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# Original Articles

## SOME OBSERVATIONS ON THE TREATMENT OF CHRONIC PURULENT OTITIS MEDIA.*

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Not so long since the modern perfected procedure of tympano-mastoid exenteration was thought to have solved all our difficulties in the attainment of a cure for a persistent purulent aural discharge. Many otologists were so enthusiastic as to hold the operation indicated in all cases in which an aural discharge had persisted in spite of careful conservative treatment for so short a time as nine months. For a time enthusiasm clouded the duty of the otologist towards the function of hearing, and so general became the practice of this operation that, in America at least, the pathological causes of an aural discharge seemed to have become obscured.

The operation seemed so logical, so radical, so perfect in detail, that as time went by the many failures to secure an absolute cure seemed almost incompatible. Investigation was thus stimulated, with the result that the extremes of radicalism now no longer obtain. These extremes were never reached in Europe as they were in America, and in this regard I was much impressed by a paper of Ruppert, an assistant in Prof. Bezold's clinic at Munich, which appeared in June of last year. In this clinic the extreme of conservative treatment of middle ear suppuration obtains, and Ruppert, in collecting his statistics, went outside the records of the clinic, taking instead the case records of Dr. Schiebe, of Munich, a former pupil of Bezold. These records extended over

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a period of 17 years. Bezold's treatment with boracic acid powder was the only treatment used. In his statistics, the author includes only such cases as had persisted for years, or such as had ceased for years, leaving a permanent opening in the membrana tympani, only to again set up a chronic discharge.

Even acute cases, in which the discharge lasted a year, were excluded. One thousand one hundred and eighteen cases were seen; 1,080 were uncomplicated, and of these, 592, or 55 per cent., had a central perforation, while the remainder involved either the membrana flaccida or the annulus tympanicus. The patients were treated every day until results were apparent, when the treatment was reduced to three times per week. Three hundred and ninety-five cases with central perforation were treated, and in only 24 cases, or 6.1 per cent., was a cure not effected, and 75.2 per cent. of all of these cures were effected within two months of instituting treatment. Three hundred and fifty-nine cases of perforation involving the annulus were treated. The formation of cholesteatomata was observed in 53.8 per cent. of the cases, involving the margotympanicus, and in 70.5 per cent. of the cases with perforation of Schrapnell's membrane. Now, of these 359 cases, only 10.6 per cent. remained uncured, and 64.6 per cent. of all cures took place within two months. Only seven cases came to operation.

In the face of the generally adopted procedure obtaining in America, these statistics were to me astounding.

The term otitis media purulenta chronica is a general one. It indicates nothing more than a persistent purulent discharge from the middle ear. The term itself gives no hint as to the underlying pathological cause of the persistent discharge of pus. To determine the actual pathological condition is an absolute necessity, in order to institute rational treatment.

Have we a chronic suppurative condition of the lining mucosa of the tympanum without involvement of the underlying bone? Have we ulceration of the mucosa with necrosis of the bony walls? Is there caries of one or more of the ossicles? Is the mastoid antrum involved? Are we dealing with a specific bone lesion, such as in tuberculosis or syphilis? Have we to do with a pressure necrosis from the presence of cholesteatomata?

All of these conditions present the same symptom—a chronic purulent aural discharge—and in instituting treatment, how often is the symptom substituted for the cause!

Much help is often obtained in arriving at a prognosis from the pathological findings upon examination of the discharge itself; this, however, is more true of the acute cases than of the chronic. It is generally conceded that of all pathogenic bacteria, the diplo-

coccus pneumoniæ is the most prolific of the acute condition, the streptococcus coming second and the staphylococcus third. When the case becomes chronic most of the diplococci pneumoniæ have been killed off, and we usually find a mixed infection of some sort. However, those in which the streptococcus predominates are known to be the most persistent.

The presence of bone dust in the discharge gives us definite information, as does also the presence of epidermal debris.

Unless, during the course of a chronic aural discharge, there are superinduced acute symptoms, the leucocyte count, total and differential, is of no definite value as an aid to diagnosis.

In a recent monograph, Kopetzky, of New York, distinguishes between a dangerous and a non-dangerous type of persistent purulent aural discharge. My own experience is in accord with this distinction. This classification will be denied by some. Potentially, any chronic aural discharge is dangerous, and calls for rigorous, well-directed treatment, but clinically there is a certain type of cases which, from the standpoint of intracranial involvement, are non-dangerous.

From this standpoint, then, those cases are non-dangerous in which the perforation in the tympanic membrane is central, be it ever so large, in which there is always some intervening drum membrane, be it ever so little, between the margin of the perforation and the annulus. Those cases in which the perforation is marginally located, particularly those in Schrapnell's membrane and those involving the annulus, are of the dangerous type, for these invariably indicate bone involvement, and so are inherently dangerous. In the former type the lesion is more often a chronic inflammation of the mucous membrane only, and is not therefore inherently dangerous; yet it may become dangerous if "an acute involvement of the mastoid is superimposed upon the chronic condition of the mucous membrane."

In instituting treatment, then, if we hold to this distinction between an intracranially dangerous and non-dangerous type, we are to a measure forewarned as to the first class at least, and we shall be careful to linger not too long in so-called conservative paths, should we not be attaining something definite towards a cure of the condition. But rather, forewarned being forearmed, we shall be truly conservative by instituting correct surgical procedures.

Charles J. Heath, of London, has for the past three years been consistently preaching a new doctrine, as to the etiology of a chronic aural suppuration, and he has attracted wide attention,

mostly because, taking his doctrine as a basis for a modified surgical procedure, he has obtained results which demand attention.

Baldly, a diseased mastoid antrum is at the bottom of every chronic aural suppuration, is the holding of Heath. He had arrived at this conclusion from his findings in 500 operations, in all of which he found diseased areas in the antrum. The diseased antrum being the nidus, the focal point of the suppuration, of what use is it, says Heath, to treat the effect, rather than the cause? In other words, there is no use in doing ossiculectomies, in curetting the tympanum, in cleansing and drying, for in none of these procedures do we reach the antrum, where the fundamental cause is situated. Rather, if we eradicate the disease in the antrum, the secondary disease of the tympanum will of itself get well.

I find the literature on this subject prior to Heath's enunciation of his theorem most meagre. It has been generally accepted that the antral disease is secondary to that of the tympanum, and always remains such. Cure the intratympanal disease and we remove the cause. We, as otologists, all believed this, and to many this reversal of pathology, so to speak, meets with very little favor. In some respects, is not the disfavor with which this theory is met rather due to an unwillingness to admit the possibilities of our firmly fixed ideas being open to error, and an unwillingness to investigate for ourselves as to the truth or the fallacy of our position.

I have been looking up my own case records of the past three years with a view to finding out in what percentage of radical operations undertaken for the cure of a chronic purulent otitis media I found the antrum diseased. I find that in all but two there was demonstrable diseases of this cavity. This was a series of 28 cases—a relatively small number, I admit, but is the finding not significant? In the two cases in which no mention is made of antral involvement, may there not have been such? For it must be remembered that no minute search was made for evidence of disease in this cavity, for I followed the traditional teachings, and always sought the cause in the tympanum.

It is an open question, this antrum versus tympanum, as a causal factor of persistent pus formation. Heath's theory has secured many adherents, and personally I believe his operation is here to stay. Its usefulness has been thoroughly proved by many surgeons of repute. What then of the pathological basis for this operation? Does it not merit our attention?

There are a few outstanding differences in the anatomy of the temporal bone of the infant and that of the adult that must be

remembered in the treatment of a chronic purulent process. At birth, and for some weeks after, there is usually no lumen to the external auditory canal, the cartilaginous walls being in apposition. There is no bony canal, simply the annulus, incomplete in its upper segment, the cartilaginous canal being attached directly to the squama. As ossification takes place from the annulus outward, to form the bony external canal, a dehiscence is often present in this wall. This dehiscence may persist to the fifth year of life or later.

The drum membrane in the infant forms a continuation of that portion of the squama which bends down and in, and to which the concha is attached. In this way the membrana tympani becomes the innermost portion of the roof of the external auditory canal. At two years of age the membrana tympani has assumed a more erect position, while at the fifth or sixth year of life it closely approaches to the adult position.

We must remember the dehiscence in the tegmen of the tympanum formed by the ununited petro-squamous suture. This suture closes usually at about the fifth or sixth month of ossification. The floor of the tympanum also commonly presents dehiscence, the jugular bulb itself frequently forming a portion of this wall.

The antrum is situated at birth above and slightly behind the tympanum, and is the only mastoid cell present. The position of the antrum changes, until at two years of age, it is more directly behind the tympanum, while at puberty it is fully developed. The mastoid cells develop from the antrum backward and downwards, and at five years of age we may have a typical adult mastoid process.

All of these points should be constantly kept in mind in the treatment of a persistent aural discharge occurring in infancy and young childhood. The ease with which infection of the contiguous and easily approached cranial cavity and its sinuses may take place is quite apparent; also the ease with which bacteria may be picked up by the lymphatics and carried to remote central organs, there setting up dangerous complications, should be borne in mind.

I am decidedly in favor of as little instrumentation as possible in the treatment of a chronic discharge in young children, and for apparent reasons. The most conservative treatment is demanded in these cases, and active surgical measures should be undertaken only when undeniably indicated.

