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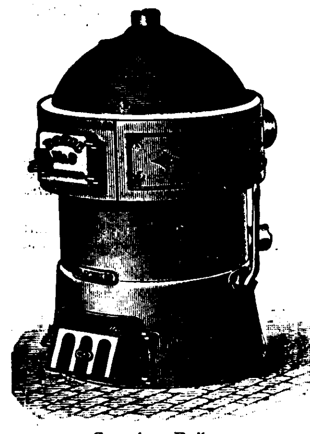

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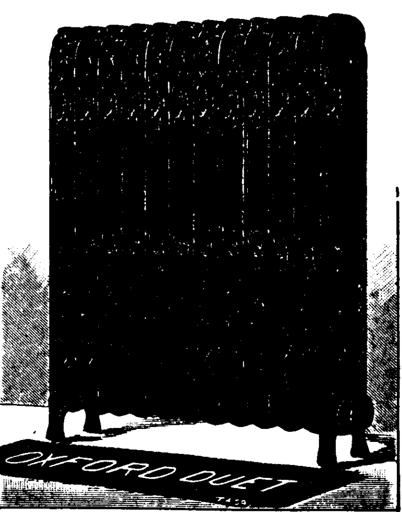

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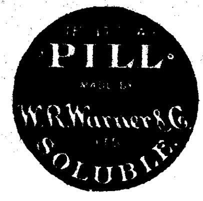

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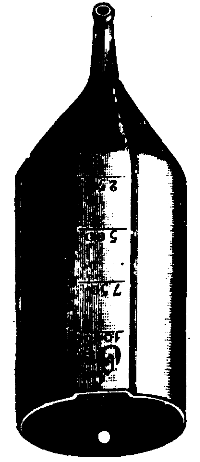

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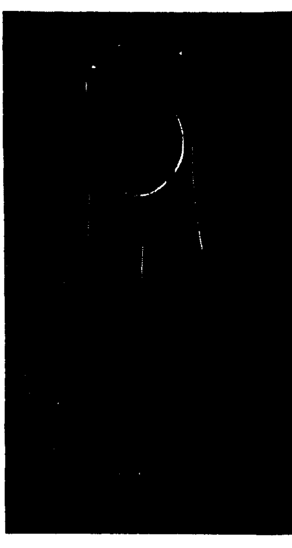

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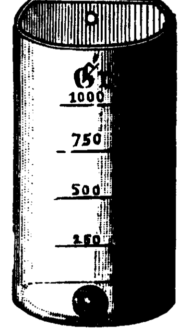

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CHRONIC ENDOMETRITIS; ITS CAUSE AND TREATMENT.

BY JOHN W. S. M'CULLOUGH, ALLISTON, ONT.

(Read before Ontario Medical Association, June, 1897.)

Before taking up the consideration of this affection it will be of interest and value to study briefly the anatomy of the endometrium.

There is a considerable difference between the lining of the cervix and that of the body of the uterus. The corporeal endometrium begins at the internal os and lines the whole of the inside of the body of the uterus, and further extends in a modified form into the openings of the Fallopian tubes. It is firmly attached by means of a stroma of connective tissue to the underlying muscle. From this connective tissue there radiates an irregularly arranged fibrillar tissue, found in lymphoid structures only. Attached to and between these fibrillar bands are innumerable lymphoid cells of various sizes. The endothelial covering consists of a single layer of ciliated cylindrical cells. The utricular glands, which are lined by the same variety of cells, are merely deep depressions of the mucosa. The lymph spaces in the mucosa extend to the spaces between the bundles of muscular fibres. The lymph vessels are most abundant in the external muscular layer, are connected with the lymph vessels of the mucosa and serosa, and run to large canals at the side of the uterus. The serosa has lymph vessels only, arranged in a net-work, which, while less numerous than those in the

subserous tissue, are much larger. Thus, we see that the lymph passes from the lymph spaces of the mucosa into the spaces and vessels of the muscularis, surrounds all the muscular bundles there, joins the lymph vessels of the serosa, and then *passes into large tubes in the broad ligaments.* The uterine mucosa is then either an open lymphatic gland or a lymphatic surface intersected by blood-vessels; the lymphatics being not mere vessels, but spaces between the bundles of connective tissue.

The cervical mucous membrane belongs to the class of true mucous membranes. It is dense, hard, and free from lymphoid elements. It also rests upon a sub-mucous connective tissue. Its numerous glands are of the compound racemose type. The membrane is thrown into interlacing folds (arbor vitæ), and is covered by columnar epithelium, which is ciliated in places. On its vaginal aspect, however, the epithelium is of the squamous variety. The lymphatics of the cervix are not so numerous as those of the body of the uterus. They pass, in connection with those of the upper part of the vagina, to the iliac and obturator glands. Septic peritonitis, when its source is in the uterine cavity, is conveyed not altogether nor mainly, as was formerly taught, by way of the Fallopian tubes. Its pathway is mainly through the lymph system just described, and hence the importance, in cases of septic disease within the organ, to remove the source of infection.

Causes.—The causes of chronic endometritis are practically those which enter into the etiology of most of the diseases peculiar to women. At the bottom of all are the two factors, *ignorance* and *neglect.* The causes are:

(1) Imperfect development of the sexual organs.

(2) Gonorrhœa.

(3) Septic infection following childbirth.

(4) Lacerations due to childbirth.

(5) Includes various factors, as constipation, errors in living, and errors in dress.

It is generally conceded that there is eventually in all cases a bacterial origin to the discharges. To study these causes a little will be of benefit.

(1) Imperfect development of the sexual organs. To this class belongs the neurotic woman. Her symptoms consist, in the main, of various nervous disorders, such as headache and other neuralgias, sleeplessness and a general more or less hysterical condition. In this class the menstrual function is often delayed and pain of a paroxysmal character is often complained of at the monthly period. Two classes of women are so affected. In the one there has been too much mental effort; as a girl the sufferer has been pushed at school. Her mental tasks have been beyond her bodily powers, consequently she becomes nervous, emotional and sleepless, has a poor appetite and difficult digestion. In the other the mental effort has been trifling, but poverty has necessitated a too great physical effort. The mill, the factory and the sweat shop have contributed, along with want of fresh air and sunshine, to "crowl" the body. From such causes the vital forces have been so reduced that the various organs, and especially the uterus, have been ill-fed and poorly developed. The infectious diseases, as scarlet fever, diphtheria, measles and whooping-cough, impoverish the blood and set up inflammatory processes which permanently damage the sexual organs.

2. Gonorrhœa is seen as a cause less frequently by the country practitioner than by his city brother. In 1873, when Emil Noeggerath first called attention to this disease as being productive of inflammatory diseases of the uterus, his ideas were vigorously opposed, but a quarter of a century's thought has changed opinion, and the position taken by this veteran teacher has been confirmed by the light of modern research. At the present time gonorrhœa is regarded as one of the greatest, if not the chief cause of uterine diseases.

(3) Septic infection during the puerperium, especially from neglected miscarriages, is a prominent cause. The majority of women do not consider a miscarriage at all so seriously as they should, and many women pass through an accident of this kind without taking an hour's rest from their ordinary duties. They invariably pay the penalty some time. This and the previous one are generally considered to be causative of at least ninety-five per cent. of uterine and other female diseases.

(4) Lacerations due to childbirth, directly by sepsis and indirectly by the induction of displacements, frequently produce chronic endometritis. Tears of the pelvic floor are almost certain, if left unrepaired, to produce a sagging down of the uterus and its appendages. The vessels of the pelvis become distorted and there results uterine congestion.

(5) Constipation is a bad habit amongst women. It predisposes to uterine congestion and retro-displacement. An overloaded rectum pushes the cervix forward, and straining at stool topples the fundus backward. The general health suffers, and there is want of tone in the tissues due to loss of appetite, poor digestion and contamination of the blood from fecal absorption. In the society girl it is produced by exposure of the arms and a large portion of the chest, whereby the blood is driven into the interior of the body, congesting the uterus along with other organs and interfering with the action of the heart and lungs; the numerous meals at irregular hours of stimulating and indigestible food; the position assumed in dancing, and the exposure and lack of rest during menstruation. In the school-teacher and the shop-girl the constant standing serve as an efficient exciting cause.

Classes of the affection.—Usually chronic endometritis is classified as the *catarrhal,* the *septic* and the *specific or gonorrhœal.* Until recent years it was considered that the young girl and the woman who had passed the menopause were exempt from chronic endometritis. Of late years, however, certain gynæcologists, notably Sexton, Skene and Mundé, have described a similar affection found in virgins and in women after the climacteric. Though designated *virginal* and *senile,* respectively, they are merely one or other of the varieties already mentioned, with certain characters peculiar to the time of life at which they occur.

Treatment.—Preventive treatment is *the* great necessity. The two factors in its etiology, viz: ignorance and neglect, should be met with the application of the principles of care and knowledge. Young girls at the age of puberty require such care as will secure to them a proper chance for a normal sexual development. Their mental and physical tasks should not be too great, and a knowledge of the principles of physiology and hygiene will be of benefit. Gonorrhœa is, in both sexes, often very

imperfectly treated. The victim frequently considers it anything but seriously, and as a consequence is often content with treatment by the druggist or the itinerant prescription. As a result, the disease is frequently doctored into a chronic stage and left a focus for the spread of a most destructive process. Cases of gonorrhœa should be most carefully treated, and kept under observation until cured. If not, some one, and often the innocent one, suffers.

Lacerations should be searched for and repaired on the spot. I know they are often left untouched; perhaps, in many cases, their very existence remains unknown. Every effort should be made by careful asepsis in our obstetric cases to prevent puerperal infection. Patients should have a good rest in bed after confinement or miscarriage, and especially if nursing, they should have not the sloppy food thought necessary by the ancient midwife, but good, wholesome, nutritious diet, plenty of fresh air and careful nursing. The evil effects of constipation are not always appreciated by those confided to our care. The female sex requires, both in this respect and in the matter of dress and habits of life, a good deal of teaching. I am of the opinion that, with the increase during late years of good trained nurses, and, too, the advent of the female physician, a great deal of good will result to our womankind.

In the matter of curative treatment, the removal of all causes which retard recovery, the use of proper constitutional treatment, freedom from excessive mental and physical tasks, with the addition of fresh air and sunshine, are material helps to a good result.

There have been many modes of treatment advocated for the cure of chronic endometritis and of the troubles which follow in its wake. In the mildest catarrhal cases much good will result from proper use of medicated hot douches. Depletion by the use of boro-glycerine tampons, applications to the cervix and vault of the vagina of various agents, such as ichthyol or Churchill's tr. of iodine, the use of leeches or the scarificator are all of service. In the severer forms, where the endometrium is lined with fungous growths, or where the discharges are purulent, or muco-purulent, these forms of treatment are but trifling with a dangerous disease. A woman with a purulent or muco-purulent discharge from the uterus, if it depends upon gonorrhœa or sepsis as a cause, is in daily danger, if she has not already reached that stage, of salpingitis or pelvic peritonitis, the latter of which may be conveyed not only by the tubes, but also by the lymph system already described. At best the routine treatment already mentioned is tedious and trying to a patient, and often its results are most discouraging.

From the use of electricity great results have been expected. I am sorry to say they have not been realized. Electricity, however, is a valuable adjunct to other methods of treatment, just as are drugs and constitutional measures of various kinds. The use of the negative pole in the cervical canal will produce dilation and establish freer drainage. This makes it useful. It is a valuable nervine tonic. The cost of a proper apparatus is so considerable that the general practitioner will usually find it to outweigh the profit. This objection may ere long, I hope, be much obviated.

At the present time, I think, the most generally accepted treatment of chronic endometritis rests upon the principle of treating the diseased organ as an ordinary abscess cavity, that is, by thorough aseptic cleanliness and the establishment of free drainage. Whatever plan will most successfully accomplish these ends will, I firmly believe, be the most curative. The various methods of procedure have each their advocates, and the individual operator will have to decide for himself what particular plan he will adopt. In the matter of divulsion of the cervix opinions differ. By some it is considered a dangerous proceeding, by others, if carefully done, to be devoid of danger. Some stretch the cervix quickly and forcibly to the extent of one or two inches; other equally prominent and successful operators do this part of the operation to a greater or less extent and more slowly. Some advise division of the cervix. All, I think, are agreed as to the value of careful asepsis. Then again regarding the curette. It is advised by some that the body of the uterus should be curetted only with a blunt instrument, using the sharp curette for the cervical mucous membrane. On the other hand, the majority of surgeons, perhaps, incline to use the sharp instrument for the whole endometrium. In the matter of after-treatment, there is likewise a diversity of opinion. Some advise that the uterine cavity be packed tightly with iodoform gauze, claiming that thereby we get better contraction of the organ and better drainage; others say that the uterine cavity should never be tightly packed, but that the gauze should be inserted loosely, reasoning that if we must use a foreign body within the uterine cavity, the less of it the better. There are others, too, who claim that iodoform gauze, or in fact any gauze containing a fixed material, does not drain, and that the discharge which is apparently drained from the uterine cavity is merely a secretion from the cervical canal. The stem pessary as a means of drainage still has its advocates.

Some of the best gynæcologists advise cauterization of the cavity after a curetting, using such caustics as carbolic acid, iodine, nitric acid, or solutions of chloride of zinc, while others who claim an equal success are content with flushing with sterilized water or a milder or stronger antiseptic solution. It is not my intention to discuss the values of these various forms of treatment, though I shall be glad if you will do so. I shall content myself with giving a short description of the plan of treatment I have myself used and with which I am very well satisfied.

In some cases it may be well to let the patient have a course of constitutional treatment before operation, but in the majority of cases they will much more rapidly show the effects of such treatment when it is used after operation. For several days previous to operation I am accustomed to give repeated doses of magnesiae sulphas, so as to have the bowels well cleared out, this tending to prevent, to some extent, much of the after-vomiting, flatulence and indigestion. It is essential, too, if any additional operation, such as a perineorraphy, is to be done. The vulva is shaved, or, at all events, thoroughly scrubbed, the vagina thoroughly cleansed and douched with a solution of 1-1000 bichloride, 10 per cent. creolin, or 1½ per cent. lysol, as may be preferred. In short, every precaution is taken to avoid carrying anything of a septic nature to the

uterus. The instruments are boiled in a weak solution of bicarbonate of soda, and instead of sponges I use sterilized borated cotton. These details being completed and the patient anæsthetized, the cervix is drawn well down, and if patulous enough the Goodell dilator passed in so as to engage the internal os. If any difficulty is found in passing this instrument, Palmer's smaller instrument, or the graduated hard rubber ones of Hanks, may be first used until dilation sufficiently great to allow of the passage of the larger instrument is reached. In the absence of the smaller instruments I have used a slender pair of uterine dressing forceps. The cervix is dilated slowly, using the pressure of the hand rather than the screw. Its position is changed from one side to the other to avoid too great strain upon any one part. I usually dilate to the extent of 1½ inches, consuming about half-an-hour's time in the operation. The irrigator containing hot sterilized water plays upon the seat of dilation all the while. In case of a very long, slender, or conical cervix, it may be sometimes necessary to slit it up, and in one case I amputated about one inch of such a cervix. The cavity of the uterus is then washed thoroughly with a solution of bichloride or other antiseptic, and using a large, sharp curette, the whole endometrium is carefully but very thoroughly removed. A smaller instrument may be used to advantage in the cornua and about the internal os, as it is most particular that these parts be thoroughly cleared out. The grating of the curette upon the underlying muscular tissue indicates when the operation is properly completed. The cavity is again washed out with an antiseptic solution, dried, and, if a purulent case, swabbed with pure carbolic acid. In all cases I pack the cavity fairly full of iodoform gauze, which is cut in a strip about an inch wide. The end projects into the vagina, where a loose pad of the same material is placed.

At the same time it is well to do any supplementary operation such as trachelorraphy, perineorraphy, or colporraphy, which may be necessary for a proper cure of the case. The patient is then put to bed, and the gauze is allowed to remain in the uterus for from two to eight days, that in the vagina being changed as often as it becomes saturated. After the removal of the gauze the uterine cavity, so long as there is any discharge, had best be washed daily, or every other day, with a mild antiseptic. Some cases, however, do not require this. Rest in bed for three or four weeks is essential. In case the chronic endometritis is associated with salpingitis or pelvic peritonitis there arise, according to Pryor (*American Journal of Obstetrics*, May, 1892, pp. 610), three questions which require consideration :

(1) If we do a laparotomy in such cases, is the endometritis cured ? To this he answers most emphatically, *No.*

(2) Is the complication due to the endometritis ? To this he answers, *Yes.*

(3) Shall the endometritis be treated before doing a laparotomy or afterwards ? To this he gives rather an affirmative answer, saying, however, that it is a mooted point. He goes on to say that there are some slight cases of endometritis associated with cysts of the tubes, serous or purulent, and with implication of the peritoneum. Here it is useless to

expect amelioration of the tubal disease by doing a curetting. But in all cases of tubal disease associated with peritonitis, and in all other cases of peritonitis, where the uterus is the seat of a purulent inflammation, he strongly advises a curetting some time before a laparotomy is determined upon. If this is done in cases of purulent peritonitis often a permanent radical cure will be effected without further surgical interference. The source of the sepsis is removed, and when laparotomy is performed later the peritonitis is gone and there is nothing left but the remains of a peritonitis and tubal disease. The acute inflammatory action will have subsided and there will be less hemorrhage and less necessity for drainage. A few words as to the treatment of virginal and senile endometritis, and I am done.

Senile endometritis is usually a chronic endometritis, with decomposition of the retained discharges, due to a contracted internal os. The treatment is divulsion—and this must be very cautiously done, as these old and often atrophied uteri may rupture very easily—curetting, and then applications of caustic preparations, as nitric acid, carbolic acid, or iodine, followed by the use of silver and free drainage. Regarding the cause, Mundé says: "I confess that I do not feel able to account for the occurrence of this affection."

In the virginal form Mundé advises curettage of the corporeal endometrium with a blunt, and the cervical lining with a sharp instrument. Penrose advises amputation of the cervix. These manipulations should be followed by proper drainage.

Tight corsets, exposure of the feet to cold, long engagements and chronic constipation, are regarded by A. Lapthorn Smith to be the chief etiological factors. It will be of value to improve the hygiene and general health. Howard Kelly examines virgins in the knee-chest position, and advises against very active local treatment.

It is quite likely that some cases of intractable dysmenorrhœa in virgins may depend upon this form of endometritis.

COMMUNICATIONS, ETC.

To the Editor of THE LANCET.

