring in legislation to remedy this serious defect in the laws governing medical registration, by establishing a common standard throughout the Dominion. It seems absurd that a young man who has studied medicine at any Canadian college of recognised standing, and has passed the necessary examination to enable him to obtain a diploma, should be compelled either to stay all his life, if he follows his profession, in the province in which his college is situated, or to pass fresh examinations if he goes over the border. One has only to imagine a case of a doctor living on the confines of a province, to see how absurd is the present situation. Such a doctor would have to refuse to attend a serious case if the patient happened to be just on the wrong side of the border. We are glad, therefore, to see that once more the subject is receiving attention, and there is a

Canadian
Medical Council

prospect that at an early date legislation will be put in force to create a medical council of Canada, composed of representatives of the Government and medical councils of the provinces and the colleges. This council is to have power to establish qualifications in medicine which will authorise the holders to practise in all the provinces, and also to define the courses of study and the examinations to be undergone, and to keep a register of licensed graduates. We hope some day that we shall go a step further, and that the medical diploma will be standardised throughout the Empire. It seems ridiculous that, as matters stand, a Canadian doctor cannot practise in England, neither can an English doctor practise in Canada, without first passing a new examination."

We are glad to note that the slight misunderstanding between the governors of the Regina General Hospital and the medical practitioners of Regina is in a fair way to be amicably settled. The matter resulted from certain remarks made by the one medical member. The Governors could not and would not accept responsibility for these remarks. Very likely the solution of the question will be that no medical man will be on the Board of Governors in the future, and that the medical practitioners will nominate three or more members of the profession to the Governors as an advisory board, and that this arrangement will be satisfactory.

The attention of our readers is invited to the article elsewhere in this issue by Dr. Alger on "The Benign Pseudo-Trachoma of School Children." This article is very apropos, on account of the prevalence of eye disease in those coming from Europe, where it seems to be epidemic, and also from the fact that true trachoma has been found sporadically in this Province. The article is comprehensive, and will be of service to many in the question of diagnosis.

Authorities differ sometimes, but we do know that the true germ has not been isolated up to the present time.

The Department of Public Health of the Province of Saskatchewan is doing excellent and efficient work under the direction of the Commissioner of Health, Dr. M. M. Seymour. Dr. Seymour has established and is conducting a publicity campaign in all parts of the Province, educating the laity by lecturing and illustrating by limelight views, all phases of anti-tuberculosis work. In conjunction with this the Commissioner is forming local Anti-tuberculosis Leagues in different sections of the Province.

News Items

A medical man is wanted at Elstow, Sask. Information may be obtained by writing to W. S. Taylor, secretary Board of Trade.

Those of our readers who are interested in the various forms of Physiologic Therapeutics (including Hydrotherapy, Electrotherapy, Massage, Hyperemis, etc.) will be glad to know that it is proposed to shortly inaugurate a new journal devoted solely to the delineation of the progress made in these lines of therapeutic endeavor. The title of this venture is The American Journal of Physiologic Therapeutics, and the office of publication is at 72 Madison St., Chicago.

The annual meeting of the Victorian Order of Nurses was held recently in Ottawa. The delegates were met at Government House by Earl Grey, who is the presiding officer. Treasurer Frazer reported that the finances are in a very satisfactory state. There is a balance to the credit of the Minto Cottage Fund of \$6,252.72.

Figures prepared by a Toronto newspaper show that infants born in New York have a better chance of living than those born in Toronto. In the over-crowded slums at which we are accustomed to hold up our hands in horror the new born infant has a better chance for living than in our own city. The death rate of infants under one year of age in every thousand born in

New York is 144, in Toronto it is 155 and in Rochester it is 86 per thousand.

Arcola, Sask., is to have an up-to-date modern hospital erected this year. The Board of Trade, citizens and ladies of this city have combined, and plans are being prepared; and it is hoped that the building will be started shortly.

Medicine Hat has decided to erect a ten thousand dollar isolation hospital this year.