Every surgeon is aware of the important rôle played by the naso-pharynx and its contiguous structures in the causation of

middle ear suppuration and its perpetuation. To an extent, I believe that surgical interference with these structures is being overdone. I believe that the practice of some in removing a normal third tonsil is pernicious. This piece of lymphoid tissue is there for a purpose—the warming and moistening of inspired air, and the lubrication of the mucous membrane of the pharyngeal vault. If not hypertrophied to the extent of causing symptoms, why should it be interfered with?

In the fossæ of Rosenmuller is found the key to the cause of many a persistent middle ear suppuration. F. P. Emmerson, of Boston,* in an admirable paper published two years ago, most clearly presented the pathology of these fossæ, and its clinical bearing. Quite frequently there is present in one or both fossæ degenerated lymphoid tissue or adhesive bands, or both, which escapes detection with the mirror. It is found only on making a digital examination. Such tissue, in even minute amount, excites a sympathetic passive hyperemia in the tympano-pharyngeal tube, with resultant impairment of its function. I make it a practice, in adult cases presenting themselves with a chronic purulent otitis, to make a digital examination of both fossæ—it is easily and quickly done; if the finding be positive it is a simple matter to clean out the fossa with the finger nail. I have had many apparently chronic cases clear up, and that quickly, after performing this simple act.

It is unnecessary to more than emphasize the importance of not overlooking such conditions as hypertrophy of the turbinates (particularly posteriorly), the presence of caries of the ethmoid cells with the resultant polypoid masses, nasal stenosis from any cause, an atrophic condition anywhere in the naso-pharyngeal tract, or a hypertrophy of any portion of the lymphatic ring.

It is necessary to keep in mind the chief anatomical differences in the position of the tympano-pharyngeal tube in the young and in the adult. It is sufficient here to recall that at birth this tube is short, straight, inclining slightly downwards from the naso-pharynx to reach the tympanum. The naso-pharyngeal orifice is on a level with, or slightly below, the floor of the nose, and the bony portion of the canal is exceedingly short. As development takes place the position of the canal changes. At two years of age we find it assuming the adult position, while at puberty this position and shape has been attained. The naso-pharyngeal orifice is now above the floor of the nose, and the tube follows an ascend-

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*Other surgeons who have called attention to the clinical bearing of the fossae of Rosenmuller are: 1. Brunk. Birmingham, Ala., 1906. 2. J. W. Jervey, Greenville, S.C., 1906. 3. F. R. Packhard, Philadelphia, Pa., 1909.

ing course to the junction of the cartilaginous with the bony portion, where it forms a constriction, and bending slightly downwards proceeds to the tympanum.

The shortness of the tube, the position of its naso-pharyngeal aperture, its horizontal and straight course, and its relatively wide lumen make the path for infection of the infant tympanum an easy one. This simply emphasizes the importance of recognizing pathological conditions in the nose and throat, and of the care which should be exercised in the use of medicated solutions in the case of infants and young children. Speak of it gently—but recently a case came under my notice, that of a young child with chronic purulent otitis media, and a chronic case of "snuffles," in which the nasal douche was prescribed for use night and morning!

What constitutes conservative treatment of an otitis media purulenta chronica? To my mind, conservatism is a broad rather than a narrow term, and that treatment is conservative which rationally follows upon a positive diagnosis of the causal factor, whether it be non-surgical, surgical, or a combination of both. Conservatism, always keeping in mind the economic value of the function of hearing, and the value of the human life, aims to accomplish a cure by clearly indicated rational and logical means, and that consistent with safety, by the least possible interference with Nature's processes of repair.

In some cases non-surgical measures constitute conservative treatment; on the other hand, so radical a procedure as tympano-mastoid exenteration is equally conservative. It is all a matter of diagnosis and of ability to recognize Nature's signals of distress.

Given any case of chronic purulent otitis media, in which no alarming or dangerous symptoms are present, I believe in first instituting the cleansing and drying and boracic powder insufflations. While carefully carrying out these measures once daily, the surgeon has time and opportunity to systematically arrive at a positive diagnosis of the underlying pathological cause. He will also have gained accurate and most valuable information as to the exact condition which he has to combat, as to its extent, its ravages, and its dangers, from an intra-cranial standpoint. This desideratum having been thus attained, he is now prepared to continue his primary treatment, or to alter or to abandon it, as the case may require.

Taking it for granted that any abnormality in the throat or nose has been corrected, he now has to deal exclusively with the tympanic space and its adnexa.

To revert to some of the pathological conditions found in

chronic aural discharge: If we find a simple chronic suppurative condition of the lining mucosa of the tympanum without involvement of the underlying bony walls, we have a condition that does not call for surgical interference. The simple cleansing and drying treatment with boracic insufflations is here indicated. In all such cases I follow Bezold's method almost exclusively, and with excellent results. In ulceration of the mucosa, and necrosis of the underlying bony walls, we must be guided by the situation of the active process. Is it in the hypo, or in the epi-tympanum, or in the tympanic cavity proper? Easily accessible areas should be gently curetted and the boracic powder treatment carried out faithfully and patiently. If success after a reasonable time does not follow, we must entertain the more radical surgical procedures Under this heading are included Ossiculectomy, the Stacke operation, the modified radical or so-called Heath, and the typical Zaufal radical operation. In caries of one or more of the ossicles which resists the simple conservative measures, either ossiculectomy or the Heath operation is indicated. With involvement of the mastoid antrum, simple mastoidectomy, the modified radical, or the typical radical operation must be decided upon, only of course after patiently following up the Bezold treatment without success.

In specific bone lesions, such as in syphilis or tuberculosis, appropriate specific treatment must be at once instituted, and here we must not be too sanguine of our prognosis, for even after most skilfully performed and thorough radical measures have been carried out, the after treatment may, de causa, be most protracted and perhaps, to an extent, futile. In cholesteatoma formation, I have in a few cases secured an apparent cure by the simpler means, but in the majority of cases, unless results are soon apparent in following out the simpler measures, the radical operation is called for.

A consideration of the indications for these several surgical measures is now in order:

Ossiculectomy, a minor operation in itself, has been advocated for the relief of numerous conditions. It has been much practised, and owing to the comparative simplicity of the technique of its performance a great deal of poor judgment has been used as regards its indications. Ossiculectomy undoubtedly has its place in otologic surgery, but in the light of later-day information and experience, I believe its field is most limited. In the past, the value of retaining whatever hearing that remains in the affected ear has been too heavily discounted, and too great stress has been placed upon the danger of invasion of the cranial cavity through

the tegmen tympani. If there be still useful hearing in the affected ear this operation should not be lightly undertaken, for post-operative hearing will be surely reduced. That its actual value in most of the conditions in which it was held to be indicated is open to question is quite apparent from the modified opinions expressed by surgeons of repute, both in Europe and in America. In America some of our foremost otologists have altogether discarded the operation, some in favor of the complete radical operation basing their reasons for so doing upon the clinical findings, viz., that the condition for the relief of which ossiculectomy was undertaken was invariably found to be more extensive than was pre-judged. Others, more particularly since Heath propounded his theory as to the integral part played by the mastoid antrum in chronic middle ear discharge, have discarded it in favor of the modified radical or so-called Heath operation.

There are still many surgeons who hold this operation in high regard; these hold it absolutely indicated in caries of one or more ossicles, or in caries of the walls of the epitympanum, in cases of pus retention under pressure in the epitympanum, in such cases in which there is persistent formation of cholesteatomatous masses in the attic, with consequent frequent acute exacerbations of the purulent process, and some go so far as to recommend it in every case of obstinate otitis media purulenta, in which a cessation is not obtained through simple measures. In the latter instance it is always a satisfactory preliminary to the radical operation. It has been the experience of many that in performing this simple operation they have often been able to avoid the major operation of tympano-mastoid exenteration.

Those who have accepted Heath's enunciation in its entirety hold that his modification of the radical operation is that indicated in every case in which either ossiculectomy or the complete radical operation has heretofore been held to be indicated. There are many surgeons again who have accepted this modified operation to a degree, viz., that it at least takes the place of ossiculectomy in otologic surgery. It is a less severe operation than the complete radical; it is less dangerous to the facial nerve, and it at least retains to the patient what hearing he already possesses, and often, in point of fact, improves his hearing. Many surgeons have had most brilliant results with this operative procedure, in many cases a complete regeneration of an almost totally destroyed membrana-tympani having been secured.

To exenterate the mastoid antrum and mastoid cells and to leave untouched a tympanic space which is markedly diseased seems like

poor surgery. Yet, what shall we do with the irrefutable statistics of many surgeons of note who are doing this very thing? They are obtaining absolute cessation of all underlying pathological processes, with in most cases an improvement in the function of hearing.

To my mind this operation cannot completely supplant the radical, but it should be performed whenever possible. I have practically abandoned ossiculectomy except in cases where the hearing is so diminished as to be of little actual value to the patient. Even then it has been my experience that I have, as a rule, had to later on do the radical operation.

Statistics of the percentage of cures after the complete radical operation are constantly coming to hand. These figures vary from 65% to 90%; probably 80% would be a good average. This is far from the ideal, but it is satisfactory. The radical operation is decidedly a major operation, and should never be lightly undertaken.