SIR,—THE LANCET and other medical journals contain the proceedings of the British Medical Association, and among the very interesting addresses given is one by Dr. W. Mitchell Banks, upon which with your permission I will make a few remarks. I refer more particularly to that part of his address where he refers to the life and labors of that eminent French physician and surgeon, Ambrose Paré. Dr. Banks gives the credit to Paré as being the inventor of the ligature as applied to the stoppage of hæmorrhage instead of the cruel methods in use in his day of using hot irons, boiling oil, etc. The Doctor says: "There are, of course, some persons who wish to make out that he (Paré) was not original in the matter of ligature;" then quotes what Ambrose Paré says about it himself, as follows: "Taught me as I interpret it by the suggestion of some good angel, for I neither learned it of my masters nor of any other man," etc.

I grant that this quotation might be taken as evidence that Paré claimed to be the inventor of the ligature, but I understand him to mean that it was not taught, nor had he seen it in use nor heard of its use by any surgeon, in his day, I have in my possession the medical works of Ambrose Paré, an English translation by T. Johnston, and published in the city of London by M. Clark in the year 1678, about one hundred years after the original work was published by its author. The work I have is bound in one very large volume. The original was divided into twenty-nine books. I give the translation of that part referred to by Dr. Banks. It reads as follows: "Wherefore I must earnestly entreat all chirurgeons that they leave this old and *too, too* cruel method of healing and embrace the new, which I think was taught me by the special favour of the Sacred Deity, for I learned not of my masters, or of any other. Neither have I at any time found it used by any. Only I have read in Galen that there was no speedier remedy for stanching the blood than to bind the vessels through which it flowed towards their roots," etc. To my mind the above quotation goes to show that Paré got his idea from Galen and other authorities; and this is not all. I could give numerous quotations that he did not claim to be original in the matter of ligature. In his address to Henry the Third of France, to whom his medical works were dedicated, he says as follows: "See here then, my little good man, the authorities which command you to tie the vessels teaching and discoursing of the flux of blood, and how to stop it by means of the ligature of the vessels." Then follows a lengthy quotation. He also refers to eleven other authorities in support of what he terms his "new method of applying the ligature." Paré appears to have met with great opposition from his confreres for taking a decided stand in his "new method," and to him is due the honor of bringing into general use the application of the ligature. Ambrose Paré was a man endowed with great wisdom and independence of thought, of sterling integrity, and very sympathetic in his nature. In his Apology, Book 29, he refers to his persecutors in the following language: "Truly I have not put my hand unto my pen to write on such a thing, were it not that some have impudently injured, taxed, and more through particular hatred disgraced me, than for the zeal or love they have for the publick good, which was my manner of tying the veins and arteries;" and again he says in another place: "O, what sweet words are here for one who is said to be a wise and learned Doctor; he remembers that his white beard admonishes him not to speak anything unworthy his age, and that he ought to put off and drive out of him all rancour and envy conceived against his neighbour," etc. I write the above in all deference to the ability and position that Dr. Banks occupies, but I felt it but due to the history of so important a surgical subject, and being in the possession of proof, to correct the statement. The work I have is interesting from the standpoint of the history of medicine and all that subject pertains to. The surgical instruments in use in the fifteenth century, plates of which are given, are of the crudest make. The work comprehends the whole medical art as understood in that day.

Yours truly,

M. FORSTER, M.D.

Palmerston, Ont.

SURGERY.

IN CHARGE OF

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MEDDLESOME INSTRUMENTATION IN URETHRAL DISEASES.

BY W. L. CHAMPION, M.D., ATLANTA, GA.

The ugly train of symptoms that follow in the wake of bad urethral surgery, and the results obtained from such instrumentation, is frequently a monument as lasting to the surgeon as a fracture improperly treated. It seems the impression is prevalent in the minds of some that the urethra has no function at all, but was made for the surgeon's use, to demonstrate his skill in the use of instruments.

Considering the teachings of to-day, and our knowledge of the importance of cleanliness in surgery, it is a puzzle to know why physicians continue to thrust dirty instruments, made sleek with rancid grease, into the urethra and bladder, producing untoward results and not knowing the source of infection. If the instruments are clean, it frequently happens that they are passed into the bladder, carrying purulent material retained within the urethra. While a diseased urethra is, as a rule, an unclean canal, it frequently happens that the deep urethra and bladder are in a healthy state, so there is no common sense in "adding fuel to the fire" by using unclean instruments or forcing poisonous material into uninfected areas.

The close observer rarely overlooks the origin of urethral fever, swelled testicle, cystitis, prostatitis, damaged kidneys, and many serious conditions directly due to the meddlesome use of instruments. Not to be a meddler in the treatment of genito-urinary diseases, it is essential to be familiar with the use of instruments, to know when to use them, and what kind of instruments to use.

The use of small steel instruments below 18 or 20 French cannot be too strongly condemned. With our knowledge of the anatomy of the urethra, and of the dangers of passing small steel instruments, false passages should be a thing of the past. The soft bougies, though not as durable as the steel sounds, accomplish the same results, and should always be used when a small instrument is called for; and even the larger ones are just as serviceable and produce less pain on introduction.

The routine practice of passing sounds *into the bladder* in treating strictures in the penile portion of the urethra is not only useless but bad surgery. There is always a liability of infecting the bladder, and producing irritation of the prostatic urethra. The short, straight sound passed through the stricture accomplishes the same result as the curved instrument, and the danger of producing complications is lessened.

An important point that should never be overlooked is the necessity of having instruments perfectly clean that are to be introduced into the bladders of old men with enlarged prostate; and this point should always be impressed upon the patient when he is given a catheter to use.

The carelessness with which instruments are thrust into the urethra frequently results in permanent injury to the tissues. "It is a very easy thing to force a catheter or sound through the urethral walls, or to produce sufficient injury, by bruising and laceration, to result in cicatricial deposit and consequent stricture." This is especially true when the canal is highly inflamed; and probably many of you have had cases of cystitis and later organic stricture to treat due to meddlesome surgery of this kind.

The custom of many physicians of using the steel sound for exploring the urethra to determine whether stricture is present or not should be abandoned. The sound is practically worthless as an instrument to arrive at any knowledge as to the condition of the urethra. Patients frequently present themselves for treatment who have been examined with sounds and told there were no strictures present, when a proper examination would reveal a badly strictured canal. A stricture that can be detected by a 25 bulbous bougie will frequently admit a thirty sound, and for this reason errors in diagnosis are made.

To meet with success in the treatment of urethral diseases it is necessary to make a careful examination. Neglect in this particular is why many failures are recorded. Patients with contracted meatus that will admit only a 26 or 28 bulbous bougie (urethrameter not being used) are told that they have no stricture, when it is impossible to determine whether the urethra is free of strictures until a bulbous bougie as large as the urethra is introduced.

The mistaken idea that every apparently gleety discharge from the urethra is an indication for the use of the sound is clearly shown in the discharge due to prostatic congestion, discharge from gonorrheal inflammation of the seminal vesicles, the discharge of long standing after epididymitis, the discharge we frequently see from syphilic mucous patches within the urethra, and other conditions that respond to proper treatment.

When a patient presents himself for treatment, if he has a highly sensitive urethra or discharge from the canal, first treat the urethra by irrigation until the sensitive condition has disappeared and discharge has been controlled, before making an examination or commencing treatment with instruments.

In treating stricture of the urethra by dilation how often should we pass an instrument? This question has been written upon, argued and discussed at length, and there seems to be a wide variance of opinion as

to the length of time that should elapse between the sittings. In the use of sounds for the treatment of stricture there can be no fixed law in regard to the intervals to be allowed between the sittings. Each case must be watched separately, and the results of the introduction of the instrument noted, so as to determine when to use the instrument again. My opinion is that the majority of men not studying the effects produced by an instrument passed through an organic stricture, influenced by the patient's desire for a rapid cure, are prone to pass instruments too often, thereby setting up an acute inflammatory condition and prolonging the treatment.

My experience in the treatment of urethral strictures coincides with that of Dr. Keyes, of New York. Probably most of you know his views on this question, but I will quote him at length so as to be plainly understood. He says: "Suppose a stricture which sensibly diminishes the size of the stream of urine, and is attended by gleet. Through this stricture a conical instrument is introduced, which is arrested for a moment, but gradually passes, stretching the stricture, and is distinctly 'grasped' as it is being withdrawn. What follows such an operation? At the next act of urination the stream is larger, and continues so during twenty-four hours. At the end of that time the stream is nearly as small as it was before the sound was used; the gleet is the same, or possibly increased. Now, for twenty-four to forty-eight hours the stream steadily becomes smaller, while the discharge grows more abundant and creamy. During the third or fourth day improvement commences; the stream again grows larger, the discharge becomes thinner and less copious, and this improvement often continues through the fifth and sixth or even seventh days, or longer, after which the volume of the stream commences to diminish and the discharge to become thicker. In such a case, if the same conical instrument first used had been reintroduced at the end of twenty-four hours it would have passed the stricture with about the same facility as on the day before; if after forty-eight hours, it would enter with more difficulty; if at the end of seventy-two hours, it would again enter as easily as on the first day; if reintroduction were first attempted on the fourth day, the sound would pass more easily than at first; if on the fifth, with more ease still, and it would not probably be so tightly 'grasped' on withdrawal; while in some cases the greatest ease of reintroduction is attained on the sixth, seventh, eighth day, or even later. This varies in different cases; but it may be stated, as a rule, that it is bad surgery, in treating stricture by dilatation, to reintroduce an instrument—unless it be filiform—before the lapse of at least seventy-two hours, and that more rapid progress will be made with the case by waiting till after ninety-six hours—often even until the sixth, seventh or eighth day."

If any one doubts the truthfulness of the above statement, all that is necessary to be convinced to the contrary is to watch the effect of an instrument under the same circumstances.

The cure of a stricture by dilatation is brought about by "absorption" of citatricial tissue; so, if the structure is not stretched up to the full size of the urethra, the cure is not perfected, and recontraction will in all probability take place. This holds true in regard to strictures that have

been cut, and a large percentage of the urethrotomies that are not successful are due to neglected after-treatment. If a stricture can be cured by dilatation, the surgeon is not justifiable in subjecting the patient to a cutting operation, that might possibly prove fatal. Strictures of recent formation, situated in the pendulous portion of the urethra, can usually be cured by dilatation, and those in the deep urethra respond readily to this method.

Now, in regard to internal urethrotomy in the deep urethra, I know there are men who do this operation with but few accidents; but the best practice is to positively refuse to interfere unless the patient will submit to the external operation. The custom of doing internal urethrotomy in the office, and allowing the patient to go home in a hack or on a car, cannot be too strongly condemned. It is an operation that is fraught with danger, so we should guard against any mishap, and give the patient the best treatment possible. The operation should be done at home, and the patient kept in bed for at least five days, and it would be safer still to require a week's rest.

The mere cutting of a stricture will never cure it; it is absolutely necessary to keep the urethra dilated up to its full size until perfect healing takes place, and all cicatricial tissue has disappeared as far as the sound will accomplish.

Before a stricture is cut, the size of the urethra should be determined and the stricture cut to this size. Then introduce a bulbous bougie, and see if the slightest band of cicatricial tissue is left; if so, reintroduce the urethratome and cut all remaining bands. If the word meddlesome applies to any operator, it is the one who cuts a stricture to number 32 when the calibre of the urethra is 34, and never introduces a sound larger than the size the stricture was cut to. An operation of this kind cannot give relief; for in the future there will probably be a recontraction of the stricture. The same kind of operative work is done in cutting the meatus; it is either not cut to the full size of the urethra, or neglected and not kept dilated until healing takes place.

It is not my intention to appear dogmatic in regard to these apparently simple operations, bnt I so frequently see strictures that were improperly treated, and meatus that have to be incised a second time, that I cannot refrain from emphasizing these important points.

In my opinion, after internal urethrotomy instruments are frequently passed too often; every fourth, fifth or sixth day will give just as good results, and less pain to the patient, as when passed on the second and third. The nearer the stricture is to the meatus the shorter should be the intervals between the sittings.

The habit of passing sounds to cure a gleet, whether due to a stricture or not, is the cause of a twenty-five or twenty-six French, the largest the meatus will admit, to be thrust into the urethra to cure a chronic gonorrhea, when a mere incision of the meatus to its proper size, and local applications to the diseased surface, will perfect a cure.

It is bad practice to try and force an instrument through a stricture; it always results in damage to the urethra. If a stricture is of such small calibre that it seems impossible to pass an instrument at all, I feel

sure that in many cases, if a stream of water is thrown against the stricture with an irrigator for a few minutes, that an instrument can be passed into the bladder. Under similar circumstances, if a two or four per cent. solution of cocaine is deposited at the stricture, it will produce contraction of the engorged vessels and tissues to such a degree that a filiform, or even larger instrument, can be passed.

The deep injection syringe, an instrument that is in general use, and one no doubt that has served a good purpose, is inferior to the endoscope. With the syringe it is a matter of guesswork whether the solution is deposited at the seat of inflammation; but with the endoscope we can make a careful examination of the entire urethra, and limit the application to the diseased surface.

Every discharge from the urethra of long standing is not due to a stricture that requires cutting or dilatation. In many cases the discharge is due to a chronic inflammation that produces a slight thickening of the urethra, and is diagnosed and occasionally operated upon as a stricture of large calibre. Strictures of this kind, if they can be called strictures, are the ones that give such quick and happy results from direct applications through the endoscope.

The granular condition that remains after a stricture has been dilatated or cut to its full size, will respond more promptly to local applications through the endoscope than other means. While the sound and deep injection syringe was originally and is yet used for the relief of these conditions, it is impossible to know the condition the urethra is left in when the patient is dismissed.

I frequently have patients who, having had a gleety discharge from the urethra for years, and having been treated with sounds for stricture until completely disgusted with instruments, make a permanent cure of the granular condition by a dozen or fifteen applications through the endoscope. The endoscope I use, and think one of the best, is Otis' instrument, with electric attachment, and Klotz tubes. The ordinary urethral tubes, with a head mirror to reflect the light, will not give satisfaction.

It is necessary to the surgeon's success and the patient's welfare to ascertain the condition of the patient's kidneys before doing an operation upon the urethra. I remember very well a case where an external urethrotomy was absolutely necessary to relieve a tight stricture of the deep urethra that had caused a rupture, and the patient died from suppression of urine fifteen days after the operation, due to structural derangement of the kidney that was present before the operation. In urethral surgery preparatory treatment is very necessary. The bowels and kidneys should be in good working order, the urine should be rendered aseptic as far as possible, the parts to be operated upon should be thoroughly cleansed, and a dose of quinine before and after the operation is advisable. Taking these precautions will, I feel satisfied, reduce the mortality in surgical operations upon the urethra.

In closing, I would like to emphasize the importance of irrigation before surgical operations upon the urethral canal, whether it be only the passage of a sound or an internal urethrotomy. If this is done there will be fewer cases of urethral fever and less irritation and inflammation after

using instruments. Within the past twelve months I have used "hydrostatic irrigation" in the treatment of inflammatory conditions of the urethra and bladder, and it is far superior to any other method. The container, which holds a prescribed quantity of the solution to be used, at a temperature of 110° F., is placed eight or nine feet from the floor. A glass nozzle is used to throw the fluid into the urethra and bladder. The anterior urethra is first thoroughly washed out, and then the nozzle is pressed firmly against the meatus, and the patient told to breathe deeply or try to urinate, and the fluid flows back into the bladder. When the bladder is full the patient is allowed to pass it out, and the bladder is refilled. The value of this method is that the urethra is distended to its full capacity, which forces the pus and germs from the glands and follicles of the canal."

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THE TREATMENT OF INJURIES OF THE BRAIN.

BY DAVID Y. WINSTON, M.D., CLARKSVILLE, TENN.

LACERATION OF THE BRAIN.

The condition known as concussion is so hard to diagnose from laceration of the brain in the severer varieties—if such a thing be possible—that I give the treatment of both together. There is much doubt if the brain, soft and easily torn as it is, can withstand the violence necessary to cause the symptoms often called concussion.

Treatment.—In the milder cases scarcely anything is to be done further than to make the patient lie down a short time, with possibly a little cool water or cold compresses to the forehead. In severer cases put patient to bed, with cold cloths or cold coil to the head, milk diet for a day or two, keep bowels open, enjoin absolute quiet, and, if needed, give bromides or small doses of morphine for rest and sleep.

In severer cases attended with unconsciousness or other grave symptoms of cerebral trouble, no rash treatment is to be followed; but what can be less conservative than to let a patient lie for days without investigating the presence or not of fracture? The word "conservative," as usually used, means "fear of action." In grave cases, I believe, no one can be positive as to the existence or not of fracture, without an incision down to the bone.

In some instances it will be both necessary and justifiable, if grave symptoms exist. I have seen men in whose hands I would trust my life, who had failed to diagnose a depressed fracture through an unbroken scalp, simply because the swelling had obliterated all traces of depression. For this reason, I claim it is often best to make an incision down to the bone, and if no depression exists, you will know the ground you are treading; then wait, and, if cerebral symptoms develop, trephine, and do

what else the case may call for. I believe almost all cases of laceration with simple non-depressed fracture would be better off and more lives saved by operation. For with drainage, opening the dura, and washing off the laceration, or if the dura is torn, doing what may be necessary in the way of trimming the edges and suturing, inflammation would be less likely to occur, and after consequences less liable to be severe.

INTRA-CRANIAL HÆMORRHAGE.

The varieties of this form of traumatism are extra dural, sub-dural, cerebral and cerebeller, and from the sinuses. Extra-dural and sub-dural hæmorrhage are so much alike in symptoms that a diagnosis between them is impossible. However, with slight modifications in the technique, the treatment is the same. Extra-dural hæmorrhage is usually from one of the branches of the middle meningeal artery, or from its main trunk. There is one symptom of such importance that all treatment hinges upon its presence; viz., a period of consciousness after the injury, preceding the coma. The period of consciousness may be very brief, being, usually, directly in proportion to the size of the vessel ruptured. If very small, it may be hours or even days before the coma appears. The hæmorrhage may come from a wounded sinus, as in three cases I have seen. The diagnosis having been established, the treatment should be promptly undertaken. Paralysis may gradually lessen and consciousness return, but the results of waiting and not operating are often deplorable. Sub-dural hæmorrhage usually comes from the small vessels on the surface of the brain and from the middle cerebral artery in the fissure of Sylvius.