Wm. H. Lever, of Lever Bros. Soap Co., London, Eng., has given \$510,000 to the Liverpool School of Tropical Medicine, of which he is chairman. Of this sum \$445,000 represents the proceeds of the damages obtained some time ago by Lever Bros. in their action against the Daily Mail in the soap libel case.

Regina is to erect an isolation hospital, modern in every respect. There has been a long felt want in this direction for some time, as Regina receives cases from points outside the city proper. There promises to be quite a boom in hospital construction this year in Regina; besides the above institution the city hospital will be completed at a cost of about one hundred and fifty thousand dollars, and the Grey Nuns are having plans prepared in Montreal by the Maxwell's for their hospital which will be a magnificent modern hospital costing about one hundred and fifty thousand dollars.

Saskatoon is contemplating an addition to their municipal hospital, this year.

A new scholarship for research work in surgery, known as the George Peters Memorial Scholarship, is to be established in the medical faculty of the University of Toronto. Dr. G. A. Peters, whose death occurred three years ago, was connected with the university for 20 years, and for part of that time filled the position of professor of surgery.

Mr. W. J. Gage has offered to the University of Toronto five scholarships of \$100 each and a gold and silver medal, each

carrying \$50 cash, to graduates in medicine of the fourth and fifth year. The idea is to encourage the study and cure of tuberculosis.

A Pasteur Institution is in the process of formation in Toronto. Several prominent medical men waited on the Cabinet and pointed out to that body the urgent necessity of having such an institution. Up to this time the New York branch of the Pasteur Institute has been depended upon.

Book Notices

PREPARATORY AND AFTER TREATMENT IN OPERATIVE CASES. By *Herman A. Haubold, M.D.*, Clinical Professor in Surgery and Demonstrator of Operative Surgery, New York University and Bellevue Hospital Medical College, New York; Visiting Surgeon Harlem and New York Red Cross Hospitals, New York, etc. New York: D. Appleton & Co.; Toronto: D. T. McAinsh & Co. Illustrated, price \$6.00.

LIVING ANATOMY AND PATHOLOGY. The Diagnosis of Disease in Early Life, by the Roentgen Method. By *Thomas Morgan Rotch, M.D.*, Professor of Pediatrics, Harvard University. Octavo, 240 pages, 303 illustrations, cloth, \$6.00. Philadelphia, London and Montreal: J. B. Lippincott Company.

"The Roentgen ray has been largely used as an aid to diagnosis in both early and later life, but a systematic exposition of the practical results of the Roentgen method of examination has not yet appeared.

"The purpose of this book is to deal as little as possible with the questions of apparatus and technic, and to devote the entire space to the actual clinical teaching of the subject.

"This teaching is accomplished by means of illustrative plates, by legends corresponding to them, and by a text explanatory of what can really be seen in health and in disease in early life.

"This book is devoted to the diagnosis of disease and does not deal to any extent with treatment. It is intended to provide a

means by which a fair knowledge of the Roentgen method can be acquired by the student when the personal instruction of a skilled Roentgenologist is not available.

"The plates are placed opposite to the legends, and the illustrations and details are given as would be done if an expert Roentgenologist were describing the plate by means of an illuminator. The different parts of the plate, whether normal or abnormal, are designated by leaders and by letters, just as the Roentgenologist would designate them with his pointer."

The description above is from the prospectus of this work, and in many ways the reviewer feels that it does not do justice to the book. The book may be taken and used as an atlas, from the abundance of the large illustrative plates, which are excellent, and not spoiled by being shown on paper with just the proper finish. The volume is highly recommended.

MORELL.

Personals

Dr. A. B. Stewart, Rosthern, is leaving in the middle of March for Europe, where he will take up Post-Graduate work in the large medical centres.

Mr. E. Dougan, representing Messrs. Hartz, of Toronto, was in Regina recently. Mr. Dougan has many friends in the Province.

At the annual assault-at-arms held in the Queen's gymnasium, Kingston, on Saturday evening, February 26, T. H. C. Wallace won the middleweight boxing championship of the university. On March 11 he will endeavor to uphold the honor of his college against the champions of McGill and 'Varsity. Wallace is from Lumsden, Sask., and is in his third year in medicine at Queen's. He won the half-mile championship of Saskatchewan at Regina last July.