The general consensus of opinion has been that this operation is indicated in every case of chronic aural discharge in which, after long intra-tympanic treatment by simple means, with accessory minor operations, including curettage of the tympanic walls, removal of granulations by snare, ossiculectomy, etc., there still remains more or less of a purulent discharge. Also, in those cases of chronic purulency in which an acute mastoiditis is superinduced; in persistent cholesteatomata formation which does not yield in spite of ossiculectomy and faithful cleansing treatment; in facial nerve paralysis; in chronic suppuration about the eustachian orifice; or in such cases in the course of which sudden alarming or dangerous symptoms develop, pointing to intracranial sinus or labyrinthine involvement.

Tympano-mastoid exenteration does not take into account to any appreciable extent the function of hearing.

In those cases which present symptoms of intracranial sinus or labyrinthine involvement this is decidedly the operation of choice. There is no place for any other than the most radical measure under these conditions.

In the other contingency which I have just mentioned, in which the complete radical was heretofore held to be indicated, the modified or Heath operation should be at least entertained, and I am coming to believe, more frequently performed.

The after-treatment, whatever the operation selected, is most important; more particularly in those cases in which the complete radical is done, and in which it is found impossible to safely remove

every vestige of diseased tissue, such, for instance, as occurs about the niche of the stapes, along the course of an eroded facial canal, or over an eroded hypotympanic floor. In such contingencies as these the radical operation becomes to an extent simply a preliminary step to effectual after-treatment. It opens the way for complete inspection of the diseased areas and for the carrying out of rational local treatment.

Where we have to deal with tubercular or luetic bone lesions, the after-treatment frequently becomes the main treatment, calling for a continuance of general remedies, local successive light curettements of diseased areas and local antiseptic applications.

Quite recently I discharged, cured, a young lad upon whom the radical operation was carefully and thoroughly performed fifteen months previous. In this case the niche of the stapes and a few cells about the mouth of the eustachian orifice were the sites of the diseased areas which were so persistent. The radical operation in this case gave free access to these parts for the carrying out of local measures, and after long and persistent effort, not to say after many discouragements, complete epidermization was secured.

Within the past six weeks a case upon which I did the radical operation nearly three years since presented himself to me with a fluctuating swelling over the centre of the post aural scar. Examination per external canal revealed a similar condition on the posterior wall of the exenterated mastoid process. The fluctuating tumor (post aural) proved to be a broken-down and purulent mastoid gland, while the internal tumor contained a sero-sanguineous exudate, but no pus. The external condition after evacuation soon healed. The internal condition required the removal of a considerable area of epidermis, and vigorous curettement of the sac followed by light tamponading of the epidermis against the posterior wall of the exenterated cavity. The cavity was again completely epidermized in about three weeks. In this case a diseased mastoid cell had most probably been overlooked at the time of operation.

To secure proper epidermization tight tamponading is a mistake. Better results are obtained through light pressure, where some pressure is required, and the use of a mixture of aristol and boracic powders in equal parts as a dusting powder. It is a mistake to exclude the air from the cavity by tightly closing the external canal with packing. Rather, either leave the canal unoccluded or place in its mouth a small amount of loose sterile absorbent cotton, just sufficient to exclude dust, but not the air.

In the after-treatment wet cleansing should be avoided. Cleans-

ing with dry pledgets of sterile cotton is preferable. Exuberant granulations are easily kept under control by means of silver nitrate solution of 10% to 20% strength.

Otologists are not engaged in a finite science. Much has been accomplished in the past twenty-five years; much is being accomplished at the very present; and he would be a prophet who could foretell to what perfection otology may attain in the future.

Otologists are enthusiasts in their field of work. This is only a natural sequence; and the true aural surgeon, working hand in hand with the pathologist, is gradually and quite surely conquering many difficulties heretofore thought unconquerable.

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## PRAIRIE DIETETICS IN RELATION TO HEALTH AND DISEASE.*

By H. M. Speechly, M.R.C.S. (Eng.), L.R.C.P. (Lond.).
Pilot Mound, Man.

As the health of the dwellers on our Western prairies must depend largely on the dietary and methods of diet by which they feed themselves and their children, the problem, what to eat and what to avoid, should bulk largely not only in the preservation of health, but also in the treatment of disease. It is not too much to claim, then, that medical men should pay close attention to this matter, even when handling surgical cases. In fact, it may be laid down that there are few cases, either surgical or medical, in which dietary management can be neglected. It is true that the general public dislike interference with their accustomed diet, but I believe that the unpopularity of dietary control arises out of a want of appreciation of its importance by large numbers of our profession, and therefore of our patients. In such matters, Professor Wm. Osler rightly contended the other day that the medical profession is not the servant of public opinion, but the leader. But how many students of medicine receive a course of instruction in Dietetics? Hence it comes to pass that the question of diet is so often slurred by the profession, and too much dependence is placed upon drugs and surgical methods. Let it not be thought, however,

*Read at Canadian Medical Association, Winnipeg, August, 1909.

that I am advocating the other extreme of neglecting the medical and surgical arms of precision with which modern science is equipping us, because I am in the habit of using perhaps thirty different drugs as aids to methodical dieting in my own practice on the prairie. The need is considerable, owing to the general average ignorance of good and bad articles of diet among the public, and owing to the neglect of certain specialists from the cities to keep in mind the fact that their own special line is governed materially by the all-pervading influence of digestion on disease. Hence it is that sometimes patients who come to the West with "tubercular disease of the throat" recover rapidly under appropriate dietetic management. It might be well, also, here to state that there are no diseases of Anglo-Saxons peculiar to Western Canada.

Let us first consider briefly what is the average prairie dietary, dividing it into two classes: (1) The Infantile, (2) the Adult.

(1) What do we mean by the Infantile dietary? It should, of course, extend over a period of two years, at least, from birth; but as a matter of practice on the prairies, the first year from birth amply covers this period. It might be supposed that this epoch could be lightly dismissed by saying that of course prairie mothers suckle their infants during that time. Most of them would do so gladly; some do reluctantly; other few—not many—are too lazy or selfish to bother with it; while all too many are unable to fulfil this function completely. Defective nipples sometimes compel a mother to stop nursing; but most often the necessity for a nursing mother to do her own work, including the harder tasks of scrubbing, washing and ironing, prevents her from nursing her child even for six months, either because her supply of milk declines to vanishing point, or because its quality is spoiled. Too often, then, the babe must be fed from the bottle, or more rarely by the spoon. Gastro-intestinal troubles follow, especially as those wise persons, whose name is legion, invariably recommend the milk "from one cow," diluted in too strong proportion, and mingled with some biscuit preparation, such as cream crackers or arrowroot biscuits. Hereditary ignorance, permitted largely by the neglect of the profession to rise above the level of "old women," is responsible for this. The usual train of vomiting, diarrhea, or constipation, is the common effect of this dietary, as well as chronic intestinal conditions which predispose to tubercular and other lung complaints. But occasionally true rickets follows and puzzles the uninitiated. It is worth noting, however, that the mingling of arrowroot biscuits with the bottle contents does occasionally im-

prove the infant's capacity to digest its milk. Finally, while well within this epoch, many infants easily slide from this biscuit dietary, aided and abetted by the male parent, into "taking everything that we do," from pork to raw carrots!

(2) From the foregoing period the Adult dietary commences, and continues until the end of life, often permanently closed by dietary mistakes, or until disease or some medical man compels the individual to halt and make a change. Let me urge that no medical man is fully equipped against disease until he grasps the common-sense principles of diet. Faddiness is sheer nonsense, and as La Rochefoucauld says (Maxim 285), "*Preserving health by too strict a regimen is a wearisome malady.*" In dietetics, we require common-sense, and the use, not of cast-iron methods, but of an elastic adaptation of principles to each individual case. We must appeal to the common-sense of the people, for, as Dr. Samuel Johnson once said, "*A man seldom thinks with more earnestness of anything than he does of his dinner.*" Moreover, moderation in the use of most articles of diet is the governing principle, not prohibition, though in some cases temporary or permanent prohibition cannot be avoided.

Let us, however, consider in detail the average prairie dietary. The principal nitrogenous foods are pork, beef, poultry, fish, game, and mutton, with eggs, milk and bread, while carbohydrates are represented by porridge, scones, biscuits, the familiar cream-cracker, dry cereals and wheat products, pies, all kinds of cakes, all sweet preserves, syrups (both plain and maple syrup), corn sauce, milk puddings, potatoes, sweet corn, butter beans, beets, turnips, carrots, onions, cucumbers, cabbage, cauliflower and pickles. The hydro-carbons in butter, cream, pork and eggs are much in use; and in their seasons quite considerable quantities of oysters are consumed, and fresh fruits, such as apples, tomatoes pears, peaches, cherries, apricots, strawberries, raspberries, blueberries, saskatoons, cranberries and currants. In addition, lemons, oranges and bananas are eaten in large quantities all the year round. It is, then, no exaggeration to state that, as the Western farmer grows more and more prosperous, his board may be said to *groan* with an abundance of good things; and so, too, quite often do those groan who partake too well thereof and not wisely. Yet, if guided by a judicious choice, one may eat there, and exclaim with Dean Swift, "*Lord, madame, I have fed like a farmer; I shall grow as fat as a porpoise!*"

It is worth noting here that the influence of tradition is well-marked, so well-marked sometimes as to make fetishes of certain

articles of diet. For instance, in the Scotch settlements the use of porridge has conferred upon the eating of this product a sanctity almost equivalent to that of a sacred rite. In the English settlements, the ancient custom of eating a big hydro-carbonaceous breakfast of pork foods and eggs, washed down with tea or coffee, is as the law of the Medes and Persians, which cannot be broken. And again, the down-East influence, touched perhaps with a Yankee blend, is evidenced by the use of apples and maple syrup as being "healthy" at all times and places, or by the use of dry cereals and fruit at breakfast, and at other meals, of corn sauce, pumpkin pie and Johnny-cake, all to be taken with the rapidity of a threshing machine in action! Three meals a day is perhaps the most common practice, and doubtless is Scotch in origin, too.