Treatment.—In treating extra-dural hæmorrhage, we must remember the vessels involved are usually the anterior or middle branches of the middle meningeal artery, at times its trunk. Sub-dural hæmorrhage is oftenest from a number of smaller vessels on the surface of the brain, and then usually is associated with a depressed fracture. It may, however, be from the middle cerebral artery running along in the fissure of Sylvius, or from some of the other large vessels on the suface of the brain. In operating for hæmorrhage, it must be our invariable rule to trephine as indicated by cerebral localization, not by the site of the external wound or injury. This, provided there are localizing symptoms. Of course, any fracture or other injury is to be treated on its own merits. It would be most reprehensible to operate only for depressed bone, with a clot of blood somewhere else.

In extra-dural hæmorrhage we can reach the main trunk and anterior branch of the middle meningeal artery on a level with the orbit, one and one-quarter inches behind the external angular process of the frontal bone. The middle branch is reached just below the parietal eminence on the same line. If the clot be from the middle cerebral, it can be reached by opening a little upward and backward from the point for the main trunk or anterior branch of the middle meningeal, or the opening for the latter can be enlarged upward and backward if we fail to find it there. The dura will, of course, have to be opened. The usual form of sub-dural hæmorrhage will only give the symptoms of the accompanying depressed

bone. If a dilated pupil points to gravitation of blood to the base, we will have to trephine lower. For instance, one-half to three-quarters of an inch below the main trunk of the middle meningeal.

HÆMORRHAGE INTO THE CEREBRUM AND CEREBELLUM.

Violence may produce hæmorrhage into the brain substance from a rupture of some of its blood-vessels. It is indistinguishable from apoplexy in its symptoms. The diagnosis depends on its resemblance to apoplexy, and the following traumatism. The treatment may be most satisfactory if too much damage has not been done the brain by the blood current. Where there are distinct localizing symptoms, the blood-clot may be easily located and found. If found in any place, it must be cleaned out, the cavity washed, and, if very large, drained. If small, after thoroughly cleansing and hæmostasis, close the dura without drainage of the cavity. When great damage has been done the brain, death often occurs. The subsequent history of many cases which live will be most deplorable where the injury was extensive.

HÆMORRHAGE FROM SINUSES.

Not so rarely as is supposed a depressed bone punctures or lacerates a sinus. The hæmorrhage is usually extra-dural. It may be sub-dural. The depressed bone usually prevents a rapid flow of blood, but when elevated or removed, allowing the blood to pour out, it often does so frightfully. Sinuses may be wounded in operations accidentally or intentionally. It may be necessary to ligate a sinus on each side, and remove the intervening portion in an operation. I have had three cases of wounds of the sinuses in depressed fractures. Two were of the superior longitudinal sinus, and one of the Torcula Herophili. All these were sutured and healed well. The torcula was packed around with iodoform gauze, in addition to suturing. These wounds may be simply packed, may be caught by forceps, or a lateral ligature may be applied if the wound is small.

WOUNDS OF THE BRAIN.

These may occur from depressed bone, from bullets or other missiles, swords, bayonets, arrows, canes, umbrellas, pencils, etc. We have already considered those from depressed bone and gun-shot wounds. Those remaining to be considered are among the most dangerous wounds to which the brain is liable. The objects causing them are usually pointed and produce punctured wounds. They are much more likely than gun-shot wounds or wounds from bone to be infected. They may occur at any part of the brain, even through the nose, mouth or eye. They are always accompanied by fracture except when they occur through an open fontanelle, or rarely a large parietal foramen. They may take place through a previous trephine opening.

The first steps toward treatment is to remove any protruding foreign bodies, and by packing, if necessary, to control hæmorrhage. It may be necessary to leave the object in the brain until the operation, for fear of doing additional injury in its removal. Be careful never to use an object as a lever, or great injury may be done. It may be necessary to remove

bone before a cane, or pencil, etc., can be extracted. All vessels requiring it must be ligated, all pieces of loose bone removed, all depressed or pointed edges bitten away, and the wound washed out to its depth and disinfected. If the wound is completely or almost through the brain, it will be best possibly to make a counter opening and carry the drainage tube through from side to side. If the puncture takes place through the mouth, nose, or orbital cavity, the object must be examined for fear it has been broken off and a piece left in the brain. If so, it must be removed, the opening being enlarged sufficiently for this purpose and for drainage. Each case will present especial features for attention, but treatment based upon these principles will give satisfactory results.

Case.—Wound of brain, June, 1894. A white girl, two and one-half years old. A large farm-bell, on a post twenty feet high, fell, striking her head on the right side in front of the motor region. The bones were driven into the brain, by the handle I suppose, to the depth of one and one-half inches, making a large jagged wound in both the dura and brain. There was not much hæmorrhage. Considerable bloody brain-tissue came away when the wound was washed out. The ragged edges of the dura were trimmed smoothly, but could not quite be brought together. All depressed bone was elevated or cut away. A drainage tube was passed down to, but not into the wound of the brain. No fever and an uninterrupted recovery.

As illustrating the danger of a non-operative course of treatment after injuries of the bones of the cranium, or to the brain itself possibly, I append this case upon which I operated three years since:

J. T., white, son of a respected family, received a blow over left side of parietal region, felling him to the ground. He was not rendered unconscious, but got up and after sitting around for a time resumed his work, chopping down timber. The blow was from a limb breaking off and flying back, when one tree struck another in falling. In a few months he began to change mentally, becoming morose, sullen and suspicious. Within a year he was sent to an asylum for the insane. About two years later he was sent home to die. At this time my acquaintance with him began. Examination of the head revealed nothing abnormal, no scar or depression was visible on the shaven scalp; nothing could be felt. I determined on an exploratory incision down to the bone, that I might see the condition present, and, if necessary, then operate. When the bone was exposed, one place three inches in diameter was eburnated. The trephine would not cut it at all. I soon made an opening with a chisel, and bit the rest away with rongeur forceps. It was over double the thickness of the surrounding bone. There was no diploe, but an occasional bleeding point the size of a pin. The bone was thickened and had exerted considerable pressure upon the brain. Before the operation he was wildly maniacal. He had emaciated to a shadow. His age was about twenty-five years. I had to tie him hand and foot in bed for a few days. He then began to get better, to sleep well and eat. In six weeks he was up, well physically, and his mental condition much improved. He recognized old friends, but all the past insane spell was a blank. Since then he has been well physically, but in rather a melancholic condi-

tion mentally. Lately I hear he is much better mentally, enough so to call on the young ladies of the community. I do not believe he will ever be perfectly sane. I think there should have been more bone removed, and there would have been but for his condition being alarming upon the operating-table. However, all the thickened bone was removed. If this case had been cut down upon at the site of injury at the time it was received, a fracture slightly depressed would have been found. If operated upon then this would have prevented further trouble.

EXTIRPATION OF THE RECTUM BY THE KRASKE METHOD.—Dr. Joseph Bacon says that when the cancer or stricture is limited to the anus and lower rectum it frequently happens that the diseased portion can be removed without opening the peritoneal cavity, and in such cases the danger of the operation is reduced to a minimum. Unfortunately cancer of the rectum, like stricture, usually begins at a point where the levator ani muscles encircle the rectum, and when the growth is removed the greater part of the levator ani muscles and the recto-vesical fascia, together with the peritoneal covering, is so extensively removed that resuturing of the peritoneum so as to close the peritoneal cavity is out of the question, and one must close the abdominal cavity by means of gauze packing in the pelvic outlet until after four or five days, when the peritoneal surface next the gauze will have thrown out a layer of lymph and granulation tissue, entirely closing off the peritoneal cavity from the external wound. It is important to remember that the bony incision must be limited above at the lower border of the third sacral vertebra, otherwise the third sacral nerve is iujured and serious bladder complications are brought about by the paralysis of this nerve.—*Interstate Medical Journal.*

A METHOD OF WASHING IN ECZEMA.—In view of the extensively-held modern opinion of the probable parasitic etiology of eczema, the necessity of cleanliness becomes an important factor in its treatment, while the long-known injurious influence of water on eczematous surfaces raises a difficulty in carrying this idea into effect. The use of olive oil—which, as a substitute for water for cleansing the skin and, indeed, in also removing the grime of manufacturing trades, is commonly known—is strongly advocated for this purpose. Recent experience with this method of cleansing has impressed the writer with its adaptability for constant use and its value when persevered in. A case in point is cited in which the disease was obstinate and tending to spread under the use of water for washing. When cleansing with the oil was adopted the disorder rapidly subsided. The method consists in smearing the parts well with a pledget of cotton-wool saturated with olive oil. The oil is then removed by gently rubbing the surface with a corner of a dry, soft towel covered with toilet oatmeal. In pustular eczema the writer fonnd the occasional use of soap and water also necessary.—*Brit. Med. Jour.*

MEDICINE.

IN CHARGE OF

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SYPHILIS OF THE THORACIC ORGANS.

BY HENRY ALFRED ROBBINS, M.D., WASHINGTON, D.C.

Lammonier nearly a century ago described the existence of phthisis pulmonalis of a syphilitic character. Then followed a long series of years when syphilis was not recognized as attacking the internal organs, probably owing to the teachings of John Hunter and Sir Astley Cooper, who did not believe in any visceral complications of syphilis. Sir Astley and Edward Jenner were the pet students of Hunter, and naturally endorsed whatever the great physiologist taught. Sir Astley in his lectures on surgery taught "that some parts of the body are incapable of being acted upon by the venereal poison, such as the brain, the heart and the abdominal viscera." Indeed, he writes: "This poison does not appear to be capable of exercising its destructive influence on the vital organs, or on those parts most essential to the welfare and continuance of life."

In 1826 Laennec and Vandral recognized and described syphilis of the lungs, identical in its symptoms which those of phthisis pulmonalis. Van der Kolk insisted that syphilitic subjects died, presenting "phthisical appearances, with ulceration of the lungs, situated most frequently in the middle lobe, but without tubercle." Ricord, Lanceraux and Alfred Fournier have, by pathological anatomy, proved that symptoms of phthisis are not only possible, but very frequently the same as those produced by syphilis. (We are not fully in accord with this last statement.—ED.)

Syphilitic Broncho-Pneumonia.—Drs. Balzar and Grandhomme have recently made several necropsies of syphilitic still-born infants, and the results of their examinations prove that syphilitic lesions, which are caused by microbes, like other inflammations, do not appear to preserve any specific character in their evolutions. With regard to the lungs, syphilitic pneumonia may be classed with broncho-pneumonia, in the same degree as secondary pneumonia in acute infectious diseases, such as measles, or in chronic affections, like tuberculosis. Syphilis in the fetus assumes the different forms of broncho-pneumonia and other lesions, according to its violence and the degree of its chronic stage.

At a meeting of the Moscow Dermatological Society, Pospelow and Kontrim (*Monatshefte für praktische Dermatologie*, 1895) each reported two cases of syphilitic pneumonia that yielded to treatment with mer-

curials. Hemoptysis occurred in three of the cases, and fever with sweating was present in two. The lesion was localized at the apices. In one of the cases, tubercle bacilli were found in the sputum, and the process was believed to be tuberculous. Treatment with mercurial inunctions and sulphur baths, with a residence in Egypt, was followed by general improvement and disappearance of fever, cough and expectoration. The patient had been well for three years at the time of the report. In this case it is believed that tuberculous affection was implanted upon the syphilitic pneumonia, disappearing with the latter.

Syphilitic Pleurisy.—In the *Presse Médicale*, of the 20th ultimo, M. Chantemesse publishes a clinical lecture on the complications of constitutional syphilis. The subjects of the lecture were two men who presented the usual stigmata of syphilis in the eruptive stage. In both there were discovered the physical signs of pleurisy with effusion, and in one aspiration with a hypodermic syringe yielded a quantity of straw-colored serum. Both had râles, due probably to an eruption of roseola on the bronchial mucous membrane. M. Chantemesse had succeeded in collecting twelve similar observations of syphilitic pleurisy. Most of them were cases of dry pleurisy, but in either case the prognosis is favorable, resolution and absorption being the rule under specific treatment M. Chantemesse treated his patients with intravenous injections of corrosive sublimate; he, nevertheless, does not recommend this method, but would prefer intramuscular injections of red oxide of mercury dissolved in sterilized olive oil. He says that he has never noticed any stomatitis during a treatment of several months, consisting of daily doses of four or eight milligrammes of the salt dissolved in one or two cubic centimetres of the oil. The specific character of the pleurisy is plain to M. Chantemesse from the following peculiarities: Its bilaterality, the small amount of effusion, its concomitance with the secondary eruption, its complete disappearance without leaving any traces, and its prompt cure by mercury. The lecturer is inclined to believe that the so-called secondary fever of syphilis may be in many instances explained by the existence of this kind of pleurisy, which in the presence of indubitable signs of lues venerea is not suspected or sought for. In one-half of the cases bronchitis is present as well, this complication being probably due to the outbreak of a syphilide on the bronchial mucous membrane.

Dr. Rendu, at a recent clinical lecture, presented an old woman who had for a long time been emaciated and cachectic, but without fever. The symptoms were ill-defined, some pain, stiffness of the limbs, without marked weakness or paresthesia, dyspnoea on exertion, and for a short time a dry cough without expectoration. The respiratory and auscultatory phenomena were found normal, anteriorly, but behind there was dullness over the right apex, with roughened prolonged expiration. There was a loud, rough, systolic murmur, together with a softer and more superficial one, but no symptom of cardiac insufficiency. The arteries were apparently healthy, the liver normal in size, and there was no albuminuria. There was a diffuse and characteristic syphilitic melanodermia, and iritis of two years' standing, nocturnal bone pains and headache. Her only previous illness had been measles. It was pointed out

that against tuberculosis was the long duration, the absence of expectoration, of râles, and of concomitant symptoms. Syphilis does not usually attack the apices, although cases of this occurrence are recorded. Syphilis and tuberculosis may occur in association, and tuberculosis may attack a lung previously syphilitic. From the absence of a history of acute pneumonia, an indurating pneumonia could here be excluded. The attack of measles was not considered adequate cause. As there were no other etiological factors, the changes in the heart and lungs were probably syphilitic. Great improvement followed the exhibition of mercury and iodide of potassium.

In lecture No. VIII. I referred to patients of Abrahams Brambilla Fournier and Ross. These patients were undoubtedly far advanced in pulmonary tuberculosis, when they acquired syphilis. They were put upon energetic anti-syphilitic treatment, which cured not only the syphilis, but the tuberculosis. (Doubtful, ED.) You will naturally ask if I do not think that the treatment destroyed the toxines of both syphilis and tuberculosis, and the same treatment is indicated for both diseases. I have put this same question to eminent throat and lung specialists, and have been informed that the treatment has been tried, and the effects were baneful, unless the patient had syphilis complicating the tuberculosis.

Syphilis of the Heart and Arteries.—Virchow describes syphilitic growths in the substance of the heart, and refers to those recorded by Ricord and Lebert. Ricord, in his Atlas, calls them "syphilitic muscular nodes in the substance of the heart." They were found in the substance of the ventricles, and consisted of firm, cheese-like masses. There was a history of chancres and ulcerated tubercles of the skin. Lebert reports that gummata were seen at a comparatively early stage of development in his case, and were found in the wall of the right ventricle. There were tubercles of the skin, of the subcutaneous tissue, genital organs and bones of the skull. Iu Virchow's case there were syphilitic gummata in the testicles.

In the Museum of the British Army Medical Department, at Netley, there are two preparations which show such gummata in the substance of the heart. "One occurred in the case of a soldier, twenty-four years of age, under treatment for venereal ulcers, of nine months duration, in various parts of the body. He had lost his palate, and eventually sank from exhaustion, with symptoms of phthisis. Sections of the muscular substance of the heart showed several isolated deposits in its substance and beneath its serous covering, and isolated portions of the lungs were converted into a substance of the consistence of cheese."

A few months ago, I visited the United States Army Medical Museum, and Dr. D. S Lamb showed me a pathological specimen of a heart in which a syphilitic gumma was imbedded in the wall of the left ventricle. This specimen was exhibited in Baltimore, at the Johns Hopkins University, and its nature verified by the pathologists there. For the clinical record, Dr. Lamb referred me to Health Officer W. C. Woodward, M.D., as the specimen was obtained from him when he was serving as coroner of the District. Dr. Woodward kindly sent me the following report: "The patient came under my observation after death. The history was

vague. Colored, male, thirty-three years old, a native of Virginia; was found dying in bed about five o'clock one morning by his wife, who had been sleeping by his side. He had complained for some time of shortness of breath, and is said to have had night-sweats just previous to his death. There was, further, a history of continued ill health, not borne out by the condition of the body, attributed by his family to a hernia. There was no external evidence and no history of syphilis. Deceased was a huckster by occupation."

At a recent meeting of the Clinical Society of London (*British Medical Journal*), Dr. Duckworth reported the case of a strongly-built man, 35 years old, who, while walking in the street carrying his little boy, suddenly fell down and expired. Only a meagre antecedent history was obtained, but there was evidence of old syphilitic disease on the tongue and on the glans penis. A small gumma was found in the left lung. The heart weighed twenty-two ounces, and was bound by firm adhesions to the pericardium, both at the apex and the base. The ventricles were hypertrophied and dilated; the valves were normal. In the wall of the left ventricle, above the apex, was a round depression, nearly an inch in diameter, and covered by long adhesions. This was due to a thinning of the wall, with much endocardial thickening. A large aneurismal pouch was found behind the posterior cusp of the mitral valve. This appeared from without as a tumor growing from the base of the heart, and completely covering the left auricle. Its walls were half an inch thick, and the pericardium was closely adherent over it. On section the muscle was replaced by tough, fibrous tissue, with foci of gelatinous matter. The endocardium was greatly thickened and fibrous. Microscopic examination proved the formation to be gummatous in nature, with patches of caseation. The smaller vessels showed signs of endarteritis. These appearances were taken to indicate a recent gummatous growth at the base of the left ventricle, and a similar but older one near the apex of that cavity.

Investigation showed that in fourteen similar cases, death occurred quite suddenly in eight. But one case in the whole number was in a woman. The mean age of all the patients was 32 years. Many of the cases seemed to have been devoid of urgent symptoms. In some there had been pericardial pain. The valves were not usually involved, and hence murmurs were not to be heard. The ventricle and their septa were the common sites of the growth. The tendency to fatal and sudden syncope was probably attributable in part to endarteritis affecting the coronary vessels, and possibly to the formation of embolisms in the branches of the coronary arteries, as a result of the dislodgment of fragments from the interior of aneurisms.

During a recent meeting of the Montreal Medico-Chirurgical Society, Dr. Finley presented the report of a case of syphilitic gummata of the heart and liver, and exhibited the pathological specimens showing the characteristic lesions.