At the meeting of the Grand Lodge of Saskatchewan of the L.O.L. held in Regina, Dr. D. D. Ellis, of Fleming, Sask, was elected Grand Master of the Order.

We are very glad to note that Dr. A. S. Gorrell, of Regina, who has been confined to his home for the past two weeks, with an attack of grip, is convalescing.

The noted writer and physician, Dr. S. Weir Mitchell, of Philadelphia, was eighty-one years of age on February 14th.

Obituary

WORKMAN—January 4, at Toronto, Florence Workman, youngest daughter of the late Joseph Workman, M.D.

CLELAND—At Toronto on January 2, Doctor George S. Cleland. The doctor was well known, and had many friends in Western Canada. He was for years an Assistant Demonstrator of Anatomy in University College.

PIPER—At Toronto, Doctor James M. Piper. Dr. Piper was Surgeon to the Seventh Fusiliers and was for over twenty-five years a general practitioner in London, Ontario. During the past four years he resided in Toronto.

Items of General Interest.

The Belgian Sleeping Sickness Expedition.—The Belgian expedition which will leave shortly for the Congo to make investigations in connection with sleeping sickness will be in charge of Dr. Rhodain, Professor of Bacteriology at the University of Louvain. Work will be begun in the northern part of the Katanga district. The expedition will go to Bukama, in the neighborhood of the Kalengwe Falls, on the Lualaba River.

By reason of its exceptional antispasmodic and tonic influence on the entire reproductive system, Ergoapiol (Smith) is of especial value in instances where a debilitated state of the pelvic viscera is the sole or a contributing cause of the distress attending each catamenial visitation.

The Carnegie Hero Fund Trustees have awarded an allowance of £35 per annum, with a supplement of £15 for the first year, to the widow and family of Dr. John Herbert Wells, of St. Mary's Hospital, London. Early in 1908 Dr. Wells undertook pioneer investigation into the treatment of glanders, and was so far successful that he was able to save the life of a patient who suffered from the disease. In the

course of laboratory work in connection with the case the doctor contracted the infection, and he died in October last year after a lingering and painful illness.

Ask the critics of Tyree's Antiseptic Powder to furnish as good a proof of the merits of the imitations and substitutes they offer as this. The bacteriological and comparative tests made by me of Tyree's Antiseptic Powder, were made from a sealed package purchased in the open market, and were duplicated three times. The results of these experiments show that the prominence given this compound is well founded, for the preparation responds to all the requirements of a first-class antiseptic and germicide, with practically no toxicity. This is certainly an advantage over the standard antiseptics, such as mercuric bichloride, carbolic acid and formaldehyde.

At a meeting of the Senate of the University of London recently a letter was read from Mr. Otto Beit, announcing a munificent benefaction in the interest of medical research. Mr. Beit's brother, the late Mr. Alfred Beit, left £50,000 to found an "Institute of Medical Sciences." As the formation of this institute has for various reasons become impossible, Mr. Beit has decided to increase the sum left by his brother to £215,000, so as to yield an annual income of about £7,500. This fund, which is to be named "The Beit Memorial Fellowships for Medical Research," is to be devoted entirely to the furthering of medical research work in all its branches. With this object a sum of £250 a year for three years is to be granted "to any man or woman of European descent, graduate of any approved University within the British Empire, who is elected to a Fellowship." The first election of Fellows will take place on or before March 1, 1910. Not more than 10 Fellows will be elected on that occasion.

The fund is to be administered by a board of trustees, who will be assisted by an advisory board of medical men. The University Senate has addressed to Mr. Beit a reply expressing gratification at his splendid endowment of scientific research.

C. S. Chase, M. D., Professor of Materia Medica and Therapeutics, Medical Department of the Iowa State University, Surgeon to the Chicago Great Western Railway, ex-Secretary of the Iowa State Medical Society, says "Even a somewhat limited observation of the therapeutic action of Waterbury Chemical Company's Cod Liver Oil Compound in my practice leads me to believe that a chemical process has been devised which renders this preparation an invaluable reconstructive agent that must have an extended use among physicians."