Further, in dealing with this subject it is necessary to emphasize the important influence of the water supply of our Western prairies on the health of our people. In view of the fact that, in taking a farm or homestead, the water supply is often the last thing of which account is taken, it cannot be pointed out too strongly that many wells are so strongly impregnated with the alkaline earths as to coat heavily the interior of kettles, and to cause severe diarrhea to newcomers. It stands to reason, therefore, that this same water must be a source of chronic irritation to certain digestions, and will complicate the dietetic management of disease. It is necessary, too, to warn our people against the impropriety of using any well for human beings that is liable to the surface soakage from stables or privies, a matter quite too often disregarded.

Here it might be asked, "Are there no errors in preparing food and in habits of eating?" Without dwelling too long on these matters it is easy to point out that, while the average standard of cooking is excellent in the matter of bread-making and the cooking of vegetables, fruits, puddings and sweet things, the practice of frying meats, especially pork, until the meat fibre is hard and tough practically destroys the nutritive value of meat, and often causes indigestion or constipation. The making of tea is often defective, also—an important error, because enormous quantities of tea, both green and black, are consumed in the West. The error lies both in making the tea too strong, and in allowing it to stand a long time on a hot stove, thus spoiling the nature of this fluid, so excellent when properly made. But far more serious perhaps is the great error in habit of bolting food without any pretence at mastication, which is all too common amongst men and young people, if less frequent among womankind. Added to this is the equally prevalent bad habit of eating and drinking simul-

taneously. It is noteworthy that a man will allow his horses two hours for food and rest, but takes himself not much more than two minutes to bolt his food and bolt out again to work. What a waste of internal force there will be in getting rid of the food-lumps! Is not a man of more value than a horse?

Briefly, now, let us touch on the relation of dietetics to the three large classes of disease covered by such terms as Goitre, the Uric Acid diathesis, and Gastro-intestinal disease. Is it too much to claim that auto-intoxication is really at the bottom of *all three?* Incontestably it is as regards the last two; but I believe that chronic auto-intoxication is essential to the production of goitre, and that without it goitre is impossible, or at least improbable. Whatever influence water of a tainted sort may have in these cases, are they not all the subjects of chronic auto-intoxication, whether they arise in Switzerland, Derbyshire, or Manitoba? I may say this, that goitre is common amongst young and old women, but only occasional amongst men in Manitoba, and that some dozens of cases occur in my own district. My observation is that all cases of goitre suffer from auto-intoxication, and that the early cases improve permanently when the intestinal canal is swept and garnished and dietary precautions are taken.

Finally, as bearing more particularly on the uric acid diathesis, so common in the West, and on gastro-intestinal disorders, let me urge that our patients should be warned *in detail* against certain articles of diet. For instance, after the growing age, porridge, even of the best Scotch or Canadian oatmeal, may be positively poisonous, and often is, especially in hot weather. In like manner, the use of sugars, especially maple syrup, is far too frequent amongst adults, who imagine that they can do what they used to do in the good old "sugar-time" down in old Ontario. Eczema and "muscular rheumatism" are common results of over-doses of maple sugar. Uncooked apples, too, produce more auto-intoxication in the winter than any other article of diet among patients of all ages, because of the hereditary notion which holds that apples are "healthy" so long as you like to eat them. Are these fruits which are picked on the unripe side of the same value as fruits eaten when ripe on the tree? I think not. Likewise, while orange juice is excellent for human beings, we ought to advise our patients against swallowing the pulp. In many digestive canals the seeds, skins, or stones of currants, raisins, raspberries, saskatoons, blue-berries and cranberries will block the way by forming dense fermenting masses of a most dangerous character.

I am aware that some people think that these dietary doctrines

are crazy; but they suffer from ignorance, and need to be educated into seeing that in what they call rheumatism and in what is called appendicitis it often happens that it is "the little foxes which spoil the grapes." To the sceptical brethren, I would say, "Experto crede."

## "MEDICAL THOUGHTS, FACTS, FADS, ETC.," VERSUS AFTERTHOUGHTS, VISIONS AND ACHIEVEMENTS.

By One Who Doesn't Know It All.

Not unfrequently have we been interested in the contributions from the pen of the Sage of Perth, which ever and anon have appeared in Canadian medical literature. His observations, as a rule, are taken at the correct angle, his conclusions reasonable, and his criticisms just; but when he attempts to deal with the modern thought movement in therapeutics, when he endeavors to measure the twentieth century psychic horizon by the physical measure of the medical education of the nineteenth century, he confesses the limitations of materialistic tendencies, all too common in our profession.

The writer is no believer in the current orthodoxy, nor does he hold any briefs for the multitudinous pathies of the day, but it does seem to him that human nature abhors a vacuum, even in therapeutics, and that there is a "demand for Osteopathy, Christian Science, Chiropractists, Vitopaths, or Emmanuel Movement," a demand that will eventually compel a fuller recognition and a keener appreciation of scientific massage, psychic force and the restful and uplifting sentiments of Christianity. Time was when the physician and the priest were one; that was when the physician knew little and the priest knew less, and in that dual capacity ministered in a primitive manner to the dual nature. As time wore on, both departments ran to seed—the physician to materialism and the priest to superstition—leaving in the course of the mental evolution of the race an ever-widening psychological vacuum, and into this plunged headlong Mrs. Eddy, with that incongruous mixture of fact and fancy—Christian Science. This came as a protest, as all other quackery comes—a protest against a material hell and eternal damnation; a protest against attributing to the Creator traits less than that of a gentleman; a protest against the sophisms of the "student," who opens the skull, and, finding no blue flame, solves the riddle of the universe by stating that he sees no soul there; a protest against the superficial observers and shallow critics, who find no value, neither comfort nor

support, in the exercise of communion with the Infinite, nor in faith in the everlasting arms.

Is it not a fact in the history of medicine that many of our most useful measures were practically forced upon us by quacks? Not that they were first to evolve the principles, but those outside the regular profession were frequently in advance in the general application of the agencies. What of Hydropathy? Go back thirty years. Was it not tabooed by the regular medical profession long after the public had learned something of its value from those who grew wealthy by the sprays, vapors and packs of the hydros? Did not electricity share the same experience? A Faradic coil ministered to the neurotic crowd as the marvellous stock-in-trade of men who reaped many shekels and much wealth many moons before the orthodox graduate purchased a "Beard and Rockwell," and related his experience of dilating urethral strictures by a Faradic current conveyed by a soft rubber catheter? What was true of water and electricity is to-day true of what we call psychopathy. Let us learn by what has been, and adapt ourselves to the growing demand for an intelligent, well-balanced profession, progressive and efficient. This we have not, or such cults as Dr. Sprague hesitates not to condemn would not be meeting with the success that is to-day their portion. Christian Science, with its absurdities of expression, its trail of blood and murder, is developing a higher type of spiritual character, a healthier mentality and a higher standard of physical health and purity than is found among the average orthodox church members. I speak from fifteen years' close observation. Osteopathy is teaching us the value of exercise and of physical development; while the Emmanuel Movement, which Dr. David Starr Jordan said unfortunately went off at half-cock, is giving us again the principles of the teachings of the Reformer of Galilee. Read our own Osler's address on the "Treatment of Diseases," delivered before the Ontario Medical Association last June, and see where this medical giant stands. Here are no words of cavil, but the straightforward statement of a man among men. Listen, ye inhabitants of Perth, and be not deaf, ye materialistic medicos: "In all ages and in all climes, the prayer of faith has saved a certain number of the sick," and a greater than Osler said something remarkably like it not a few years ago in a little country bordering upon the Mediterranean.

Let quackery come. It is an indication of our shortcomings, the index of our incapacity, the suggester of our requirements. Opposing it but strengthens it; the wise man learns his lesson, applies the principles, and in the end triumphs. And this is possible, even in Perth.

ERNEST A. HALL, *Victoria, B.C.*

# Medicine

GRAHAM CHAMBERS, R. J. DWYER, GOLDWIN HOWLAND, GEO. W. ROSS, WM. D. YOUNG.

**Treatment of Carcinoma with the Body Fluids of a Recovered Case.** EUGENE HODENPYL, M.D., *Medical Record.*

About four years ago the writer became interested in a case of carcinoma of the breast in a woman then 37 years of age. The clinical history and the morphology of the tumor were typical of a rapidly growing malignant cancer. In spite of radical operation, multiple recurrences appeared in the neck and in the primary scar. After the thorough removal of these, secondary growths appeared which were morphologically typical of rapidly growing carcinoma. Still other tumors developed in the neck and breast, which, owing to local complications and the debilitated condition of the patient, were not removed. Later, large tumors developed in the liver, which nearly filled the abdominal cavity, followed by the occurrence of excessive chyliform ascites. The prognosis was unqualifiedly bad, and the patient's death seemed imminent.