At a late meeting of the Charité Aerzte of Berlin, Dr. Israel exhibited pathological specimens, and gave the following clinical history: During life the patient, aged 47, had presented the appearance of hepatic cirrho-

sis. The pulse, 136, was small and irregular at first, but improved under digitalis. A systolic murmur was heard in the left, second and third intercostal spaces, with an accentuated second sound. There was no clinical evidence of syphilis. Eight days after admission there was a profuse and fatal hemorrhage from the stomach. The autopsy showed the heart to be hypertrophied, but only slightly dilated. No circulatory obstruction could be proved at the mitral orifice. Islets of fibrous tissue were present at the base of the papillary muscles, and the muscles themselves had undergone fibrous changes. Fine strands of fibrous tissue were seen in the slightly brown cardiac muscular tissue. The dilated left auricle presented peculiar appearances. The wall was rigid, with only the remains of a few yellowish-brown muscular fibers. The auricular appendix was greatly shrunken. Very irregular and easily detached excrescences were found in the inner wall of the auricle, and were especially marked well on the upper surface of the mitral valve segment. The gummatous formation in the heart muscle could only be due to syphilis. In the liver fibrous changes with the remains of gummata were found. There was induration of the uterus with chronic endometritis, also of syphilitic origin.

At the Berlin Medical Society, Dr. A. Fraenkel recently demonstrated a specimen of cardiac syphilis from a woman 36 years of age. When first seen last year she had aortic regurgitation and suffered from frequent headaches, which were occasionally associated with fainting attacks. The heart disease was supposed to be consequent on acute rheumatism. The husband was syphilitic and the woman herself had suffered from swellings on the head, which had ulcerated and left scars. She improved at first and left the hospital, but was readmitted this year with severe attacks of angina pectoris, in one of which she died. At the necropsy the left coronary artery was found quite permeable, but the orifice of the right coronary was completely obliterated by a process of arterio-sclerosis, which, in excess of the patient's years and its proper position could only be determined backwards along the lumen of the artery. There was a gummatous tumor, four and a half centimeters long, in the septum ventriculorum, and Fraenkel thinks this shows that the arterial changes were really of syphilitic nature. The arterio-sclerotic changes in the aorta reached down to the bifurcation. Fraenkel, moreover, remarks on the part played by syphilis in the etiology of aneurisms. Walsh thought that sixty per cent. of true aneurisms were due to syphilis; others think still more. Fraenkel himself, during the last four years, has seen nineteen cases of aneurism of the thoracic aorta in which there were necropsies. Three cases were in women, sixteen in men. Of the nineteen patients, nine, that is, forty-seven per cent., had had syphilis, and these were all under fifty years of age. The case illustrates the relation of precocious arterio-sclerosis and syphilis. Mracek (*Medico-Chirurgisches Centralblatt*, 1895) refers to authors and states that, especially just preceding the roseola, in the second stage of syphilis, disturbance of the heart's action is not uncommon. He quotes Fournier to the effect that these troubles are functional and not dependent upon distinct lesions of the heart itself, and that they are distinctly transitory by nature, disap-

pearing without leaving a trace, occurring much more frequently in women, and commonly associated with nervous disturbances. The latter forms of heart syphilis appear, however, as distinct pathological changes. The symptoms of the affection are those of degeneration of the heart-muscle or interference with the valves, whatever is the cause of these pathological conditions.

Semnola holds as pathognomonic a persistent arhythmia, either existing alone or accompanied by tachycardia, respiratory troubles coming and going, resistance to all ordinary methods of treatment, and a history of syphilis. Through syphilitic stenosis of the coronary artery the symptoms of angina pectoris may be caused. Exceptionally, murmurs are developed. The course of syphilis of the heart is extremely slow and insidious. There is rarely any acute process, such as a softening of the gumma, but rather a slow transformation in the fibrous tissue. Judging from reported cases the prognosis is extremely bad, death coming suddenly and often in the midst of apparent perfect health. In sixty-three cases collected by the author (Semnola), this suddenly occurred in one-third of the number. Julien and Mauriac stated that this end is observed in fifty per cent. of cases. Death comes after a heavy meal, or from drinking or straining. Often the patients are found dead in bed. Many cases perish in coma from heart failure.

Dr. Fisher, in the *Medico-Chirurgical Journal*, summarizes as follows the articles of Hektoen (*Journal of Pathology and Bacteriology*) and Jacquinet (*Gazette de Hôpitaux*, 1895): "Hektoen records a case of interstitial myocarditis due to syphilis in a child six weeks old, and mentions that only eleven other cases have been recorded. In two of these eleven cases sudden death occurred when the children were considered to be in good health, a noteworthy fact, since it shows that this disease in the child may lead to the same abrupt arrest of heart action that frequently occurs in the adult when the heart is affected with syphilis.

"Jacquinet treats the subject of syphilis of the heart very fully. In connection with the above remark it may be mentioned that he quotes Mracek as saying that of fifty-eight cases of syphilis of the heart, twenty-one ended in sudden death. Others terminated in what French writers call acute asystole, where severe dyspnea ushers in the rapidly approaching end. Jacquinet quotes as an example the case of a prostitute who was dining in a beer-house with some of her companions, when she complained of pain in the stomach and abdomen. The pains increased, and palpitation of the heart was added. She was removed to a hospital and died of "advanced asphyxia" after a few hours. The pain mentioned in this case suggests angina pectoris, which may sometimes be epigastric in situation. Jacquinet comments upon this point and refers to the possibility of cardiac pain being a symptom of syphilis of the heart. He mentions that one of the recorded cases of sudden death occurred in a sailor, who died putting his hand to his heart as if he suffered pain in that region. Hutchard is quoted as saying that of 110 cases of angina pectoris, in 32 a history of syphilis was obtained, and other observers are mentioned as having noticed severe cardiac pain in syphilitic subjects. This point is of some interest, since potassium iodide is recognized as of

value in angina pectoris. The drug is not generally given, however, with the idea of combating syphilis, but of influencing the diseased condition of the coronary arteries that often exists. Yet a satisfactory result naturally suggests that this disease of the coronary arteries may be sometimes syphilitic, like aortitis of the intra-pericardial portion of the aorta, with which cardiac pain is also often associated."

Dr. H. P. Loomis has reported fifteen cases of fibroid disease of the heart, three of which were considered beyond all doubt to have been of syphilitic origin. He has also seen four cases of gummata of the heart wall. Sudden death occurred in two of these cases. Notes are given of one. An apparently healthy man, aged 35, was found lying dead on his bedroom floor, with his hat in his hand, having obviously fallen immediately after entry. The two cases that did not terminate suddenly were in young prostitutes. One of these died with intense dyspnea and cyanosis; the other was admitted to the Bellevue Hospital for lobar pneumonia, which ended fatally. Dr. Loomis emphasizes the point that the question of syphilis as a probable cause of heart disease should not be overlooked. He says: "When symptoms of cardiac failure occur during the prime of life, for which no cause can be ascertained, such as rheumatic history, valvular disease, arterial changes or kidney complications, especially in one with a syphilitic history, these should always suggest syphilis as the cause of the condition."

THE JUDICIAL MIND IN MEDICINE.

BY JAS. MCMUNN, L.R.C.P. LOND. & I.

Having heard the evidence of the various witnesses in respect to the present state of medicine, we must acknowledge its character appertains to the chaotic. The *savants* of this enlightened age may well blandly smile at Galenic simplicity on account of the electuaries of viper's flesh, which once held their ground; at Hippocrates, who taught with the earnestness of his heart that the function of the right testis was to furnish males, and the left, females, at the physicians of the "erudite" age, who gave pomegranate seeds for toothache because these seeds resembled teeth; nay, even at the illustrious Paracelsus who prescribed the moss growing on the head of a thief. And what was it which distinguished our forefathers' views? Surely their cock-sureness of their truth. Yet, will not the followers of the 19th century doctors have some reason to develop their zygomatici? Will that bright pioneer be crowned a hero, or dubbed a simpleton, who first searched in Tyrol mines for reptilian deposits for ulcerated wombs or thought of the ground-down livers of cocks and hens for emesis? On what pedestal will he rest who rehabilitated organotherapy? Who first gave Fallopian or prostatic extracts? or went to the dogs for serum? The pomegranate seeds offered the bait of suggestion, and I submit that suggestion, and its parent bias, even now, lead the faculty into innumerable errors. Yet surely the ancients were not so simply in contrast with ourselves as some would think. In Galen's

time every disease was thought to be due to relaxation or constriction. Afterwards to acidity or alkalinity of humours or to fermentations. Again to obstruction of pores or minute vessels. Again to diminished vitality or excess of irritation. I would ask you, can you improve much on these theories now? Most of your treatment is virtually tonic or sedative. Is not pain itself tension? Were not intubation and nephrotomy done at the time of Hippocrates? Did not Praxagoras advise laparotomy and enterectomy? Heliodorus do internal urethrotomy? Are bacilli, micrococci or wandering spirilla very modern acquaintances? By no means; they were known in 1683.

The most beneficent aids you now possess were ridiculed a short time ago. Among what throes did vaccination, the story of the circulation, anæsthesia, and other great advances become established? Of the discoverers of anæsthesia, that greatest gift ever bestowed by science, it may be said, those who deserved crowns were allowed to die the death of suicide, or live in bankruptcy of heart and pocket. Yet, in your fetich worship, you place laurel wreaths on more ignoble brows, and martyr, even now, the prophets who are too honest to be orthodox. The stethoscope, the microscope, the laryngoscope were but yesterday mere scientific toys. Before 1866 you did not know what fever heat was. Medicine is in its baby clothes, and the child is being reared badly.

Myopia has already developed.

"What is truth?" was the most pertinent question ever asked. Truth is the rarest of gems in the motley mines of so-called knowledge You have to search for one little truth, and are lucky if you find it, all through a life-time. Huge piles of knowledge are built, but there is no one to focus or analyse it for practical use. How long would it take you to localise a cerebral tumour from a study of the 447 papers written on brain sulci and gyri.

The life of most medical and physiological facts seems to be some half dozen years. Idiopathic peritonitis, a few years ago a very comnon disease, is now a myth; so is the "fact" that an acute angle formed by the neck of the senile femur with the shaft conduces to fracture, and a hundred other things. "Opportunity and experience are fleeting," said Hippocrates, and what permanent new stones have the very best of us placed as the edifice of knowledge? Work a lifetime unenlightened by the past, and you will scarce discover that your toe nails grow; and, said Abercrombie, "He who has confidence in his own experience as a test of probability characterises a mind confined in its view, and limited in its acquirements." The physiology of the cell alone is too much for one life. Just think; the hand which dexterously removes a calculus belongs not to you, but to some dead Liston; the ear which distinguishes intra-thoracic sounds to some dead Cullen. The dead reign. The observations which gave you mercury cost centuries, and yet you are uncertain about it, and yet, also, at the word of every enterprising chemist you swear by every swindling drug. Some of your eminent men would swear that syphilis is as innocent as a common cold.

All things considered, the medical mind ought to be full of precedent and current knowledge, for, as Sir W. Gull fitly used to say, "ignorance

is the cruellest thing in life." Yet, as Celsus said, "Doctors are made by experience, not by reasoning," "a grain of fact is worth a pound of reason," and they would do well to remember that the senses are, as Aristotle pointed out, the only avenues to the mind. Of personal acquisition, enriched by the heirship of the mighty past and the teaching of the present, avoiding ruts, yet, perhaps, as man is an image worshipper, setting up on it some living model of excellency; eager to essay and focus knowledge, avoiding extremes or precipices. This should be the medical mind.

Dr. R. G. Curtin, of Philadelphia, in a statistical study of 60 cases of hæmorrhagic typhoid fever concludes that the following conditions indicate a fatal termination:

1. A tympanitic condition of the abdomen with a continual discharge of black clotted blood. The blood-vessels may sometimes be kept patulous by the distended condition of the intestines.
2. Associated renal trouble, which alters the blood in some cases, rendering it less coagulable.
3. Marked organic heart disease. The blood being impoverished and lessened in quantity is propelled slowly and the tissues are consequently imperfectly supplied with blood. Under these conditions a hemorrhage from the bowel becomes the "last straw that breaks the camel's back."
4. Cases of hemophilia. The blood is so altered that there is little likelihood of its being staunched.

SYPHILIS AND SEXUAL NEURASTHENIA: THEIR TREATMENT WITH THE GOLD SOLUTIONS.

BY HERMAN F. NORDEMAN, M.D.,

Adjunct-Professor Genito-Urinary Diseases at the New York Polyclinic, Surgeon to New York Surgical and Genito-Urinary Hospital, etc., etc.

Within the past six months my attention has been repeatedly called to the gold solutions (known as arsenauro and mercauro) as offering results in my special line of practice not heretofore obtained by treatment commonly in vogue. I am sceptical in regard to special therapeutic agents, as a rule, such claims being made by the manufacturer as would tend to preclude confidence rather than to produce it.

Knowing the reputation of G. Frank Lydston, M.D., whose writings are so authentic and forcible, and being attracted by his paper read before the Chicago Academy of Medicine, in October, 1894, I determined to test these alteratives thoroughly in my service at the New York Polyclinic, and thus learn from personal observation whether results obtained would warrant me in suggesting their use to the number of practitioners who attend this institution. I must say that the income has been beyond all expectations.

The classes of cases that came under my observation were as follows: Chronic masturbators, those suffering from the results of incomplete coitus, or certain degenerates, the victims of psychical excitants leading to complete or partial impotence. These are the milder classes of cases so ably described by Kraft-Ebing in his classical work on psychopathia sexualis, and by Schrenk-Notzing in his Suggestive Therapeutics. These patients present themselves with the usual symptoms, i.e., profound anemia, neurasthenia, relaxed scrotum, etc., etc. In other words, they belong to the list of sexual neurasthenics. They feel the desire for copulation, but the act is unsatisfactory in that the moment the organ becomes erect ejaculation takes place, rendering the sexual congress incomplete and disgusting. In several cases I began the administration of arsenauro in five drop doses, increasing daily until the patient reached ten drops, three times daily, continuing this dose for at least eight weeks. It has been interesting to note the excellent general appearance of these individuals after about two weeks of treatment. They were full-blooded, hearty and buoyant, differing so markedly from their appearance when they presented themselves—an appearance so familiar, so unmistakable to medical men. I think, without doubt, that arsenauro is the most pronounced aphrodisiac I have ever seen, producing this effect in both sexes. Thus after noting the effect Iw as led to extend its use in my private practice.

The nervous debility so marked in the sexual neurasthenic is positively controlled by arsenauro. As for mercauro, I am in a position to attest its great value in cases requiring tonic mercurial treatment. I refer to those instances where, in the initial lesion, we give either the protiodide of mercury or inunctions of the ointment. Our patients often rebel at a continuation of this treatment. It is here that I put the patient on mercauro, beginning with five drop doses and increasing a drop a day until evidences of arsenical intolerance are established. Look for puffiness under the lids, which may appear when arriving at eight, ten, fifteen or twenty drops, three times daily, or the intolerance of the gold may be presented, i.e., frontal headache, a tendency to vertigo, and increased saliva. When any of these symptoms are present, decrease the dose until they disappear, then resume and persist in the treatment, say, for at least six weeks without omission. I find these patients, who are run down, as it were, under so-called tonic mercurial treatment, rapidly build up and show such an improvement that I continue them right along with mercauro, and apparently abort the later specific lesions—i.e., locomotor-ataxia, hemiplegia, etc. In mild forms of syphilis with little or no glandular involvement, and in mixed sores, I immediately resort to mercauro, and I have never seen its equal as a remedial agent in syphilis. It is pre-eminently a new therapeutic agent, the physiological effect being *sub judice*. In latent lesions it is positively the best remedy. By abundant experience I am settled in my conviction as to its value, and more particularly so when the iodides are not tolerated. We meet many cases thatpresent an idiosyncrasy, either with little or much of the iodide of potash. In these cases I give mercauro at once, and I am satisfied that my colleagues will agree with me as to its value.

Squamous, ulcerative and tubercular syphilides, hyperplasia and chronic mucous ulcerations are the special indications for mercauro. In lesions of the skin, such as a tendency to eczema where syphilis co-exists, this is a most powerful antidote therapeutically. In chronic catarrhal cystitis, as the result of prostatic hyperplasia, arsenauro is a very valuable remedy. I have seen cases which have existed for years where the bladder would only contract sufficiently to expel a portion of the urine, leaving a residue to undergo ammoniacal decomposition, become absolutely well under the use of this combination. Seemingly it stimulates the viscus to contract, and I have noted the same result in the hypertrophied prostate of the aged, where atony of the bladder existed. It has been remarkable to note the vigor this solution gives to the organ. Of course, mercauro must be given preference where a history of specific disease exists or is suspected. I feel under obligations to those of my colleagues who attracted my attention to these products, and I hope that someone among my hearers at the Polyclinic will in time work out their physiological effect. They are certainly valuable curative agents and deserved careful trial. As illustrative, I mention an interesting case. Mr. R. J., aged thirty-two, widower, sent to me by Dr. L. to be examined for diabetes. He had at times, as the doctor informed me, shown traces of sugar in his urine. The patient was told by Dr. L. and other physicians in New York that his malady was diabetes—the result being that he came to me in a state of extreme mental perturbation, almost verging on nervous prostration.

Examination of urine revealed ¼ to ½ of one per cent. of sugar, high specific gravity and hyperacidity. His family history was good, both parents alive, and brothers and sisters healthy. He complained of violent headache, loss of sleep, in fact, he was in a profoundly anemic condition, and suffered from neuralgias in his arm, shoulders and lower extremities. Examination revealed hyperesthesia of the skin, tenderness along the lumbar spine, and last, but not least, a well-marked specific macular eruption. Recently coitus was denied absolutely. Upon examining the throat mucous patches were discovered on the soft palate, and a well-defined chancrous sore on the right tonsil.

The cervical glands were markedly enlarged. I made the diagnosis of syphilis, as the case was clearly this, and the subsequent treatment proved it beyond any doubt.

The patient was placed on a full diet, allowed some claret, as he was sorely in need of a general tonic, and mercauro prescribed in ten drop doses three times daily, increasing one drop every other day until he was taking twenty drops three times daily, which was his physiological limit. His general condition began to improve in a very short time—sugar disappeared entirely, the eruption and sores improved, headache and nervousness left him, and he gained in flesh and strength. Here, then, was a typical case of the beginning secondary stage of syphilis benefited by mercauro, the case being one in which the use of other well-known mercurials could not have brought about such a result. I mention this case to show the good effect this mercurial tonic will produce, especially in syphilitic anemias.

NERVOUS DISEASES AND ELECTRO-THERAPEUTICS.

IN CHARGE OF

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TRAUMATIC PARALYSIS OF THE UPPER EXTREMITIES.

BY JOHN F. ERDMAN, M.D.,

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Considered from a medico-legal standpoint, these lesions are of sufficient importance to entitle them to more elaborate consideration than can be found in the text-books of the present day. The literature is sparse, possibly on account of these conditions having arisen less frequently before the modern operating-tables came into vogue, as a large number of the traumatic paralyses classed as postoperative or anæsthetic paralyses are due to the arms of the patients being allowed to fall on the sharp or narrow edge of these tables, and as a result pressure takes place and paralysis of certain muscles or groups of muscles follows.

In a recent article entitled "Anæsthesia Paralysis," Dr. H. J. Garrigues presents histories of fourteen cases, of which five occurred in his own practice. He also quotes Kron as stating that elevation of the arm backward and outward causes the median nerve to be stretched over the head of the humerus, and, as this is a position of the arms favored by some anæsthetists, it can readily be seen to form one of the causes of these conditions.

Büdinger, also quoted in the same article, states that a frequent cause of these paralyses is pressure, occurring between the clavicle and the anterior surface of the first rib, on the brachial plexus as it emerges between the scaleni in the neck. It would appear to the author that frequently in these anæsthetic cases, apart from the position of the arms and forearms, trouble is caused by the anæsthetizer in one or more of the following ways: In attempting to prevent the dropping of the inferior maxilla, the fingers, well abducted, are very often, particularly in beginners, placed very firmly along the neck, so as to give a strong brace for the index in supporting the angle of the jaw; by this means one or more of the fingers press upon the fifth, sixth and seventh cervical nerves (these being the most frequently involved), near the exit between the scaleni, and, as frequently is the case, the head is rotated to one side and the nerve or nerves are compressed between the fingers and the vertebræ. Again, as has often been observed by the writer, the anæsthetist will be

found leaning or bearing his weight upon the patient's arm or forearm, especially so when the patient's arms are drawn above the head, thus causing pressure of the nerves to take place between the humerus of the patient and the anæsthetist's arm, or between the humerus and the operating-table. Again, some of the assistants, in their over-assiduous endeavors to hold a patient down during the stage of excitement, produce the trauma either by firmly encircling the arm with the hand, and thus compressing the nerves, or by holding the arm down against the sharp or narrow edges of the table. The author has on several occasions seen one of these assistants throw his entire weight upon the upper extremity and chest, using the trunk of his body to hold down one arm, and, by reaching across the patient's chest, hold down the arm of the opposite side with his hands.

Recently a case of this class, *i.e.*, of postoperative paralysis, was referred to me with the following history :

Case 1.—Male, aged about thirty-six, bartender by occupation, had his forearm cut by the explosion of a siphon of seltzer on June 10, 1897. The injury was at the junction of the lower and middle thirds of his forearm, and cut the flexors of his little, ring, and middle fingers, possibly also that of the flexor carpi ulnaris. No attempt was made to unite the severed tendons, and the injury was healed in three weeks. The only impairment of function was in the fingers mentioned. The thumb and index finger were uninjured, as the patient stated that he used them constantly.

On July 19th he was operated upon with a view to uniting the severed tendons. An incision eight inches in length was made on the ulnar border of the forearm, and, as far as can be judged at the present time, with perfect success as far as union of the divided tendon is concerned.

September 5th he was referred to me; an examination revealed a complete paralysis of all the muscles of the forearm. The only motion of the forearm retained was feeble supination, and that was demonstrated as being due to the action of the biceps.

The operator in the case was an able and careful surgeon, and the incision certainly could not have implicated any but the ulnar nerve. That this lesion could not have been an ascending neuritis entirely, is evident from the fact that the function of the thumb and index and of all extensors was perfect previous to the operation; and that these functions were abolished shortly after the operation points to a pressure trauma of operative origin, possibly to the use of an Esmarch bandage for a bloodless operation, in addition to the table pressure by reason of the extension of the forearm and arm.

In addition to the postoperative or so-called anæsthetic paralyses, it happens frequently enough that the surgeon sees cases of paralysis following dislocations of the shoulder, especially when not reduced for some time ; cases of fracture of the humerus, in which the musculo-spiral is involved in the callus or in fibrous tissue, or by stretching of the nerve over an angular deformity; contusions of the shoulder followed by deltoid paralysis due to the involvement of the circumflex, etc.; paralyses due to pressure in the axilla caused by the use of crutches or by tumors,

etc.; paralysis caused by sleeping with the head resting upon the arm or forearm; and, as in one case recently seen by the author, implication of the ulnar nerve in a marksman who used his elbow as a rest while shooting in the prone position at the Creedmoor rifle range.

Case 2.—Complete paralysis of the upper extremity following unreduced dislocated shoulder of three weeks' standing. D. S.——, about twenty-two years of age, sustained an injury to his left shoulder while bicycling at Liberty, N.Y. A diagnosis of dislocation of the shoulder was made and the ordinary treatment applied. Twenty-one days after the injury he was referred to me, and upon examination a subcoracoid displacement was found to exist, which apparently was rather firmly retained by adhesions. He complained of inability to use the arm, considerable pain in his elbow, and tingling with numbness of the fingers, particularly those supplied by the ulnar nerve. A complicating pressure neuritis was diagnosticated, and the possibilities of paralysis were told the patient. As will be seen, this was a wise precaution.

After the patient was anæsthetized in my office the shoulder was reduced with some difficulty. Within ten days after the reduction there was a total paralysis of the entire arm and forearm, with rapid atrophy particularly marked in the muscles of the hand. Electrical reaction was retained both to the faradic and galvanic currents, but was finally lost. The return of reaction to the galvanic current was manifested about twenty-one days after its loss, and within six weeks the return of contraction with the faradic was observed. The patient left my care about eight months after the injury was received, with an arm and forearm considerably smaller than those of the opposite side, but with restored function in all of the muscles.

Case 3.—Complete upper-arm paralysis from contusion. Mr. R.——, track inspector, was struck by the Empire Express and was thrown about twenty feet. He was referred to me two days later by Drs. Piatti and Thompson, of Greenwich, Conn. Upon examination he was found to have sustained a compound fracture of each of the bones of the right forearm near the wrist, and a single one of the ulna at its middle. Drs. Piatti and Thompson had made an excellent skiagraph, which showed the latter fracture very distinctly. In addition, the entire right shoulder and right half of his thorax were ecchymosed. The fractures were treated as usual in these cases, and complete repair was observed in the sixth week. It was noted at this time that the deltoid, which formerly was exceptionally well developed, had atrophied to a very small and useless mass of tissue, allowing the shoulder to drop so that it was mistaken for a dislocation. He was again referred to me, and in addition to the deltoid atrophy we found a complete paresis of the entire upper arm. A cure was obtained in about six months in this case.

Case 4.—Musculo-spiral paralysis following a fracture of the humerus. W. K.——, aged thirty-nine, driver, while attempting to check a runaway on September 2, 1896, was knocked down and sustained a fracture of his left humerus about the junction of the lower and middle thirds. He came under my care on November 23rd, with a history of paralysis of his lower-arm, muscles, etc.

ASTHENOPIA AS A FORERUNNER OF NEURASTHENIA.

BY D. B. ST. JOHN ROOSA, M.D., LL.D.

It has long been known that the inability to use the eyes on near objects, without discomfort, is one of the early symptoms of locomotor ataxia. This form of asthenopia is easily recognized, if attention has once been turned to it. It depends upon irregularities in the action of the external muscles of the eye, and these in turn are dependent upon the general muscular weakness, which is one of the early symptoms of the disease. I desire carefully to distinguish what I am about to say from a discussion of the asthenopia, or, better said, the weakness of the external muscles of the eye, characteristic of grave disease of the spinal cord. I mean a well-defined asthenopia, entirely different from the paresis of locomotor ataxia—one that has all the subjective symptoms of true asthenopia, but which lacks one essential part of this condition.

The patients who are unable to use their eyes upon fine and near work, such as reading, writing, sewing, and the like, without ocular discomfort, are, in large proportion, found to have a positive error in the refraction, such as a considerable degree of hypermetropia or astigmatism, or both. On correction of this, the asthenopia is almost invariably relieved. But in the cases I am now classifying, there is no considerable error of refraction; none, at least, that of itself produces asthenopia. The greater part of the human race which is not myopic is hypermetropic. It cannot be said that a low degree of hypermetropia is, of itself, a sufficient cause of asthenopia. Just so with corneal astigmatism. Unless it reaches a diopter with the rule, or a quarter of a diopter against the rule, it does not, of itself, produce asthenopia. In addition to hypermetropia and astigmatism, presbyopia, with a considerable degree of astigmatism occurring in conjunction with it, is very often a source of true asthenopia in early middle life.

But there is a large class of people with asthenopia who consult an oculist who have, as to their refraction, a normal eye—at any rate, an eye which has no intrinsic conditions which may cause weak sight.

The cases of which I am about to write must not be confounded with those seen by every ophthalmic practitioner, in which, although there is need for glasses, and they are properly fitted, the patients are still not able to work, without asthenopia. In these instances, asthenopia occurs simply because the subjects of it are using their eyes beyond the capacity of the eyes themselves, or of their nervous or muscular system, or both. This is true asthenopia complicated with a neurotic or debilitated constitution. While writing this article I received a letter from a presbyopic patient, who has suffered from neurasthenia for some years, and who is adequately provided with glasses, but who cannot use her eyes as fully as she desires, in poring over volumes pertaining to a subject in which she is greatly interested, from morning till night, to the neglect of all proper open-air life. She asks for an eye wash that will enable her to do what she wishes to accomplish, or else she desires her glasses

changed. With such cases as these we are all perfectly familiar. I am writing of people who clearly do not need any glasses whatever, and who yet cannot use their eyes.

Given a normal refraction in the two eyes, there can be no such thing as want of muscular equilibrium, except in cases of paresis. The irregular action of the muscles in locomotor ataxia is not to be classified with the so-called "muscular insufficiencies." It is a weakness of all the muscles, and varies from day to day. It is a very different thing from the weakness of the interni seen in myopia, which is almost an invariable accompaniment of a high degree of that error of refraction.

When a patient comes to me having normal vision, a low degree of hypermetropia—that is to say, hypermetropia of from one to three diopters, and either no astigmatism at all, or half a diopter with the rule, I conclude that there must be something besides the eye which is at fault in the production of the asthenopia. Repeatedly I have found this condition of things to be the premonition of neurasthenia, or general nervous breakdown. To give such patients glasses is at the best to give them a placebo. The result of such a prescription is sometimes disastrous, since it veils the true condition and encourages them to continue to think of their eyes as the cause of all their troubles. We should be inflexible in our exact conformity to the principles laid down so clearly by the results of ophthalmoscopic and ophthalmometric investigation, and not prescribe glasses for those people in whose cases there are no scientific indications for their use. There is an idea prevalent in the mind of some general practitioners, and I fear also in that of some ophthalmologists, that there is virtue in a convex spherical glass of a low degree—in resting the eyes for distant vision, although the vision is perfect without it, and is at the best made a little less distinct with it. In my judgment no one is ever the better for glasses unless he or she sees better with them, or is much more comfortable with them. In the latter case, when the vision is not improved, there is usually facultative hypermetropia, or a low degree of astigmatism, and the patient will see as well at a distance with the glasses as without them. Even then, when the vision for the distance is perfect, I do not urge or advise such patients to wear glasses, except for the near. Careful observation on this point is of importance in the diagnosis, and in the conditions that I am writing about, for if an expert believes that glasses will be of service to a person when there are no positive indications in the eyeball itself for their use, he will often endeavor to do the impossible—that is, try to relieve a jaded nervous system by putting useless and troublesome lenses before the eyes.

In the early stages of neurasthenia the eyes are sometimes indexes of how much the general system is overworked. When the examinations result negatively, or we find that there is only myopia, which very seldom is the cause of true asthenopia—although it may be of inflammatory conditions—which prevent the eyes from being used with comfort, then we should very carefully abstain from ordering a glass, but endeavor, by the aid of a neurologist or general physician to find out what really is the trouble with such a patient. A careful search into the habits and environment of daily life will often determine this. I could multiply

the instances, chiefly occurring in young men and young women, for whom the whole gamut of glasses is run in vain by those who believe strongly in the curative value of convex, cylindric, and prismatic lenses for constitutional disease, even when no error of refraction exists, until the breakdown from neurasthenia, or, in the case of women, sometimes from uterine or ovarian disease, makes the matter plain to every one except to him who is possessed with the idea that the human economy revolves around the muscular action of the eye.

Malaria also produces asthenopia, and this fact, it seems to me, is also often overlooked. In New York City it is always necessary in obscure cases of asthenopia to secure a history as to the previous or present existence of malaria. I have cured many cases of asthenopia with Warburg's tincture. In view of the fact that various maladies are often erroneously ascribed to malaria, it may be well for me to say that I do not admit the diagnosis of malaria unless there is a positive history of intermittent or remittent malarial fever. In three recent cases in which the asthenopic symptoms were relieved by antimalarial treatment two were from notoriously infected places on Long Island and the other from Staten Island. In the latter case excavations for a building adjacent to the residence were the cause of the outbreak. I hold that if malarial fever has once occurred in a subject, subsequent diseases are either modified by the reappearance of the malarial parasite or uncomplicated malarial disease may again arise. I am thus particular on the subject, because the general exaggeration in regard to the frequency of malarial disease sometimes leads the medical observer to forget that it may crop out again if it has once actually existed.

The point I make in what I have been saying is that whenever in a case of asthenopia the refractive conditions do not clearly justify from an optical standpoint the prescription of a pair of glasses, they should not be advised, but a thorough investigation of the whole train of symptoms should be undertaken. An incidental advantage in such a course is that the expert in ophthalmology will demonstrate to the general profession that there are rules for the prescription of glasses, and show that we do not, like an optician with a customer, change from one to the other at every new ocular-symptom, or upon every whim of a nernous patient. The ophthalmologist who does this is forever floundering in a bog.

The ophthalmologist may find it interesting in this connection to recall the definitions of neurasthenia, as given by the standard writers. That of Dana seems to me especially clear and comprehensive: "Neurasthenia is a morbid condition of the nervous system of which the underlying characteristics are weakness and excessive irritability. . . . Neurasthenia," he continues, "occurs most often between the ages of eighteen and thirty." Every ophthalmic observer who will refresh his memory by turning to his case books for his unsatisfactory cases of asthenopia will, I think, find that a majority of them belongs between these years, and that some of them traced the first signs of their nervous breakdown to inability to use the eyes continually."—*Medical Record.*

PATHOLOGY AND BACTERIOLOGY.

IN CHARGE OF

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ON THE HÆMATOZOAN INFECTIONS OF BIRDS.

BY W. G. MACCALLUM, M.D.,

Bulletin, Johns Hopkins Hospital, Baltimore.

In the adult examples of the Halterdium of Labbé, which occurs abundantly in crows in Ontario, Opie in 1896-7 pointed out a distinction between two forms—a hyaline, non-staining form, and a form which is granular and takes on a comparatively dark stain with methylene blue —and suggested that the hyaline form alone might become flagellated. This distinction is readily confirmed, and it is a fact that only the hyaline forms become flagellated, the granular forms being extruded, and lying quiet as spheres beside the free nuclei of the red corpuscles which lately contained them.

Motile fusiform bodies, identical with the "Vermiculus" described by Danilewsky in his "Parasitologie comparée du Sang," in 1889, are seen after fifteen or twenty-five minutes to develop from these quiet spheres and wander away. By careful watching of the two adult forms on extrusion from the corpuscle, it is seen that the flagella from the flagellated forms, tearing themselves free, constitute themselves fertilizing agents or spermatozoa, and proceeding directly to the granular sphere, wriggle about it. One only of these gains admission, and plunges itself into the sphere, which after some agitation of the pigment becomes quiet for a period of fifteen or twenty-five minutes, after which it puts out a conical process, which grows and draws the protoplasm into itself, until we finally have the fusiform body with a small pigmented appendage and refractive, nucleus-like body such as was described by Danilewsky as a "Vermiculus." The origin of the vermiculus is in every case exactly the same.

In other words, we have a sexual process with a resulting motile form, occurring under unfavorable circumstances, and comparable with analogous processes observed in the lower plants and animals.

It is thought that a similar process may be expected in the case of the human malaria. The vermiculus moves actively and has great powers of penetration by means of its pointed anterior end, with which it breaks up the red corpuscles in its path, and it is thought that possibly it may penetrate the intestinal wall and escape as the resistant form which

gains the external world. This idea is supported by the finding of free organisms in the mucous contents of the intestine.

In the organs, the connective tissue skeleton is one great storehouse of pigment, the branching cells being often loaded with foreign material. The endothelial cells are also very generally pigmented, and there occur in some of the organs, as well as in their blood-vessels, large makrophages loaded with pigment and other debris. Many large phagocytic cells occur in various organs which engulf whole corpuscles with their contained organisms.

The organs found pigmented are, in the order of intensity of pigmentation, the spleen, liver, bone marrow, intestine, kidney, adrenals and thyroid. The leucocytes take but little part in phagocytosis in the organs, although phagocytosis goes on actively in a slide of blood.

During the last week I have examined the blood of a woman suffering from an infection with the aestivo-autumnal type of organism, in which a great number of crescents were to be seen These in a freshly made slide of blood, with very few exceptions, retained their crescentic shape for only a few minutes. They soon drew themselves up, thus straightening out the curve of the crescent while shortening themselves into the well-known ovoid form. After the lapse of ten to twelve minutes most of them were quite round and extra-corpuscular, the "bib" lying beside them as a delicate circle or "shadow" of the red corpuscle.

After twenty to twenty-five minutes certain ones of these spherical forms became flagellated; others, and especially those in which the pigment formed a definite ring and was not diffused throughout the organism, remained quiet and did not become flagellated. In a field where an example of each form could be watched, the flagella broke from the flagellated form and struggled about among the corpuscles, finally approaching the quiet spherical form; one of them entered, agitating the pigment greatly, sometimes spinning the ring about. The rest were refused admission, but swarmed about, beating their heads against the wall of the organism. This occurred over thirty-five to forty-five minutes.

After the entrance of the flagellum the organism again became quiet and rather swollen, but although in the two instances in which this process was traced the fertilized form was watched for a long time, no form analagous to the "vermiculus" was seen.

This is evidently for the human being what was foreshadowed by the organisms of the bird.

(In part an abstract of a paper read before the British Association for the Advancement of Science, August 24, 1897. Dr. MacCallum, we are pleased to state, is one of the numerous colony of Canadians whose original investigations in this great American seat of medical learning, have helped to gain for Johns Hopkins Hospital its present enviable position in the medical world.)