But, nevertheless, the tumors in the neck and breast gradually dwindled and disappeared. The abdominal tumors gradually grew smaller and became imperceptible, while the liver became smoother and smaller. At length, about four years after the first operation, the liver is approximately normal in size and position. With the exception of the scars and decreasing emaciation, and extreme chyliform ascites, requiring frequent tapping, there is now no indication of the original disorder.

In his deliberations upon this rare case of recovery from extensive carcinoma, with residual chyliform ascites, the writer was led to weigh the possibility, so often discussed, especially in connection with experimental tumors in mice, of the development by the patient of some sort of antibody inimical to the progressive growth and persistence of the tumor cells. The alternative hypothesis, which seemed plausible, was that in the processes of tumor-tissue formation in the abdomen, some physical or physiological disturbance of organic or internal secretions might have occurred, leading to the accumulation or formation of substances antagonistic to tumor cell growth or existence.

The ascitic fluid having been freely placed at the writer's disposal to test these theoretical conceptions, a series of mice, which had developed tumors after the implanting of some of the well-known strains of mouse cancer cells, were injected with varying amounts of the ascitic fluid. These injections were made near the tumors, into the tumors, and into the body at large. The effect of these injections, in brief, was to lead to marked necrosis of the tumors, to a noteworthy diminution in their size, or to their complete disappearance.

After experimental tests of the harmlessness of the fluid, first in animals, then in human beings, injections of the fluid in cases of carcinoma of various types in man, were undertaken. These injections have been made in small quantities, near or directly into the tumors, or in large quantities into the veins. The general effects of these injections in man have been nearly uniformly to induce a temporary local redness, tenderness, and swelling about the tumors, which soon subside. Then occur softening and necrosis of the tumor tissue, which is now absorbed or discharged externally, with the subsequent formation of more or less connective tissue. In all cases the tumors have grown smaller; in some they have disappeared altogether. In no instance has any tissue in the body, other than the tumor, shown the least reaction after the injections, nor have any systemic effects been manifest, even after large venous infusions.

The greater number of the forty-seven cases thus far treated were distinctly unfavorable, many of them hopeless and incurable. Many of the cases are still under observation by the writer or by other physicians in and out of New York.

The records of the cases treated, the technique employed, and the results obtained will be placed at the service of the medical profession as soon as time permits, together with the results of various obvious control experiments which are now in hand under the direction or with the concurrence of the writer. In the meantime this preliminary communication is made, first, in order that the attention of the profession may be called to the possible significance of body fluids from the rare cases of those who have recovered or are recovering from carcinoma; second, to correct the false impressions which may have been conveyed by the premature and unauthorized news items in the daily press; and, finally, to secure an opportunity to remind physicians practically interested in this study, that the urgency for this treatment, of hopeless, inoperable cases, is hardly just, either to these patients themselves or to a

method from which it is hoped to secure new resources and new light through deliberate and reasonable tests.

It is not my purpose to announce at this time a new cure for cancer, but to call attention to the remarkable, selective necrotizing effects upon carcinoma cells of the ascitic fluid from a recovered case of carcinoma, wherever in the body of the patient this fluid is introduced. The nature and significance and the practical importance of the substances contained in this fluid, and the ultimate value of this method of treatment of carcinoma are to be finally determined only by a continuance and completion of the various correlated series of investigations, chemical and biological, now under way, or by such tests as other observers may undertake.

# Obstetrics

CHAS. J. C. O. HASTINGS, ARTHUR C. HENDRICK.

**The Management of Normal Labor.** By DAVID J. EVANS, M.D. *Montreal Medical Journal,* Sept., 1909.

Ordinarily, normal labor means spontaneous delivery of a living child, which has presented in a vertex position, with the occiput rotating anteriorly. This occurs in over 90 per cent. of all full-term labours. To ensure this natural delivery, it is important that the patient be under the direct supervision of her medical attendant from early pregnancy. The writer wisely states that the advent of the baby should be in the nature of a visit, and not a visitation. It is a perfectly natural event, and should not be ushered in with a great fuss and much expense to the parents.

Common sense and plain directions are all that is required with an intelligent patient.

As regards the requirements for the baby, written directions are given. Employ a nurse with the true surgical instinct and quiet manner.

As to the physician's obstetric outfit, it usually bears an inverse proportion of instruments to the skill of the owner.

The pelvimeter is an important instrument, as often it contra-indicates the early application of the forceps, an instrument often abused.

As to the labor room—choose the most cheerful and quiet available, and have plenty of clean linen, towels, sheets, etc. Have the room house-cleaned a few days previously, if possible.

The bed should be so placed as to avoid draughts, and the mattress or springs supported, if they sag too much. Another point the writer warns against, and that is the very pernicious habit of using old newspapers as pads under the sheets. Better use pads made of cotton-batting one yard square and 3 inches thick. They are sterilized by steaming or baking for half an hour.

Preparation of Patient for Labor: If possible, let them have a bath 24 hours before, and an enema after the labor sets in. The vulva and thighs should be washed with soap and hot water, the hair trimmed or clipped, and an aseptic pad applied. A clean night-

gown, stockings and chemise are put on. While up, a wrapper is worn.

The preliminary vaginal douche is rightly strongly condemned. The writer urges careful measurements of the pelvic diameters pre-partum. Then the general condition of the mother, and the position and character of the fetal head, and the kind and duration of the labor pains are observed by abdominal examination alone. The writer considers a vaginal examination quite unnecessary in the majority of cases, and suggests in its stead rectal examination to ascertain the condition of the cervix.

When pelvimetry shows a moderately contracted pelvis, considerable delay should be allowed, at least four hours of second-stage pains before interference, as many of these cases (75%, Williams, of Baltimore) deliver spontaneously.

As to the application of the forceps, the writer waits until the os is completely dilated, either naturally or artificially, before applying them.

For the restlessness in the first stage, Chloral, gr. 15, q. 4 hrs., is advised, and liquid diet, such as a cup of hot, freshly-made tea, is allowed.

When the membranes fail to rupture after the cervix is dilated, the writer uses a large safety-pin to puncture them.

Preparations for delivery: The sutures, instruments, etc., are now put conveniently at hand.

The patient is placed in the left lateral position, with hips resting on a Kelly-pad, covered with a sterile towel, and suitable receptacle at the bedside. The carpet or floor may be protected by an old rug or layers of paper that may be destroyed.

The vulva is washed with 1/2000 bichloride, or lysol, swabbing from pubes to anus.

The writer advocates wearing rubber gloves of moderately heavy red rubber, instead of the very thin surgical glove.

Chloroform is used in every case, the mask being applied early at the onset of the pains, and just at the moment of birth, and does not fear any tendency to post-partum hæmorrhage from its use.

Protection of the perineum: Laceration of the perineum may occur in some cases in spite of the most skilful treatment. It may be avoided largely by sustaining *complete* flexion of the child's head, and not getting in a hurry.

The writer considers that support to the perineum by the physician's hand is a mistake. With this we cannot agree. Proper

support of the perineum assists in retaining flexion of the head, and also gives one complete control of the advance.

If the perineum does not distend readily the writer recommends a medium episiotomy with blunt-pointed scissors. With this we do not agree. If a simple nick in the median line will allow the head to escape so readily as the writer states, then there are other means of getting this extra space.

First, the writer has failed to emphasize the importance of having and keeping the patient's bladder well emptied, by catheter if necessary, during the last position of the second stage. This is important, both in order to prevent obstruction and to protect the vesical tissues. Again, we have found that in many cases the "Walcher position" aids very materially. The patient is kept in this position for a short time. The head advances easier, and the perineum is relaxed.

Immediately the head is born the eyes are wiped, the throat cleansed and the neck examined for encircling cord. The shoulders are delivered by carrying the head well up over the pubis. We think it is important to support the perineum still, or often to assist by traction on the shoulder.

The writer ties the cord when convenient to attend to it, whether pulsating or not. We think it a good rule to wait until pulsation has ceased, unless there are counter-indications.

Repair of Lacerations: The writer sutures all tears at once, before waiting for the expulsion of the placenta, using silk-worm gut and a strong needle-holder, having the buttocks supported on a bed-pan. The sutures must not be tied too tightly.

Management of the third stage: "Watch and wait" is the wise rule. The separation of the placenta is shown by three signs:

1. Fundus uteri rises to the level of the umbilicus.

2. Winkel's sign: Pressure on belly just above the pubis; if placenta is still in the uterus the cord will be drawn into the vulva; otherwise, it is extruded. Again, compression of fundus uteri causes a wave of pulsation in the cord.

When the placenta is detached, slight pressure on the fundus is sufficient to expel it.

After half an hour Crede's method is employed, just after a uterine contraction has reached its acme. Pressure during other times may tend towards inversion. Also, premature attempts at expulsion may lead to separation of detached portions and subsequent hæmorrhage.

We consider that keeping the uterus well contracted by slight massage is the best preventive of slow separation of the placenta.