REGENERATION OF NERVES.

Robert Kennedy, in a paper read befor the Royal Society on February 11th, 1897, reports four cases of secondary suture of nerves. In the first

the median and ulnar were sutured six months and a half after division in the middle of the forearm. There was total loss of sensation and motion in the distribution in the hand, and marked muscular atrophy. Three days after operation sensation commenced to return; by the nineteenth day touch was correctly localized on all parts of the fingers, and in a month sensation was almost perfect. Improvement in motion was slow and imperfect. In the second case suture of the median nerve was performed three months after complete division above the wrist. Sensation was lost in the median distribution, and apposition of the thumb was impossible. The thenar eminence was markedly atrophied. Two days after operation sensation began to return. Both sensation and motion speedily improved, and at the end of a year recovery was almost perfect. In the third case the median, musculo-spiral, and ulnar were involved in cicatrical tissue at the seat of fracture above the elbow. Two months after the accident there was total anæsthesia in their distribution and paralysis of the muscles. Sensation commenced to return on the fourth morning after operation; the case was followed only for six weeks, at the end of which time sensation was present in the fingers, but there was no return of motion. In the last patient the ulnar was sutured eighteen months after section, the sense of pain being totally lost in its distribution. Five days after this returned in the little finger, and in six weeks sensation was almost perfect, though motion had not improved. The author considers that early return of sensation must be regarded as indicating a restored conductivity of the divided nerve. The imperfect or non-return of motion must be taken to imply atrophy or destruction of the muscles. Microscopically he found that both central and peripheral portions of ununited nerves contained bundles of young nerve fibres, to the sides of which spindle-shaped nuclei were attached at frequent intervals. Where the nerve ends were united by a cicatricial segment without conductivity being restored the segment was found to consist of a dense network of connective tissue containing bundles of young nerve fibres in its meshes. Portions excised from the central ends of the nerves showed no trace of old myelin fibres or of degenerated fibres, but were made up of bundles of young nerve fibres, which could be seen taking origin within the old sheaths of Schwann. The author finds no evidence of Krause's ascending degeneration, the old axis cylinder and myelin sheath being destroyed in the peripheral segment in the ultimate portion of the central segment. Young nerve fibres are developed in the peripheral segment as well as in the end of the central segment, even while there is no connection between the two. These young nerve fibres arise within the old sheath of Schwann from the protoplasm and nucleus of the interannular segments. The spindle cells formed from the protoplasm and nuclei of the inter-annular segments elongate and unite to form protoplasmic threads with the elongated nuclei attached to their sides. The central portion of the protoplasmic thread develops into the axis cylinder, while myelin is deposited in drops in the outer portions, the protoplasm of which remains with the nucleus as the neuroblast of the new interannular segment. As long as the conductivity of the nerve is not re-established

the development of the fibres proceeds only to a certain stage, and as the new fibres three and eighteen months after division present the same characters this stage may be regarded as a resting stage, depending for its further development on re-establishment of function. The cicatricial intercalary segments of a spontaneously reunited nerve may be permeated from end to end by young fibres without re-establishment of function if the amount of cicatricial tissue present in the mass is sufficient by its pressure to prevent the passage of impulses.

THE BACTERICIDAL ACTION OF THE BLOOD.

Loudon (*Archives Biol. de l'Institut. Imp. de Med. exp. à St. Petersbourg,* Tome v, No. 1, 1897) contributes a preliminary communication of his researches on this subject. A large number of experiments were made on the blood of rabbits and pigeons with the anthrax bacillus. From them he draws the following conclusions: Both from defibrinated arterial and venous blood of rabbits and pigeons, and from the serum and corpuscles of centrifugalised blood inoculated with anthrax, the number of colonies obtained in gelatine plate cultures shows a tendency to diminish fairly regularly up to a certain point. When this point is passed there is, on the contrary, a tendency to increase in the number of colonies obtained. This rise is often so rapid that after twenty-four hours the number of colonies cannot be counted. In some cases the initial diminution is so rapid that after 1½ to 7½ hours the plates proved sterile, and remained so till the close of the experiment 22 to 73 hours later. In others, after a diminution, the numbers rose again after 2½ to 8 hours. In a third class the plates made after 1 to 7 hours were sterile, but later colonies reappeared and multiplied. Thus the influence of blood media is not constant; some bacilli are killed, others are quite unaffected, while others seem paralyzed for a time, but under favorable conditions regain their activity. On an average the lowest number of colonies was reached with specimens taken 3 hours after inoculation of the blood. The mean of many experiments showed that at this time the diminution of numbers of the bacilli was from 93 to 100 per cent. The tables given seem to prove that the bactericidal substances are present in a constant quantity, and that the fewer the bacilli inoculated the more of these substances there is to act on each bacillus individually. Pigeon's blood is more bactericidal than rabbit's, which is probably the reason of their relatively greater natural immunity against anthrax. One of the tables given shows that under the same conditions the arterial blood of individual animals differs very slightly in bactericidal power. Taking the constituents of the blood, the serum is more bactericidal than the corpuscles, and possibly venous than arterial blood, though Fodor found the contrary. Finally, Loudon sums up the whole literature concerning the origin and constitution of the bactericidal substance. The special mechanism which communicates the bactericidal power to the blood is probably contained in the formed elements; by its aid substances are formed which are active, even in such an inert fluid as the serum. It is uncertain in what

condition these substances exist first in the formed elements, and afterwards in the serum. Either they have lost all the characters of active biological elements, or the latter are present at a certain stage of development only. The author found that broth made from cabbages and radishes, under conditions excluding the presence of active biological substances, acted on anthrax bacilli bactericidally in a manner exactly similar to blood. Hence it is simplest to suppose that the bactericidal substances are not active agents struggling with bacteria, but are inert matter, which, after being seized and assimilated by the bacteria themselves, then exerts its toxic power on them. Thus so-called bactericidal media contain both nutritive and, in relation to bacteria, toxic substances.

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NOSE AND THROAT.

IN CHARGE OF

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EARACHE.

The first indication in the early stage of an earache is to procure quiet, physical and mental. Place the patient at once in bed and keep him there, if a child, forty-eight hours at least. Many relapses occur from allowing a restless child to play about the house the next day after an earache. Let a hot foot-bath be given under the bed clothes for its relaxing and revulsive effect.

If a child from 3 to 8 years of age, give morphia sulphate, gr. $\frac{1}{16}$ to $\frac{1}{10}$, by the mouth. Let the dose be large enough to be effective and given hypodermatically in older patients. The result sought is not only relief of pain, but to affect the circulation, locally and in general. The opiate may be repeated, if the pain recur or be not controlled, but it should not be continued the second day. There are then surgical means to be used to relieve pain, and at the same time to relieve tension in the tympanum and lessen the danger of mastoid or brain complications.

If the bowels are loaded or the tongue indicates it, give calomel and a saline in robust cases. For two days let the patient have only light diet. See that no erupting or decayed or ulcerated teeth are exciting inflammation in the ear. Let the room be kept at about 68 degrees and the air sweet and somewhat humid.

The local treatment of the early stage of acute catarrhal otitis consists of measures to apply warmth to the parts and to prevent sudden alternations of temperature. Dry hot applications are preferable to moist ones. Let a large pad of wool or absorbent cotton be heated quite hot and applied over the entire affected side of the head, held in place by a kerchief. In young children the pad can be stitched inside a little cap and effectively held in place.

Occasionally, if the pain continue despite the treatment already suggested, combined heat and moisture give relief. This is best applied by a very gentle stream from a fountain syringe. A quart at least of very hot water should pass steadily and slowly into the auditory canal to the fundus and then escape into a receptacle held below the ear properly. If it relieves pain, it may be repeated as often as indicated.

Avoid the use of all applications about the auricle or within the auditory canal that may ferment or become rancid, such as sweet oil, oil and laudanum, and poultices of any kind. Instillations of laudanum, morphine solutions or cocaine solutions are of doubtful utility, and may be positively injurious in case of rupture of the drum-head.

There is frequently considerable naso-pharyngeal catarrh in these cases. Avoid the use of cleansing sprays or douches the first day or two of the attack. The congestion of the ear is very easily increased by them. A half of one per cent. solution of cocaine muriate in distilled water may be used, if there be, as there often is, much nasal stenosis. This may be followed to advantage by a two per cent. solution of menthol, sprayed lightly into the nose and throat. Warn the patient against blowing the nose violently. Carelessness in this regard may cause a recurrence of the pain. Do not inflate the tympanum at this time by any method. That should be done only under expert advice.

If pain continues unabated or increased on the second day, the ear should be thoroughly examined. Evacuation of the tympanic cavity by free incision of the drum membrane may be needed. If promptly done, this may prevent a prolonged purulent inflammation, with all the dangers it entails to hearing and even life itself. The author sums up as follows:

1. Earache, however slight, may signify disease that, neglected, may terminate in loss of hearing, or even of life itself.

2. Recurring earache in children almost always is associated with lymphoid hypertrophy of the pharynx, and permanent impairment of the function of the ear is prevented only by early surgical treatment of the "adenoids."

3. Acute inflammation of the middle ear may be frequently aborted, if proper treatment—mostly of a general sedative character—be administered early in the attack and with precision.

4. If relief be not obtained by the second day, a thorough examination of the ear should be made and proper surgical treatment applied to relieve intratympanic pressure and possible involvement of the mastoid cells or intracranial structures. Failure at this stage to obtain as exact knowledge as possible of the condition of the middle ear is criminal negligence.—*Maryland Med. Jour., Medical Standard.*

VOICE AFTER REMOVAL OF ADENOID VEGETATIONS.—A guarded prognosis is given by Dr. Gibb (*Phila. Polyclinic*, June 26, 1897) as to the quality and character of the voice after the removal of *adenoid vegetations* from the vault, or the excision of hypertrophied faucial tonsils in children of ten years or over. We are apt to believe in the return to a normal voice after these operations, and not infrequently we shall be disappointed. Besides the faulty habit formed, prolonged mouth-breathing brings about changes in the turbinates, and the high-arched palate contributes to an alteration of tone.

Medical Societies.

TORONTO MEDICAL SOCIETY.

OCTOBER 28.—Dr. McMahon in the chair, meeting called to order at 9 o'clock.

Dr. J. F. W. Ross asked if he might say a few words to clear himself of a misunderstanding he thought existed regarding his remarks at the last meeting, regarding the application of forceps to the after-coming head. He had had a pair of forceps made to illustrate the idea he wished to convey. He had frequently had difficulty in applying forceps in these cases, on account of the neck getting in the way and being pinched by them. He demonstrated on the model how this occurred. The forceps he had devised were broader, there being a greater interval between the shanks. In the shanks there is a double antero-posterior curve, so as to bring the blade and handle on a different plane. The blades are shorter than usual. Dr. Ross showed how by the extra curve and greater interval between the shanks the pinching of the neck was avoided.

Dr. Machell—Management of occipito-posterior positions.

The management presupposes a diagnosis, so the point is first to make a diagnosis. Fry, of Washington, gives two useful guides to this: (1) The fontanelle, having a position in or near the mid line of the pelvis. This is very suggestive. In occ. antr. cases the fontanelle is away out to the side, but in posterior cases is near the middle; (2) The head fails to fill the pelvis as well as in occ. antr. cases.

McLean, of New York, thinks that short, sharp, snappy, ineffectual pains are suggestive, and when by vaginal examination it is found that no progress is made during the pains. To make sure of the position it is better to insert the hand or a half hand into the vagina and explore, as one finger is not sufficient, the head being high up, and the scalp probably much infiltrated, so as to obscure the fontenelles. Then for diagnosis we have left palpation and auscultation of the abdomen.

By abdominal palpation we find an absence of the dorsal plane; the back of the child is not felt. Palpation of the head in occ. antr. cases is successful only on deep pressure of the fingers down behind the pubes. In occ. postr. cases it is much more easily felt. In occ. antr. cases the extremities are always difficult to make out, and if felt are almost always to the right of the median line. In occ. postr. cases they are more easily felt, and usually in the middle line. With occ. antr. the shoulder is in or near the mid line, with occ. postr. it is more to the right. With occ postr. the fœtal heart sounds are heard far back and with difficulty, whereas when anterior they are found more easily and midway between the umbilicus and middle of Poupart's ligt.

So far for diagnosis. As to prophylaxis all patients should be examined some days prior to labor; but this is impossible in many cases. If the case be seen before labor has set in, the occ. postr. may be changed to

anterior by the knee-chest or knee-elbow position, whereby the child, by gravity, falls away free from the pelvic brim, and the back being heavier sinks toward the mother's abdomen, the child rotating a half circle. The mother should then lie on her left side to maintain the corrected position.

If called to a case after labor has set in, or before the head has engaged, try the postural method again. But it must be remembered that 97½% of these cases terminate as occ. antr. cases.

If extension be moderate, wait and see if flexion will occur. McLean says to wait as long as one hour. If it does not occur, promote flexion by pushing up the forehead. They say this is easily accomplished in the knee-chest position; or the head may be pushed up bodily, and the patient placed on the left side. If this be not successful, an anæsthetic may be given, the os dilated, and with the half hand push the head up, if engaged, and force the forehead upward to promote flexion. This done, withdraw the hand, stop the anæsthetic, and by pressure on the fundus force the head down in its corrected position.

Dr. Ross (Senior) used to rotate the occiput.

If these means be tried and not successful, introduce the whole hand and rotate the head ½ circle and roll over the body as well, and leave it as an occ. antr. case, or apply forceps to deliver; but there is a tendency while putting on the forceps for the child to rotate into its former position. It is better to leave it to nature. If this fail do a version; but here again is the possibility of trouble with the after-coming head.

The speaker spoke of a case of his which began with the occ. postr. He inserted the hand and rotated ¼ circle under chloroform. It slipped back, however, to its former position, chloroform was given again, a version done, and delivery easily accomplished.

It is suggested with occ. postr. to apply forceps in a reversed position, grasping the head well back so as to favor flexion. If too far forward, they increase extension. The speaker objects to forceps at the brim. There is danger to both mother and child.

When the head is in the cavity of the pelvis.—First maintain flexion by pushing up the forehead, but in the speaker's experience this has not been successful.

In addition to pushing up the forehead, pull down the occiput with the fingers hooked over it and the thumb on the forehead.

Some obstetricians swear by the vectis. The speaker had never used it. It is supposed to act as a rigid perineum, promoting flexion. Reversed forceps are safer here than when head is at the brim. Should the head neither flex nor rotate, it being well down in the pelvis, and the membranes gone, the head may be raised with the hand and rotated—the body also being rotated. This may be done even though the waters have come away.

Or the low operation with forceps may be performed, the blades to the sides of the head and well back upon it to favor flexion. The straight forceps are the better. Forced rotation with forceps is not safe for mother or child.

In the case of occ. postr. persisting, what is best to do? Force flexion

by pulling occiput as much as possible toward the pelvis. Don't hurry till you have to. Allow the head to mould. Better than pull too long on a living child, do a symphysiotomy. Craniotomy is applicable only when the child is dead. It is much better for the mother.

97½% of the cases terminate favorably, it is for the other 2½% that we must work.

Dr. Adam Wright has no criticism to make. He agrees with what has been said. Several methods have been described, but not advised. There are many difficulties and many useless procedures.

First as to diagnosis: External examination is a very good method, very useful and easy, and much neglected.

In o. antr. cases the spine of the child is easily felt. In o. p. cases the feet are felt far back and to the right, which is a point for diagnosis.

When diagnosed, what is to be done? Speaker does not think much of the knee-chest position, for the uterus lies on the bed.

Herman recommends twisting the shoulders around by the abdominal method. As McLean says, unsatisfactory pains are suggestive of o. posterior positions, for the uterus is working at a great disadvantage, a large diameter of the head having engaged a small diameter of the pelvis.

When the head is high up:—Give chloroform, insert the hand, and rotate the head, the body being rotated by external manipulation, but the easiest, by far, is to turn altogether. The speaker does not scruple as to what to do. Some object to this procedure, but this is Dr. Wright's opinion.

When the head is down at the pelvic floor:—Dr. Ross used to push the occiput forward, but when can one say whether he has done it or not, when 97½% go forward, anyway?

There is no curve or circle described by the head; it is a simple rotation. It is remarkable how quickly the occiput goes forward. One minute may do it all.

It is important not to interfere too much. Watch the mother, and if there is reason to hasten matters, apply forceps, but never apply them reversed. Forceps rightly applied and the head gently rotated is allowable, but must be very carefully done. If head begins to rotate, take off the forceps and let it go its own way.

Dr. Wm. Oldright advised the use of the whole hand for diagnosis. Spoke of which hand to use in a given case. In examination, get the two fontanelles in relation to one another and the position of the head is clear. He thinks he has helped rotation with forceps, applied in the natural way and carefully manipulated, slight rotation and traction being applied, the body of the child being at the same time rotated by an assistant by abdominal manipulation. When both are rotated, why wait? So deliver at once. If rotation should tend to take place in the opposite direction to your wish, let it go its own way. If the pelvis be small and the head large, give a chance for moulding by waiting.

Dr. Hunter questioned the ease of diagnosis, and spoke of the mistakes in abdominal diagnosis by the more learned in that department. Never leave to nature. Meddle and interfere when you like; nature is not fit

to take care of these cases. The speaker had never lost a case, had never found such cases difficult.

Dr. G. Gordon agreed, in part, with Dr. Hunter. If diagnosis be not easily made with a finger, leave alone. The insertion of one hand for examination is too great a risk when 97% of the cases do well anyway.

Too little stress has been laid upon the promotion of flexion. Flexion must be obtained before rotation can occur. Regarding delivery, he had had one case born with occ. persisting in the post. position. The case terminated rapidly and without much trouble.

Dr. J. F. W. Ross.—With all due regard to Dr. Hunter, he thought abdominal surgery had made great advances. He spoke of a case in point, where everything had been done, but the case ended with rupture of the uterus. In Vienna he was taught to put on forceps in the reversed position, with the pelvis much elevated, but he always hesitated to do so. Forceps help flexion and the head rotates naturally. With regard to his father's procedure in these cases, he said, he assisted the forward and prevented the backward rotation; the operator does not do all the rotating, but endeavors to prevent abnormal rotation.

Dr. Hastings.—Dr. Machell has covered the ground so well that nothing is left to discuss. He expressed his appreciation of the manner in which the subject had been handled. Much importance should be laid upon the maintenance of flexion.

Dr. Carveth suggested that the X-rays would in time be a valuable aid in diagnosis.