Ergot in the third stage is unwise. The writer thinks portions of membrane which fail to come away are better left alone unless they give rise to hæmorrhage. With this we fail to agree. If there is any doubt in the obstetrician's mind as to the complete emptying of the uterus of placenta or membranes at the time of labor, we consider it good practice to explore the uterus with the sterilized hand, just as one would do in a case of incomplete abortion or miscarriage.

A. C. H.

# Psychiatry

W. C. Herriman, Ernest Jones.

**Current Conceptions of Hysteria.** By W. A. White. *Interstate Med. Journal,* Jan., 1910.

White first makes the following general remarks: "The fundamental idea upon which present-day conceptions of hysteria are built is that the phenomena of hysteria are mental—that hysteria is a mental disorder—a psychosis, and not a neurosis, as has been at times supposed. The psychic origin of hysteria is the prevailing note now running through its theoretical consideration." He then gives a general review, without making any personal contribution to the subject, of the different opinions held concerning the nature of hysteria. He does not distinguish between hypotheses, such as Janet's, clinical definitions, such as Babinski's, and the theory of hysteria, namely Freud's, but loosely groups all the opinions under the term theories. These he divides into the following groups:

1. *Psychological.*—Description of these takes up the greater part of the article. Starting from Binet's experimental proof of the existence of mental processes unknown to the subject's ego in such conditions as hysterical anesthesia, automatic writing, etc., he passes on to Janet's description of hysteria as "a form of mental depression, characterized by the contraction of the field of personal consciousness, and by the tendency to the dissociation and emancipation of systems of ideas which, by their synthesis, constitute the personality." The symptoms are due to the automatic activity of these split-off groups of mental processes. Sidi's description is very similar to Janet's. Freud goes further, in that he seeks to account for the dissociation. He finds that the ideas split off are so because they have been associated with a disagreeable feeling; they are, therefore, "repressed." The symptom is the working out of the repressed mental processes. Further, these processes are dynamic in nature, i.e., they are wishes. They are always of a sexual nature. The morbid process has arisen in early childhood, and is an error in sexual development.

2. *Physiological.*—Sollier's view, that hysteria is a partial sleep of the cerebral cortex, is mentioned, and White points out that it

is purely conjectural, and merely an attempt to translate known psychical facts into unknown physical ones.

3. *Biological.*—White erroneously omits to classify Freud's biological theory under this heading. Of the views he here mentions, the only important one is that of Claparède, who regards the resistance to hysteria shows to the revival of painful memories as a biological defence reaction. Many of the symptoms he explains by invoking atavism.

4. *Clinical.*—The only author mentioned under this heading is Babinski, who has sought to define hysteria as a group of symptoms that can be produced and removed by suggestion. As White puts it, this view " rests on entirely inadequate conceptions."

E. J.

# Reviews

*American Practice of Surgery.* Vol. IV. BRYANT and BUCK. New York: Wm. Wood & Co.

Volume IV. of this system is divided into three parts, the first dealing with dislocation, the second with general operative surgery, and the third with orthopedic surgery. For the most part the articles give evidence of very careful preparation, and if we were to single out any one in particular we should select that on plastic surgery as especially worthy of careful perusal. The work is quite up to the standard of former volumes. G. E. W.

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*Surgery of the Brain.* KRAUSE. Translated by Hanbold of New York. New York: Rebman Co.

One might infer from the title of this volume that a comprehensive study of the subject was to be found therein. This, however, is not the case, nor does the author intend that it is in any sense a text-book. To the internist and neurologist he leaves the discussion of diagnosis and symptomatology, and merely cites cases illustrative of his procedure in dealing with various cerebral conditions, with reasons therefor.

As is well known, the author favors operating by two stages, removing an osteoplastic flap in the first instance.

For the temporary arrest of hemorrhage he uses the Haidenhain and Kredel principle of ligatures applied on either side of the contemplated incision, in preference to either the rubber band or pneumatic tourniquet.

He differs from Cushing and Horsley in advocating his osteoplastic method for the decompression operation, nor would he adopt the muscle splitting procedure as taught by the former in the right temporal region.

In uttering a word of caution against the indiscriminate use of brain puncture for the purpose of getting a core of brain matter for diagnostic purposes, the author, we think, takes a very sane position.

The opinions expressed in this work are based upon the author's experiences in the operating room, and we feel that the surgeon who is not familiar with its precepts before opening the skull is not doing the utmost for his patient. G. E. W.

*New and Non-official Remedies*, 1910; containing descriptions of articles which have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association, prior to Jan. 1, 1910. Price, paper, 25 cents; cloth, 50 cents.

This is the 1910 edition of the annual New and Non-official Remedies, issued by the Council on Pharmacy and Chemistry of the American Medical Association, and contains descriptions of all articles approved by the Council up to Dec. 31, 1909. There are also descriptions of a number of unofficial non-proprietary articles which the Council deemed of value. The action, dosage, uses and tests of identity, purity and strength of all articles are given. As an illustration of the scope of the book, attention is called to the following: The articles on arsanilic acid and its derivatives, page 35; on phenolphthalein, page 152, and on epinephrine, page 73, indicate the effort which the Council is making to have new remedies known by their correct names. The description of medicinal foods, page 120, should put physicians on their guard as to the small value of such products. Particular attention is called to the description of serums and vaccines, page 169. Since our knowledge of the therapeutic value of new remedies is still largely in the experimental stage, the statements which appear under each proprietary article are based largely on the claims made by those interested. On the other hand, on page 56, under creosote carbonate, is a note on the claims of non-toxicity often made for certain remedies. A similar caution in reference to the claimed harmlessness of intestinal antiseptics appears on page 41 under beta-naphthol benzoate.

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*Practice of Gynecology.* By WILLIAM EASTERLY ASHTON. Fourth edition; revised and enlarged. Philadelphia: W. B. Saunders Co. Canadian Agents, The J. F. Hartz Co., Toronto.

This new edition of Ashton's Gynecology, intended for the use of practitioners and students, is full of useful and detailed information. The author forestalls criticism as to the details given in his work. He sets out to produce a work where nothing is taken for granted, not even the significance of leucocytosis and the value of differential counts, and on the whole accomplishes his purpose in a creditable manner. With such a purpose in view it would hardly be in order to criticize, but at the present time, when allied subjects are so admirably discussed by authors whose subjects are their specialties, one questions the advisability of introducing into

a work on gynecology so much of matter which, for purposes of reference and information, will be sought elsewhere. Even so, one feels that his splendid sections on baths, physical exercises and diets are quite fittingly introduced on account of the great importance of such measures in the management of diseases of women. Illustrations of various kinds abound. Here, again, true to his purpose, nothing is left to the imagination, for no matter how clear and comprehensive the text, almost every detail is illustrated, so that the slowest cerebrating beginner could not misunderstand. To the reader of even ordinary experience, much of the trivial detail is slightly wearisome. Many of what might be called "golden texts" are introduced in wide-spaced printing, which cannot fail to attract attention. No one could glance through the book without having impressed upon him the absolute necessity of a careful and exhaustive examination of all patients suffering from profuse or irregular menstruation at the menopause. Speaking generally, the book is a splendid production, filled with clear and valuable information. F. W. M.

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*The Pocket Clinical Guide.* By JAMES BURNET, M.A., M.D., M.R.C.P.E. Edinburgh: John Currie.

As a vest-pocket clinical guide many students will find this helpful. It treats of the urine, blood, sputum, stomach contents and feces. As a ready, handy reference probably some general practitioners may find it useful.

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*Hints on Prescription Writing.* By JAMES BURNET, M.A., M.D., M.R.C.P.E. Second edition. One shilling. Edinburgh: John Currie.

In this little brochure attention is paid to methods to be adopted in writing prescriptions, in examinations, the Latin numerals, directions for the dispenser, incompatibility, list of principal doses, solutions to prescriptions set at recent examinations. The medical student will find it a practical and useful help.

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## COMMENT FROM MONTH TO MONTH.

**Radium** is the most concentrated form of energy known. It is not a constant substance, but keeps changing into other things, which have been denominated radium A, radium B, radium C, on up to radium F. Some of these have a life existence of only thirty or forty minutes.

Recently before the Authors' Club, London, England, Sir Wm. Ramsay, K.C.B., delivered a popular lecture upon the wonders of radium. The Alpha particles, Sir William explained, were really gas, and that two-thirds of the energy from radium came from the gas emitted by these rays. This gas comes off at a regular rate, and brought forth the question how long would radium last. His answer to this is that it will last forever, the amount of gas being always proportionate to the radium present. To the question when would radium be half gone, this had recently been investigated and measured in Sir William's laboratory, and it had been estimated that it would take 1,750 years. This would mean that everyone who possessed radium would have at least one-half his capital at the end of that time. Some time ago one-half a gramme, or 1-55th part of an ounce, came into Sir William's possession, entrusted by the Austrian Government. The value of this small portion was set down at $45,000.

Being possessed of so much energy, what does that energy accomplish? The Alpha rays are sent out at a velocity of 40,000 miles per second. The Beta rays, about 1-1000th part of the size, exceed the Alpha rays in velocity, and are accredited with tremendous energy. Sir William has seen the Delta rays, which he stated would be gone in about forty years. He has never demonstrated the others. Although the energy of radium generally manifested itself as light, it kept itself hot. It has been found that it gave off about 3,500,000 times as much heat as given off by the oxyhydrogen blowpipe, which gave a temperature of over 2,000 degrees Centigrade.

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**The use of Paper Bottles in the Delivery of Milk** would be a step in the right direction—cleanliness and prevention. We now get butter and ice cream delivered in paper boxes; eggs in cellular boxes; oysters in paper boxes, and cold meats. Paper wrappers for loaves are used by some bakers. Milk, however, so susceptible to contamination, is delivered in vehicles which the day before may have carried milk to a scarlet fever, typhoid or diphtheritic person.

The single service container as exemplified in the paper bottle and the abolition of milk cans and glass bottles would bring milk for direct consumption from the udder to the mouth, from the teat to the tongue. And they could be made educators by being labelled with pertinent facts.

The United States Department of Agriculture in Bulletin No. 46 says: The ideal package for milk carriage and delivery is one that would be light, clean, safe, and could be used only once and then destroyed.

Dr. Ernest Wende, Health Commissioner of Buffalo, says: The abolition of the existing milk cans and bottles, and the adoption of the single service paper containers for direct consumption—no Pasteurized, sterilized or certified milk can compete with the raw milk from the healthy udder. This close tie between cow and consumer must not be severed by manipulations that are deleterious and by cans and bottles that are unsanitary.

All food for man's consumption must be handled with the greatest care and intelligence in order to prevent sickness and disease in the human being; and it is inconceivable how prone we are to go along year after year knowing that articles of food, particularly milk and bread, these essentials of daily life, are handled in the primitive way of our grandfathers. May the day speedily come when milk is delivered in the single service container and bread likewise.

**Typhoid Fever** should be handled as other contagious diseases. Three years' study of the disease in Washington and the District of Columbia has demonstrated that contact, infected milk and importation are the three greatest factors in the prevalence of the disease.

In 1908, out of 665 cases reported and investigated, 21.8 per cent. were imported cases. Five hundred and forty-two cases were contracted by infection within the district, and of these cases 9.59 per cent. and 21.3 per cent. were attributed to infected milk and contact.

That contact is important has been before pointed out in these pages. Dr. Victor C. Vaughan, one of the commission in 1898 to investigate typhoid in military camps, emphasizes this. In the United States military camps this commission found that personal contact was to be held responsible for 66 2-3 per cent. of the cases.

Montreal has recently recovered from a rather extensive outbreak. Toronto has had one not quite so severe. Water seems to be the cause of it all in these two cities. The question of investigating the milk supply and contact does not appear to cut any ice whatsoever. However, the opinion is a growing one amongst physicians and sanitarians that typhoid fever cases should be dealt with like other contagious diseases.

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**The "Public Health Militia"** calls for the enrollment of all good citizens according to Dr. M. J. Roseneau, late of the Public and Marine Hospital Service, Washington, but now of the Department of Preventive Medicine and Hygiene, Harvard Medical College.

In this connection life insurance companies and fraternal societies are becoming alive to the potent influence for good their respective bodies may exert, not only for themselves and their policyholders, but to the community and the state at large.

That there is a latent power for good in a public health way is rapidly becoming known and appreciated by these organizations. That latent power is the well-selected band of physicians who as examiners, and officers and agents who as solicitors, are in a position to join forces to form a well-organized "public health militia."

In these two classes interested in life insurance work there is at all times an interest in questions of health and sanitation, which makes a careful and efficient body of good citizens to enter the field in any campaign for the general good.

There is scarcely a home into which the physician and life

insurance or fraternal solicitor has not penetrated, and there is scarcely a portion of the country not traversed by their influence.

These bodies have all headquarters from which a plan of campaign can always be conducted, and their possibilities for good are almost unlimited.

The question is: How shall these powers be brought into action and utilized?

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**Of the Internal Parasites of Rats and Mice in their Relation to Diseases of Man** one is particularly interesting because of its practical importance. This causes in man the zooparasitic disease known as trichinosis. The rat is a practical and permanent reservoir for this parasite, and the disease in man will probably not be eradicated until rats and mice cease to be.

Rats are cannibalistic, and trichinosis is a common disease among them. They become infected by eating each other, eating scraps of pork from the offal piles of slaughter-houses, or from swill, also from dissecting-rooms.

Swine become infected by eating rats and as above.

Man becomes infected almost solely from pork, rarely from other meats.

The medical significance of trichinosis refers to infection with the flesh-worm or trichinia. It chiefly occurs in mammals of the carnivorous or omnivorous species. It is transmissible by the eating of the uncooked flesh.

As the adult parasites are in the intestine, we get such gastro-intestinal symptoms as irregular appetite, nausea, diarrhea, or constipation and colicky pains. There may be an edema around the eyes, and about the eighth day muscular pains begin. Then sets in the period of digression. The myositis is especially marked in the biceps; arms become semi-flexed; and chewing, swallowing, breathing and speech become difficult. There is fever, perspiration and fixed eyes.

When the parasites become encysted in the muscles, there are noted cachexia and anemia, pruritus, miliary cutaneous eruptions, followed by desquamation.

About the third week there may be such complications as facial edema, bronchial catarrh, pneumonia, pleurisy.

In the clinical diagnosis, the microscope should be used.

Under the following circumstances trichinosis should be suspected: Several patients in same family or neighborhood, gen-

erally of North German descent, particularly after some festivity where pork has been served.

In the differential diagnosis take into account typhoid fever and rheumatism.

Preventive treatment should be directed towards killing off rats and mice and the eating of pork well cooked. The treatment of the attack should be to purge in early stage, but nothing will act upon the larvae in the muscles. Stimulate to carry the patient over that period.

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**The Statement in the Western Canada Medical Journal** that the "Dominion Medical Association asking the B. C. Colleges of Physicians and Surgeons to take no action until the amended Roddick Act has passed Parliament virtually is putting a stopper on the culminating acts of the Inter-Provincial Federation of the four Western Provinces," is incorrect and has no foundation in fact, as neither from the Special Committee on Dominion Registration of the Canadian (not Dominion) Medical Association nor the office of the General Secretary has any communication issued to B. C. Council on the matter of Western Federation.

# News Items

DR. JOHN CAVEN, Toronto, has returned from a trip South.

DR. H. T. MACHELL, Toronto, has returned from New York.

DR. A. H. GARRETT, Toronto, visited Washington at Easter time.

DR. HARVEY SMITH, Winnipeg, has returned from the Bermudas.

THE American Proctologic Society is to meet in St. Louis June 6th and 7th, 1910.

A LEADING Winnipeg physician wants a partner. Address this office for particulars.

DR. F. A. CLARKSON, Toronto, Secretary of the Ontario Medical Association, will shortly sail for Europe.

DR. CHARLES SHEARD, for eighteen years Medical Health Officer of Toronto, has resigned that position.

TORONTO will give an additional $250,000 towards the new Toronto General Hospital, which is to be finished in 1913.

DR. J. G. FITZGERALD, of the University of Toronto, will spend the next six months working in the Pasteur Institutes in Brussels and Berlin.

DR. G. REID SIMPSON, Toronto University, 1895, died in this city on the 9th of April. Dr. Simpson practised at Hamilton up to four years ago.

QUEBEC PROVINCE has an enormous infant mortality. Statistics just published show that in 1908 there were 5,716 deaths among infants, 16.6 per cent. of the deaths of all kinds.

CANADIAN MEDICAL ASSOCIATION in Toronto, June 1st to 4th. Readers should enquire of their ticket agents at an early date as to rates, and should early reserve hotel accommodation.

IT is understood that the Ontario Government will shortly commence the manufacture of sera in Toronto.

INSANITY is on the increase in the Province of Quebec. The total insane population in 1908 was 3,688, an increase of 193 in a year.

QUEBEC medical men are indignant over about a dozen private bills in the Legislature to make medical students physicians by Act of Parliament.

ACCORDING to Dr. Pelletier, Secretary of the Board of Health of Quebec, many municipalities in that Province do absolutely nothing towards preventing the spread of contagious diseases.

# Correspondence.

## GREATER BRITAIN AND THE ANNUAL MEETING, 1910.

*Sir*,—The Colonial Reception Committee is particularly desirous of bringing the Annual Meeting, to be held in London in July next, to the notice of all medical practitioners residing in the dominions beyond the seas, as affording them an unusual opportunity of visiting London both for the scientific purposes of the meeting and also for social intercourse with their fellow-practitioners throughout the Empire.