Dr. Webster.—In occ. postr. cases the mothers usually felt the fœtal movement on the left side, so they tell him.

Mr. Cameron.—Dr. Ross (Sr.) used to be the only man successful with these cases. Rotation of the head with ordinary forceps is very dangerous. With the straight forceps it is less so.

In reply, Dr. Machell dwelt on the question of diagnosis; there is much in it. Abdominal palpation is a great help, but with all means at our disposal, a diagnosis is difficult. He had never used Herman's method. As to Dr. Oldright's choice of hand for examn., he agreed, the palm of the hand to correspond and apply to the abdomen of the child. As to finding the two fontanelles; it is hard enough to find one, much less two. Forcible rotation is to be condemned. He thought Dr. Hunter's record good. It is a rule not to turn after the waters have come away, but he has succeeded in doing so.

Many of the procedures suggested had not been successful in his hands. Waiting was often necessary and wise. Rotation of head and shoulders (Reynolds'), version, and forceps were all good in certain cases, and perforation was necessary at times.

The meeting then adjourned.

H. C. PARSONS,
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The *BERLINER KLINISCHE WOCHENSCHRIFT*, 22nd March, 1897, publishes a report upon some experiments that have been made under the direction of **PROFESSOR GERHARDT,** in his clinic at the Charité Hospital at **BERLIN,** demonstrating the value of **APENTA WATER** in the treatment of obesity and its influence on change of tissue.

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is the condition of the woman who has been relieved from some functional disturbance to her state before relief. Don't you know, Doctor, that there are few cases that pay the physician so well as those of women—and the Doctor that relieves one woman, lays the foundation for many more such cases—all women talk and your patient will tell her friends ASPAROLINE COMPOUND gives relief in all cases of functional disturbance—Leucorrhœa, Dysmenorrhœa, etc., and in the cases it does not cure it gives relief. We will send you enough ASPAROLINE COMPOUND—free—to treat one case.

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Parsley Seed	Grs.	30
Black Haw (bark of the root)	"	60
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A Remedy in Nervous Disorders when Characterized by Melancholia. —Mode of Exhibition.—

The "Reference Book of Practical Therapeutics," by Frank P. Foster, M.D., Editor of *The New York Medical Journal*, which has recently been issued by D. Appleton Co., of New York City, contains an article of which the following is an excerpt, which we feel expresses the consensus of medical opinion as adduced by actual results: "Antikamnia is an American preparation that has come into extensive use as an analgetic and antipyretic. It is a white, crystalline, odorless powder, having a slightly aromatic taste, soluble in hot water, almost insoluble in cold water, but more fully soluble in alcohol.

* * * * * *

"As an antipyretic it acts rather more slowly than antipyrine or acetanilide, but efficiently, and it has the advantage of being free, or almost free from any depressing effect on the heart. Some observers even think that it exerts a sustaining action on the circulation. As an analgetic it is characterized by promptness of action and freedom from the disagreeable effects of the narcotics. It has been much used, and with very favorable results in neuralgia, influenza and various nervous disorders characterized by melancholia. The dose of antikamnia is from three to ten grains, and it is most conveniently given in the form of tablets."

We may add, that the best vehicles, in our experience, for the exhibition of antikamnia are Simple Elixir, Adjuvant Elixir or Aromatic Elixir, as also brandy, wine or whiskey. It can also be readily given in cachets or capsules, but preferably tablets, as well as dry on the tongue in powder form, followed by a swallow of water. When dispensed in cachets or capsules it should be put into them dry. Antikamnia tablets should be crushed when very prompt effect is desired and patients should always be so instructed. The conditions of the stomach frequently present unfavorable solvent influences and they can be thus overcome.

—*Notes New Pharm. Products.*

In Pneumonia where there is Restlessness.

℞ Antikamnia (Genuine)........................ ʒ ij
Tinct. Digitalis........................ ʒ iss
Syrup Doveri........................ ℥ iij

Mx. Sig.:—Teaspoonful every 3 to 6 hours.

In Painful Dysmenorrhœa.

℞ Antikamnia (Genuine)........................ ʒ j
Brom. Potass........................ ʒ ij
Elix. Aurantii........................ ℥ ij

Mx. Sig.:—One or two teaspoonfuls every hour in water.—*Dunglison's Clinical Record.*

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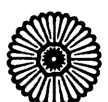

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Editorial.

MODERN METHODS IN MEDICAL TEACHING.

Returning to the subject of our last issue, the same tendency to run to extremes seen in some teachers of anatomy, which we noted last month, seems to exist to a positively injurious extent among some teachers of subsidiary subjects of primary study, such as botany, zoology, embryology, and the more important ones of chemistry and Materia Medica. Some of the most beautiful examples of conservatism in this mundane sphere can be seen in our own profession, and why botany should still be taught as it is in some of our best British schools is quite beyond comprehension. The old days of the "apothecary in tattered weeds, culling of simples" are gone for ever, and what bearing a course in field botany can have now on the professional needs of the future physician not even a Professor of Botany can say. Structural and microscopical botany can be made up to a certain point quite as useful as the rudiments of animal histology, and at least a smattering must be admitted as essential, or at least desirable, in any man of average modern education. But that certain point is very soon reached among medical students, and only students in abstract natural sciences should be carried by their instructors beyond the bare rudiments. All these subjects, while useful accessory branches, should be left for postgraduate work, to which the brilliant or ambitious man, whose mental and other qualities are likely in any case to carry him to the front, may devote himself at pleasure, or should be exacted only of those seeking the highest degrees of the colleges, given only after the usual degrees have been taken; but, in our opinion, modern developments in the science and art of healing have quite changed the perspective, and so altered the relative value of subjects that a rearrangement is imperative. And signs are not wanting that that rearrangement will in due time have taken place by the spontaneous action of the colleges, rather than from pressure from without.

THE VICTORIAN ORDER OF NURSES.

The titled and kindly progenitors of this scheme have evidently not forgotten it in spite of the floods of cold water thrown upon it by the

professions most interested, and by almost all the lay press in whose columns any note has been taken of it. Press notices have been printed by request, carefully sent by interested parties from distant cities, even from some outside the Dominion, but the editorial columns have either been empty of reference, or have contained diplomatic attempts to blow hot and cold at once. The presence of their Excellencies the Governor-General and Lady Aberdeen in Toronto will doubtless bring up the subject again, and we wish to record once more our failure to see anything practicable or urgently necessary in the scheme. Such methods of relief for the pain and misery of the indigent can be effectively applied only where the population is dense, and if the proposal had been to supplement existing organizations of the kind, rather than to snuff them more or less rudely out, both the public and the profession would have been much more apt to take kindly to the idea. We do not claim that even existing organizations have fully covered the needs of their localities, for they have all been hampered by lack of funds, and if Her Excellency's powerful influence had been lent to a plan for consolidating and unifying these, and securing them further support, her undoubted kindness would have been quite as fully recognized by the Canadian public, and the proposal would have been probably a success. As it is, while grateful for the thoughtfulness, not so often seen in high places, for the pains and poverty of the lowly, we wish respectfully to suggest that Her Excellency has misjudged both the needs of the community, the temper of the people sought to be relieved, and the giving capacity of the country. The scheme is so large as to be hopeless, even were the necessity for it proven.

Modification of it might be possible. Indeed, it has been somewhat modified so as to bring it more into line with the work done by the various Deaconess' Orders and Sisterhoods of the churches, with whose work it would seem that it must interfere. The profession, if properly approached with a scheme distinctly different from that so universally declined last year, and presented with some regard to details, can be fully trusted to meet it with a warm welcome.

A recent editorial in a Toronto daily contained the following allusion to the scheme:

The medical men of the Dominion—certainly in Ontario—almost invariably condemn the scheme whenever and wherever it is discussed, and are emphatic in their declarations that it is impractical and unworkable even in its modified form.

Indeed, the only prominent medical men who favor it are one or two at Ottawa and Montreal.

The Provincial Medical Association of Ontario has passed resolutions condemning it, and the Dominion Medical Association at its meeting in Montreal was prepared to pass a similar resolution to that passed by the Ontario Association, but out of deference to their Excellencies, who were in Montreal at the time the resolution was withheld.

About the same time the British Medical Association met in Montreal, and in its closing hour, indeed, it was but a few moments before adjournment when instead of some 400 being present some twenty were in the hall, a resolution was read and rushed, approving of the project. It was so quickly done that one or two medical men who intended to speak on and against the scheme had hardly time to seat themselves —so rapidly was the endorsement railroaded through the meeting.

The medical men of Halifax have not only declined to endorse the scheme but have by resolution condemned it, while the profession in Winnipeg unhesitatingly disap-

prove of this attempt to float a scheme that, if successful, would materially injure the future of the excellent nurses now being trained in the hospitals of that great western city.

The lady superintendents of the large training schools of Toronto and other cities of Ontario mark the scheme down as not only thoroughly unworkable, but a menace to the trained nurse work of the different institutions.

Indeed, one of the most experienced lady superintendents in Canada, residing in Montreal, does not hesitate to freely express her opinion that the project lacks the essentials of success.

One of the proposals for action includes the establishment of small cottage hospitals and homes in outlying country districts and in cities.

In 1896 Dr. Chamberlain, one of the best authorities on the continent in hospital inspection, expressed his opinion in a report to the Government of Ontario. The doctor said: "It is to be regretted that there is a disposition to multiply hospitals in localities which do not require them, or where the population will not warrant it," for, he adds, "one hospital well equipped and supported will do much better work than two or more and at much less expense to the country."

Who is there in Ontario who will have the assurance to say that Toronto, Hamilton, London, Ottawa, Kingston, Halifax or Montreal are cities that require home or cottage hospitals? Why, in Toronto there are at least 200 beds vacant in all the hospitals all the year round, and yet a suggestion is made to increase the number.

Just how far the powerful influence and patronage of the Governor-General and his wife should be used in promoting schemes which must interfere with and disturb a department of Canadian hospital work that it has taken twenty years to bring to its present high status, at an expense of many thousands of dollars, is a question that stands up for answer in the very front of this movement.

No one for a moment doubts the goodness and kindness of heart that prevails in those who represent Her Majesty in this Dominion. No one will deny that this Victorian scheme has surely been called into life with intentions the best and most noble. But when a scheme is propounded that will so interfere with the work of trained nursing and wreck the opportunities of our nurses for making a decent living by their profession, is it not time to call a halt and demand that the efforts of vice-royalty shall be confined to the carrying out of those functions which naturally belong to the representatives of Her Majesty in this Dominion?

EDITORIAL NOTES AND CLIPPINGS.

COUNCIL EXAMINATIONS.

The following candidates have passed the primary examinations of the College of Physicians and Surgeons of Ontario, October, 1897:

W. H. K. Anderson, Ottawa; W. S. Burd, French River; T. Bradley, Georgetown; J. A. Ferguson, Easton's Corners; T. A. Gourley, Eganville; Thos. Gibson, Ottawa; E. H. Hooper, Toronto; H. J. Hough, Toronto; H. A. Kingsmill, London; H. Maw, Georgetown; N. Malloch, Marvelville; J. N. MacLean, Sarnia; A. W. P. McCarthy, Stapleton; E. B. Oliver, Ingersoll; J. H. Peters, Fergus; C. A. Page, Toronto; F. Porter, Toronto; F. D. Turnbull, Milverton; C. G. Thomson, Hiawatha.

The following have passed the intermediate and final examinations:

Intermediate—T. Bradley, Georgetown; N. E. Farewell, Oshawa; Thos. Gibson, Ottawa; H. A. Kingsmill, London; H. Maw, Georgetown; A. W. P. McCarthy, Stapledon; F. W. E. Wilson, Toronto.

Final—S. R. Clemes, Collingwood; J. A. Ferguson, Easton's Corners; A. Gray, Niagara Falls; T. A. Gourley, Eganville; Thos. Gibson, Ottawa; H. A. Kingsmill, London; N. Malloch, Marvelville; A. E. Ross, Kingston; C. G. Thomson, Hiawatha; E. A. P. Hardy, Toronto.

H. A. Hare, in *Therapeutic Gazette*, September 15, '97, discusses the rate of absorption and elimination of some common drugs, as a guide to their use. The drugs discussed are chiefly of mineral origin, especially the iodides and bromides of sodium and potassium, mercury, antipyrin, arsenious acid. He mentions, also, digitalis, belladonna and aconite.

His remarks on potassium bromide are most extended, and he points out that though very rapidly absorbed it is very slowly eliminated. Rabuteau says that in five minutes it begins to be eliminated. One-half the drug is said by Amory to be eliminated in twenty-four hours, and one-third in the next twenty-four hours, but the remainder exceedingly slowly, traces having been found in the urine by Rabuteau up to a month after taking. He deduces thus rationally the rule which clinicians have empirically established, that in the use of the iodides and bromides that after large initial doses have had their full effect it can be fully kept up by much smaller doses. Neurologists usually so employ these drugs, the general practitioner probably seldom.

A fu ther corollary he gives, that "the administration of either iodides or bromides in frequent small doses possesses no advantages and is apt to disorder the digestion and overload the organism with the drug. They should be given twice or thrice a day in full dose rather than frequently in small doses."—J. T. F.

A MODE OF GIVING A VAPOR BATH TO A PATIENT IN BED.—A writer in the *Presse Medicale* for June 19 recommends the following mode of giving a vapor bath without removing the patient from bed: A woollen blanket is placed on the bed under the patient, who keeps on his night-robe. Under each foot and at each side of the body a stone bottle containing boiling water is placed, each bottle having previously been wrapped in a very wet towel and the whole covered with flannel. After the bottles are placed in position, the woollen blanket is wrapped around the patient, and another blanket and an eiderdown quilt are put over him.

At the end of fifteen minutes the patient is in a veritable vapor bath, which induces a profuse perspiration, and he is kept in this condition for a varying length of time, according to the case. In order to favor sweating, one or two cupfuls of some hot infusion should be taken. After the patient has remained a sufficient length of time in the bath, the woollen blankets under him and the bottles are withdrawn without exposing him, and he is then wiped dry under the other blanket and the quilt. At the end of twenty or thirty minutes the patient may have a change of linen.

ANEURISM AND SYPHILIS.—A study of the connection between aneurism and syphilis in the *Annales de Derm. et de Syph*, for January, by Prof. G. Etienne (*Med. News*), announces that 70 per cent. of 376 cases examined were found to have syphilitic antecedents, and this is a minimum proportion, as it is so difficult sometimes to detect traces of old syphilis. With most of the aneurisms the infection dates from five to twenty-five years. No histological difference between the aneurism of

syphilitics and non-syphilitics was noted with rare exceptions. Mercurial treatment is successful if the gummatous infiltration is still susceptible to absorption without leaving scleroma behind it, so that the tissues can resume their elasticity. When the lesion has advanced beyond this stage, specific treatment is ineffectual. The article concludes with the statement that aneurisms, therefore, with tabes and general paralysis, can be included in what Fournier calls para-syphilitic affections.—*N. Y. Med. Times.*

PALATABLE CASTOR OIL.—A palatable emulsion of castor oil may be prepared as follows:

℞ Powd. acacia ....15 (ʒ iv.)
Ol. ricini, fl..........................30 (℥j.)
Elix. sacch ....1 5 (mxx.)
Ol. almonds (bitter) .... 05 (mj.)
Ol. cloves .... 15 (mij.)
Aq. dest., q.s. to make fl ....60 (℥ij.)

Dissolve the gum in sufficient water and add the oil gradually; lastly add the flavoring

Glycosin, saccharin and dulcin are all soluble to some extent in castor oil, and are serviceable in imparting a sweet and pleasant flavor, masking to some extent the disagreeable taste of the oil.—*London Pract.*

CHOREA MINOR.—Use the following as a sedative and antispasmodic for children of five to ten years:

℞ Lactophenini..........................0.15
Quinin. hydrobrom 0.15
M. Ft. chart, No. X.

Sig. Take one powder three times daily.

For children of ten to fifteen years of age, use:

℞ Lactophenini.......................... 0.8
Quinin. hydrobrom........................ 0.8
Butter cacao 10.0

Atlantic Med. Monthly.

A POWDER FOR CORYZA.—

℞ Subnitrate of bismuth, 1 drachm;
Powdered camphor, 10 grains;
Powdered boric acid, 30 grains;
Hydrochlorate of morphine, 1 grain;
Hydrochlorate of cocaine, 1 grain;
Powdered benzoin, 15 grains.

A pinch of this is to be snuffed up the nostrils.—*Therapeutic Gazette.*

THE TREATMENT OF DIABETIC COMA.—In *La Semaine Médicale*, Lepine, of Lyons, reports still another case of diabetic coma treated with success by two drachms of chloride of sodium and two and a half drachms of bicarbonate of sodium in one quart of sterilized water.

Book Reviews.

THE ESSENTIALS OF OBSTETRICS.—By Charles Jewett, M.D., Professor of Obstetrics in the Long Island College Hospital, Brooklyn, New York. In one handsome 12mo. volume of 356 pages, with 78 illustrations and 3 colored plates. Cloth, $2.25. Lea Brothers & Co., Publishers, New York and Philadelphia, 1897.

A PRACTICAL TREATISE ON SEXUAL DISORDERS OF THE MALE AND FEMALE.—By Robert W. Taylor, M.D., Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York. In one handsome octavo volume of 448 pages, with 73 illustrations and 8 plates in color and monochrome. Cloth, $3.00, net. Lea Brothers & Co., New York and Philadelphia.

SIMON'S CLINICAL DIAGNOSIS.—New (2d) Edition, Revised and Enlarged A Manual of Clinical Diagnosis by Microscopical and Chemical Methods. For students, hospital physicians and practitioners. By Charles E. Simon, M.D., late Assistant Resident Physician Johns Hopkins Hospital, Baltimore. In one very handsome octavo volume of 530 pages, with 135 engravings and 14 full-page colored plates. Cloth, $3.50.

THE PRINCIPLES OF BACTERIOLOGY.—A Practical Manual for Students and Physicians. By A. C. Abbott, M.D., Professor of Hygiene and Director of the Laboratory of Hygiene, University of Pennsylvania, Philadelphia. Fourth edition, enlarged and thoroughly revised. Handsome 12mo., 542 pages, 106 illustrations of which 19 are colored. Cloth, $2 75. Phildelphia and New York: Lea Brothers & Co., Publishers.