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

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

We are, etc.,

EDMUND OWEN, *Chairman Colonial Reception Committee.*
DONALD ARMOUR, *Hon. Sec., Colonial Reception Committee.*

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

# Publishers' Department

REMARKS ON GLYCO-THYMOLINE.—W. R. D. Blackwood, M.D., Philadelphia, Pa.—For many years past this preparation has been one of my mainstays in diseases of the mucous membranes, and it has held its place despite the trials of many other agents warranted to supplant it by the advocates who decried Glyco-Thymoline when I spoke of its virtues. Space is now getting too valuable to waste with long, detailed descriptions of separate cases, and anyhow I never did write in that manner. I think general remarks about agents is the better way, and we need this more than stories of symptoms and temperatures, with daily alterations. No class of maladies is more troublesome than disorders of the mucous membranes, and none more difficult to eradicate thoroughly, and we have been put to our wits' end many times for remedial agents in such cases. The local treatment of catarrhs is frequently disappointing, and none more so than the prevalent one—post-nasal catarrh. Unless we can get an alternative condition established, little good is done, and nothing has been of greater service to me than Glyco-Thymoline, locally and internally. In several hundreds of long-standing and severe cases of this intractable and common affliction, I have come to regard this preparation as a standard and almost routine remedy. I seldom care for a post-nasal trouble without prescribing it at the onset, and if I don't, it is not long before it comes into use. It is just alkaline enough, just so as to cause the dialysis (the action locally with exactly the right amount of fluid excretion through the diseased membrane), just enough astringent without drying the parts, and just the right thing in the direct line of reparative work; it sets up tissue building soon after the membrane gets somewhere near its right shape. Many things are employed in catarrh, but I firmly believe that if I was confined to one agent only, that would be Glyco-Thymoline. For years I used the so-called antiseptic tablets of boric acid and glycerine, etc., and with good results; but for a long time past this is thrown aside and the Glyco-Thymoline takes its place. I use it in about half-strength, with a K. & O. nasal douche, and from twice to four times daily. With this, in bad cases I give internally, adding to it or giving separately, mercuric bichloride, and if done separately the menstruum is compound syrup of stillingia. In presumed syphilitic persons I always do this.

In gastritis, chronic entritis, vaginitis, gonorrhea, and in re-

curring attacks of what in many instances is deemed appendicitis, I use this agent freely, and always with good results. As a local application to foul ulcers, and especially to hemorrhoids, I think this preparation is very good. In the nasty leg ulcers, which now and then defy all remedies, Glyco-Thymoline does wonders; it can't do harm any time, and I am almost persuaded to give it in all instances. In bronchitis and asthma it is fine; in spasmodic croup it fills the bill nicely; it does well in venereal disorders locally, and in blantitis it stops the trouble at once.—W. R. D. BLACKWOOD, M.D., Philadelphia, Pa., *Medical Summary*, December, 1903.

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MENTAL DISTRESS.—Of all the various anomalies of the menstrual function, none occasions more worry on the part of the patient than a suppressed or scanty flow. The fact that cessation of the menses is a common symptom of phthisis is known to practically every woman; hence it is that whenever the expected flow is absent or scanty, there is apt to be a degree of mental distress entirely out of all proportion to the amount of physical discomfort experienced. Mindful of the fact that worry of this character is always detrimental to the general welfare of the patient, the physician very wisely avails himself of an agent having the property of promoting the menstrual discharge. Despite the fact that overwork, over-study, lack of exercise, insufficient food, anemia and numerous other circumstances may be the cause of non-appearance or deficiency of the catamenial discharge, it is, in the opinion of the best-informed, always the part of wisdom to restore the function with the least possible delay in order that the patient may be spared the depressing consequences of extended anxiety. Furthermore, a debilitated condition of the reproductive system is invariably associated with a suppressed or scanty menstrual flow, and by reason of this fact, the prompt administration of a utero-ovarian stimulant is obviously of more immediate benefit than the employment of measures directed toward improving the nutrition and general health of the patient. When the menstrual discharge has been acutely suppressed or rendered scanty by exposure to cold, change of climate, worry or grief, the administration of a potent utero-ovarian stimulant is incomparably more beneficial than drugs that only affect the reproductive system indirectly. The invigorating action of Ergoapiol (Smith) on the uterus and its appendages renders it of extraordinary service in cases of suppressed or scanty menstrual flow. The stimulating action of the preparation on the sexual apparatus is exceptionally marked and prompt, and

in instances where debility of these organs is the underlying cause of suppressed or scanty menstrual discharge, its employment is invariably advantageous. In the amenorrhea of "shop-girls" debilitated by overwork and insufficient exercise, Ergoapiol (Smith) has proved particularly beneficial. It is likewise notably serviceable in scanty menstruation of women who have borne children in rapid succession. In cases of acute suppression arising from sudden exposure to cold or dampness, change of climate, shock or similar causes, the preparation should be administered in doses of one capsule three or four times a day until the function has been re-established. When the amenorrhea is of long standing and due to general debility, anemia, sexual depression or other systemic impairments, one capsule should be administered night and morning throughout the intermenstrual period.

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THE HARBOR OF CONVALESCENCE.—While the physician is always on the alert to meet and overcome any of the various complications or serious symptoms that threaten the patient during the acute stages of a severe constitutional illness, it is not infrequently the case that insufficient attention is given to the effort to hasten a return to normal health after the subsidence of the acute symptoms. The rocks and shoals of active disease have been successfully evaded and the medical pilot has brought his more or less damaged human craft into the peaceful harbor of convalescence. At this point both patient and attendant are apt to "rest on their oars" with the idea that the "vis medicatrix naturæ" is all-sufficient to bring back the normal vitality, without the special help of medication. It can scarcely be said that such a "laissez faire" policy is to the best interest of the patient. Unless the reparative and restorative forces of the organism are encouraged and fortified, a slow and retarded convalescence is apt to supervene. The essentially devitalizing influence of the morbific agent in Typhoid, Grippe, Pneumonia, etc., is exerted primarily and principally upon the blood itself and a readily tolerable, promptly assimilable and thoroughly efficient hematinic, such as Pepto-Mangan (Gude), is always serviceable and valuable. As Pepto-Mangan (Gude) is palatable and non-irritant, it exercises no disturbing effect upon appetite or digestion—in fact it increases the desire for food, and, by its general tonic action, assists in its absorption and assimilation. Its freedom from constipating effect also renders it especially suitable in the restorative treatment of the convalescent invalid.

ELEMENTS OF SUCCESS IN SURGERY.—Cordier concludes an article on this subject with the following deductions: (1) The field of surgery is a vast one, and is best covered by the specialist in some of its departments, the eye and ear especially. (2) Surgery and medicine should go hand in hand in the treatment of border-line cases, but should be divorced in the strictly surgical or medical cases. (3) The selection of a surgeon for a given case should be made from no other standpoint than that of his recognized ability. (4) A surgical operation should be performed as quickly as possible, consistent with good and completed technique. (5) All unnecessary and rough handling of important tissues should be avoided. (6) Careful, short anesthesias will help to keep the death-rate low. (7) Careful hemostasis, with proper ligature material, is an important element in successful surgery. (8) Thorough aseptic technique should be carried out, and may be obtained either with or without rubber gloves and mask. (9) Lawn tennis suits and gloves are only too often the avenue leading to wound infection. (10) Short post-graduate courses instill false surgical confidence, and lead to many surgical disasters. (11) Honesty and sincerity should ever be the keynote in deciding as to the advisability of performing any surgical operation. (12) Mental tranquillity of the patient is of much importance preceding the performance of some surgical operations.—*The Lancet-Clinic.*

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THE TREATMENT OF ABORTION.—In concluding a very complete and comprehensive article, Stowe, in *Surgery, Gynecology and Obstetrics,* calls particular attention to the following points in the treatment of abortion:

1. The importance of treating all cases of uterine hemorrhage accompanied by intermittent pelvic pain in a woman of child-bearing age as acute abortion.
2. The value of absolute rest in bed in the treatment of threatened abortion until all pain and bleeding have ceased.
3. The necessity of saving as much blood as possible to avoid a long period of anemia and prostration.
4. The selection of cotton pledgets in lieu of gauze strips as a material for vaginal tamponage.
5. The use of finger curettement and manual removal of the uterine contents whenever possible.
6. The performance of Hoening's abdomino-vaginal compression when the conditions are present.
7. The difficulty of complete sterilization of laminaria tents.
8. The danger of perforation of the uterus with steel dilators and sounds.

9. The great danger of uterine perforation with the steel curette in acute abortion, and the value of the instrument in chronic abortion.

10. Curettement should be raised to the dignity and seriousness of a surgical operation, and should be performed under the same surroundings and with the necessary equipment.

11. The importance of refraining from curetting after the complete emptying of the uterus.

12. The use of ergot after the uterus is empty.

13. Local interference in septic abortion when the infection is limited to the uterine cavity. Less tendency to interfere when the adnexa or peritoneum are involved in the septic process.—*Med. Standard.*

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In our advertising pages will be noticed the advertisement of the Rapid Cleaning Cartridge, marketed in Canada by Mr. Otto T. E. Veit, 28-30 Wellington St. West. This is said to be a rapid and effective disinfectant and thoroughly efficacious in every respect.

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Antiphlogistine, the sole product of the Denver Chemical Mfg. Co., New York, has recently been called upon to protect its interests in the United States Circuit Court, and it is pleasant to record that they have been properly given protection by said Court. The action was taken against a Western company who marketed a dressing under the name of "Denver Mud," a nickname often facetiously applied to Antiphlogistine.

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"Sweet Babee" is a wide-mouthed, rubber-capped and nippled feeding or nursing bottle, which is being placed on the Canadian market by Mr. Otto T. E. Veit, 28-30 Wellington St. West, Toronto. The simplicity of construction and the adaptability to cleanliness will appeal to physicians. Indeed, it is about the best we have seen in the line of nursing bottles.

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In allaying inflammation in the prostatic urethra before surgical operations, and in keeping the urine bland and non-irritating after the operation is complete, sanmetto has been used very extensively and found valuable.