A MANUAL OF MEDICAL JURISPRUDENCE.—By Alfred S. Taylor, M.D., Lecturer on Medical Jurisprudence and Chemistry in Guy's Hospital, London. New American edition of 1897 from the twelfth English edition. Thoroughly revised by Clark Bell, Esq., of the New York Bar. In one octavo volume of 831 pages, with 54 engravings and 8 full-page plates. Cloth $4.50; leather, $5.50. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

HARE'S PRACTICAL DIAGNOSIS.—The use of Symptoms in the Diagnosis of Disease By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Laureate of the Medical Society of London, of the Royal Academy in Belgium, etc. New (2d) and revised edition. In one octavo volume of 598 pages, with 201 engravings and 13 full-page colored plates. Cloth, $4.75. Philadelphia: Lea Brothers & Co., Publishers.

HUTCHISON & RAINY'S CLINICAL METHODS.—Clinical Methods, being an Introduction to the Practical Study of Medicine. By Robert Hutchison, M.D., M.R.C.P., Demonstrator of Physiology in London Hospital Medical College and Harry Rainy, F.R.C.P., F.R.S.E., University Tutor in Clinical Medicine, Royal Infirmary, Edinburgh. Handsome 12mo, 562 pages, 137 engravings and 8 colored plates. Cloth, $3.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

THE MEDICAL NEWS VISITING LIST FOR 1898.—Weekly (dated, for 30 patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for 30 patients weekly per year); and Perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60 patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber Seal Grain Leather, $1.25. Thumb letter Index, 25 cents extra. Philadelphia and New York: Lea Brothers & Co.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS, with especial reference to the application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart Amory Hare, M.D, Professor of Therapeutics and Materia Medica in the Jefferson Medical College Philadelphia, etc. With special chapters by Drs. George E. de Schweinitz Edward Martin and Barton C. Hirst. Sixth edition, thoroughly revised and largely rewritten. In one octavo volume of 756 pages. Cloth, $3.75; leather, $4.75. Lea Brothers & Co., Publishers, Philadelphia and New York, 1897.

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Viburnum Opulus (Cramp Bark), *Piscidia Erythrina* (Jamaica Dogwood), *Hydrastis Canadensis* (Golden Seal), *Pulsatilla* (Anemone Pulsatilla.)

The above combination cannot but at once appeal to the intelligent practitioner as almost a specific in the treatment of the various kinds of pain incident to the diseases of the female sexual organs, so varied in their character and such a drain upon the general health and strength.

It is most valuable in cases of Dysmenorrhœa. Never fails, and is equalled only by opium, without having any of the dangers of that narcotic.

It possesses very remarkable antispasmodic properties. It also acts as a nervine tonic, astringent, and is a useful remedy in Diarrhœa and Dysentery, and is particularly valuable in preventing abortion and miscarriage, whether habitual or otherwise.

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And the Vitilizing Constituent—Phosphorus ; the whole combined in the form of a Syrup, with a **slight alkaline reaction.**

It differs in its effects from all Analogous Preparations: and it possesses the important properties of being pleasant to the taste, easily borne by the stomach, and harmless under prolonged use.

It has gained a Wide Reputation, particularly in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs. It has also been employed with much success in various nervous and debilitating diseases.

Its Curative Power is largely attributable to its stimulant, tonic and nutritive properties, by means of which the energy of the system is recruited.

Its Action is Prompt: It stimulates the appetite and the digestion, it promotes assimiliation, and it enters directly into the circulation with the food products.

The prescribed dose produces a feeling of buoyancy and removes depression and melancholy ; *hence the preparation is of great value in the treatment of nervous and mental affections.* From the fact, also, that it exerts a double tonic influence, and induces a healthy flow of the secretions, its use is indicated in a wide range of diseases.

When prescribing the Syrup please write, " Syr. Hypophos. FELLOWS." As a further precaution it is advisable to order in original bottles.

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Mr. Charles Fowler, of the well-known firm of Scott & Bowne, makers of "Scott's Emulsion," has returned to the head office, New York. His successor is Mr. George C. Hawkins, who was born and brought up with Scott's Emulsion, he having been with the firm ever since he left school. It will be a very short time until Mr. Hawkins will enjoy the same popularity among the medical profession as that possessed by his predecessor, Mr. Fowler.

PROFESSOR BOGOSLOWSKY ON "APENTA."—"W. S. Bogoslowsky, from clinical observations on the action and value of a constant bitter water, draws the following conclusions (*Transactions* of the Moscow Section of the Society for the Preservation of Public Health, No. VI.):

"Systematic treatment with Apenta water is especially indicated for constipation produced by atony of the bowels, and it has the advantage that its use does not give rise to subsequent constipation.

"Its action is more gentle than that of some other bitter waters because it contains less calcium sulphate and no magnesium chloride. It is probably owing to this circumstance that it does not cause crampy pains.

"The efficiency of Apenta as a remedy for the systematic treatment of obesity is clinically established."—*The British Medical Journal,* August 28th, 1897.

SIR JAMES GRANT, M.D., EXPRESSED A MOST FAVORABLE OPINION OF TAKA-DIASTASE.—In a recent letter, Sir James Grant, of Ottawa, Canada, late physician to H.R.H. Princess Louise, reports his experience with Taka-Diastase in the following language: "I consider Taka-Diastase a powerful solvent of material which has undergone only partial digestion as a result of defective gastric action. The intense hurry of everyday life is such at the present time that the gastric functions are more than commonly subjected to abnormal influences. Under such circumstances I have closely observed the action of Taka-Diastase and the remarkable manner in which it aids digestion without taxing the system in the slightest degree. I have recommended it in Canada and England with great pleasure and satisfaction, and I predict for it a wide use, owing to the fact that it serves as a remedial agent not previously at the command of the medical profession."

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ness is a mattress made for hospitals exclusively, in which the cover can be taken off and the contents taken out bodily and be thoroughly disinfected. This will commend itself at once to every physician. The Alaska Feather and Down Co. will be glad to furnish all particulars, price, etc., to any physician dropping them a card. There is not the slightest doubt that this mattress will immediately take precedence over any other mattress now on the market.

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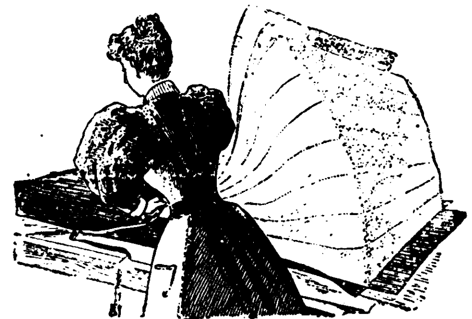
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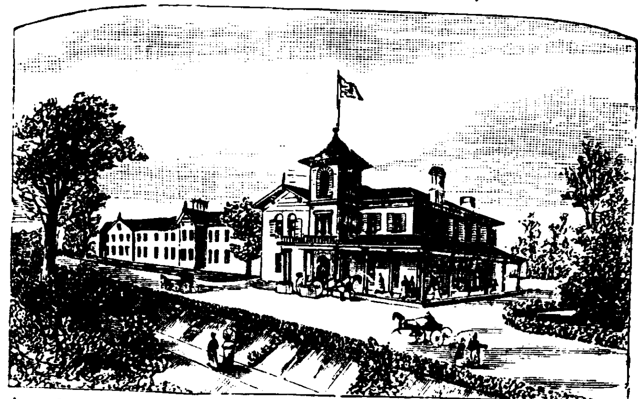

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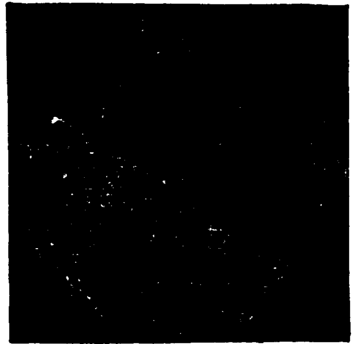

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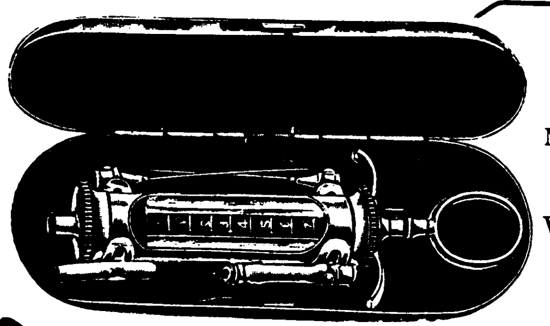

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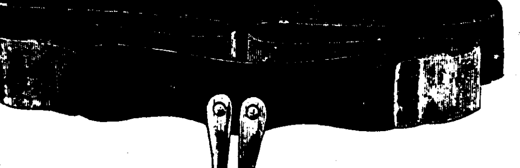

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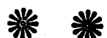

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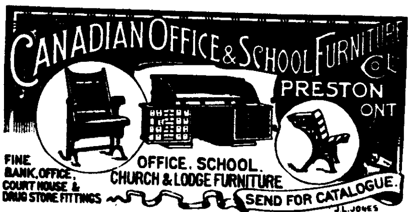

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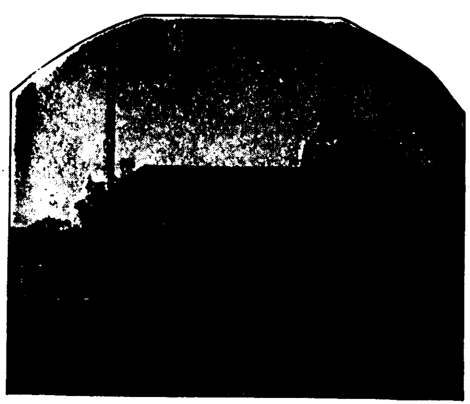

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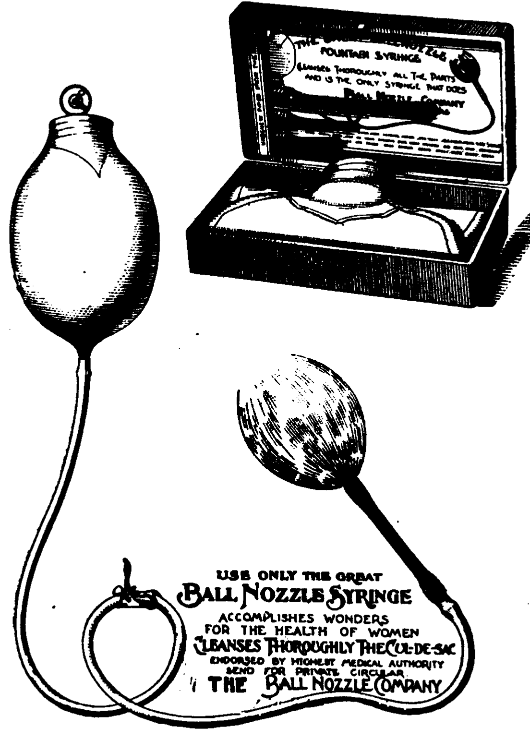

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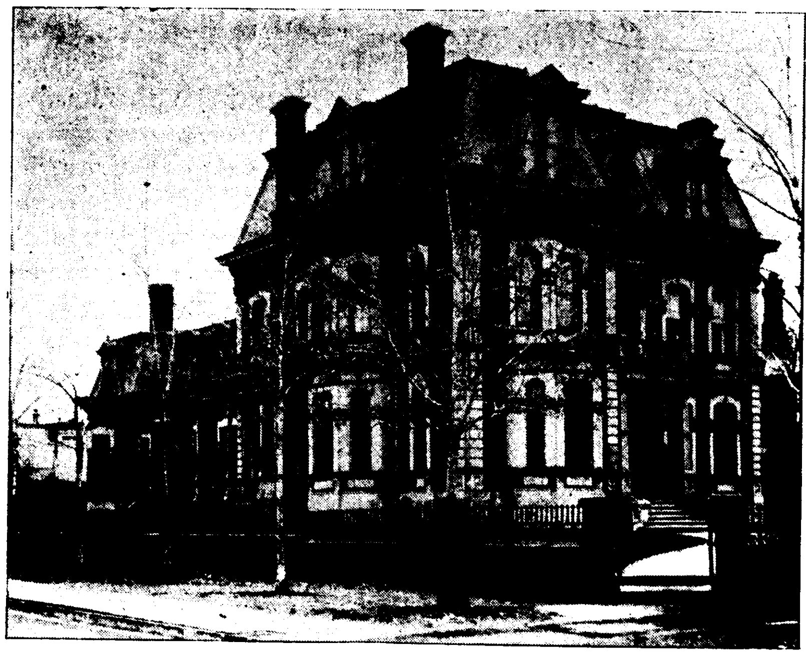

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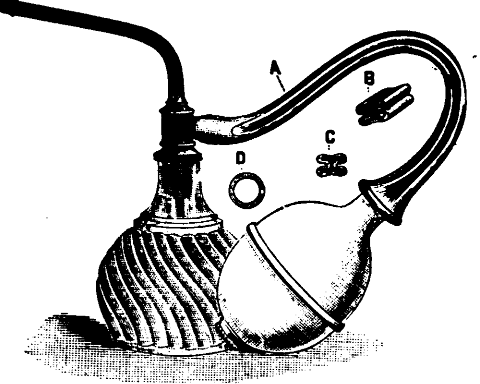

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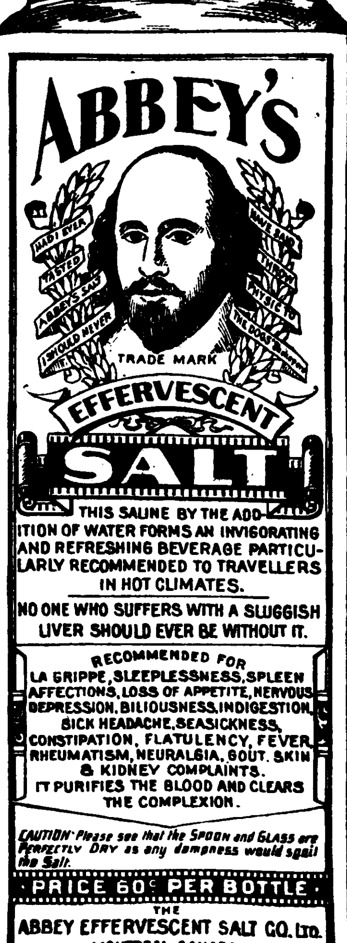

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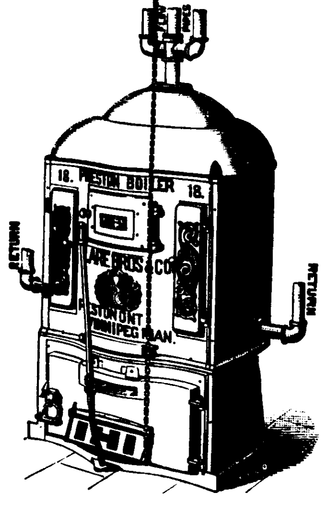

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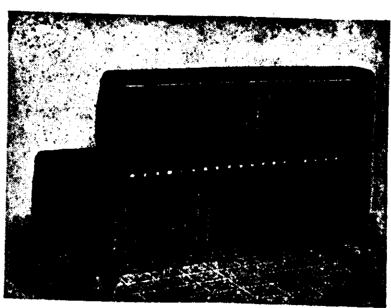

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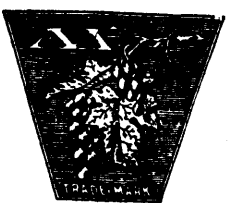

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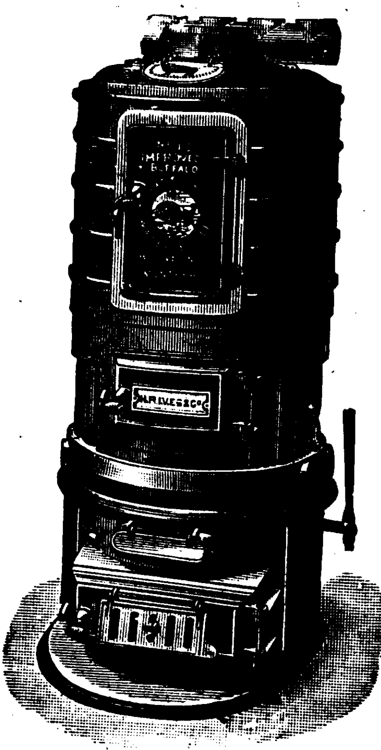

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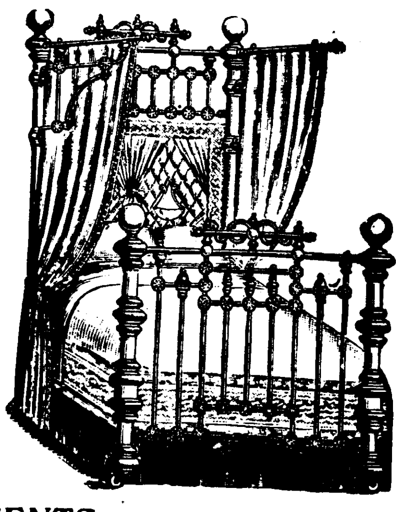

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TO YIELD A FOOD FOR INFANTS

Which in Physiological, Chemical and Physical Properties is almost identical with human milk, affording a complete substitute therefor during the entire nursing period.

The indigestibility of caseine is now universally recognized as the chief obstacle to the employment of cows' milk as a food for infants. Modern investigation of the comparative composition and properties of cows' and human milk discloses the fact that cows' milk contains twice as much albuminoids, caseine, etc., and that these are for the greater part coagulable, and form firm masses of curd in the stomach ; whilst most of the albuminoids of mothers' milk are soluble, and those coagulable form minute, soft, flocculent particles in the stomach. Thus science explains and confirms common experience. Further, there appear definite and significant differences in the relative proportion, as well as total amount of nutritive substances in the two milks, clearly in accordance with their destination.

By means of the Peptogenic Milk Powder and process, cows' milk is so modified as to conform remarkably in every particular to normal mothers' milk, thus affording a food for infants exactly suited to the functions of infant digestion, calling forth the natural digestive powers of the stomach and supplying every element of nutrition competent for the nutrition and development of the nursing infant.

DIRECTIONS.

Peptogenic Milk Powder - -	One Measure.
Cold Water - - - - -	Half Pint.
Cold Fresh Milk - - -	Half Pint.
Cream - - - - - -	Four Tablespoonfuls.

Heat the mixture with constant stirring until it comes to the boil in ten minutes.

	Water.	Fat.	Milk Sugar.	Albuminoids.	Ash
Average of Analyses 80 samples of Womans' Milk.	86.73	4.13	6.94	2.	0.2
Analysis of Milk prepared with Peptogenic Milk Powder.	86.2	4.5	7.	2.	0.3

PEPTOGENIC MILK POWDER

Originated and Made Solely by **FAIRCHILD BROS. & FOSTER, New York.**