

## Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- |                                     |   |                                     |   |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/>            | Coloured covers /<br>Couverture de couleur  | <input type="checkbox"/>            | Coloured pages / Pages de couleur   |
| <input type="checkbox"/>            | Covers damaged /<br>Couverture endommagée   | <input type="checkbox"/>            | Pages damaged / Pages endommagées   |
| <input type="checkbox"/>            | Covers restored and/or laminated /<br>Couverture restaurée et/ou pelliculée   | <input type="checkbox"/>            | Pages restored and/or laminated /<br>Pages restaurées et/ou pelliculées   |
| <input type="checkbox"/>            | Cover title missing /<br>Le titre de couverture manque  | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/<br>Pages décolorées, tachetées ou piquées  |
| <input type="checkbox"/>            | Coloured maps /<br>Cartes géographiques en couleur  | <input type="checkbox"/>            | Pages detached / Pages détachées  |
| <input type="checkbox"/>            | Coloured ink (i.e. other than blue or black) /<br>Encre de couleur (i.e. autre que bleue ou noire)  | <input checked="" type="checkbox"/> | Showthrough / Transparence  |
| <input type="checkbox"/>            | Coloured plates and/or illustrations /<br>Planches et/ou illustrations en couleur   | <input checked="" type="checkbox"/> | Quality of print varies /<br>Qualité inégale de l'impression  |
| <input checked="" type="checkbox"/> | Bound with other material /<br>Relié avec d'autres documents  | <input type="checkbox"/>            | Includes supplementary materials /<br>Comprend du matériel supplémentaire   |
| <input type="checkbox"/>            | Only edition available /<br>Seule édition disponible  | <input type="checkbox"/>            | Blank leaves added during restorations may<br>appear within the text. Whenever possible, these<br>have been omitted from scanning / Il se peut que<br>certaines pages blanches ajoutées lors d'une<br>restauration apparaissent dans le texte, mais,<br>lorsque cela était possible, ces pages n'ont pas<br>été numérisées. |
| <input checked="" type="checkbox"/> | Tight binding may cause shadows or distortion<br>along interior margin / La reliure serrée peut<br>causer de l'ombre ou de la distorsion le long de la<br>marge intérieure. |                                     |   |
| <input checked="" type="checkbox"/> | Additional comments /<br>Commentaires supplémentaires:  |                                     | Continuous pagination.  |

THE

# Canadian Journal of Medical Science.

A MONTHLY JOURNAL OF BRITISH AND FOREIGN MEDICAL SCIENCE, CRITICISM, AND NEWS.

U. OGDEN, M.D.,  
EDITOR.

R. ZIMMERMAN, M.D., L.R.C.P., London  
171 Church Street Toronto, Corresponding Editor.

SUBSCRIPTION, \$3 PER ANNUM.

All Communications, Letters and Exchanges must be addressed to the Corresponding Editor.

TORONTO, OCTOBER, 1878.

## Selections: *Medicine.*

### DISEASE OF THE KIDNEY.

Mr. D. T. Hamilton showed microscopic preparations illustrative of diseases of the kidney, and, among others, that accompanying scarlet fever. In all the cases which he had examined, the change had been essentially that of an acute interstitial affection, characterised by the production of large depots of inflammatory cells between the convoluted tubules of the cortex, sometimes distributed diffusely, but much more frequently in and around the glomeruli themselves. The lesion, which was most typical, corresponded to what has been described by Klebs as "glomerulo-nephritis." In one instance, the appearances, both to the naked eye and microscopically, were quite characteristic. The organs were taken from a child who had suffered from postscarlatinal dropsy, and died with uræmic symptoms. They were about twice the natural size; the capsule was non-adherent, and, on stripping it off, an extremely pale yellow mottled surface was left, with, here and there, congested venous radicles. On cutting into the organ, the cortex was found to be enormously enlarged, of a pale yellow colour, and had a mottled appearance very much like, at first sight, the mottling seen in parenchymatous nephritis. On closer inspection, however, the pale spots producing the mottling were seen to be rounded, and corresponded to the situation of the Malpighian bodies. The microscopic examination confirmed this opinion. The first thing that seemed to take place was a proliferation of the connective tissue nuclei within the

Malpighian tuft, giving rise to great constriction of its blood-vessels. The Malpighian capsule then participated in the same process, becoming much thickened. Finally, for a short distance around the Malpighian body, there was very considerable inflammatory exudation of a similar nature, but limited to this neighbourhood. The epithelium in most of the convoluted tubules seemed comparatively normal. There was no blocking up of the tubules, and it was only here and there the epithelium appeared to be at all fatty. The lesion was entirely different from that met with in acute tubular nephritis, any alteration which might exist in the epithelium of the tubes being undoubtedly secondary to the much more evident and much further developed acute interstitial change. The medulla, further, was deeply congested, apparently from the obstruction to the circulation in the Malpighian tufts. The lesion seemed to be a very fatal one, and was usually accompanied by coma and convulsions. In other cases of scarlet fever which Mr. Hamilton had examined, the lesion was always markedly interstitial, affecting the cortex chiefly, and characterised by the deposition of inflammatory material between the convoluted tubules. In those cases where there was a tendency to resolution, it was apparently brought about by the inflammatory cells becoming fatty, instead of organizing; they broke down after a time, and were absorbed. The other specimens were illustrative of different forms of Bright's disease, with more special reference to chronic interstitial nephritis, which, in all respects, was a truly inflammatory process, and similar in its different aspects to

like affections in the liver and lung, although by no means necessarily accompanied by them. Preparations from a case of pyelo-nephritis were also exhibited, showing a complete infiltration of the organ, with putrefactive organisms of the micrococcus variety. The affection presented exactly the same features as a diphtheritic mucous membrane, and undoubtedly was dependent on the same cause, namely, the introduction of some septic material into an organ previously weakened by disease. The beginning of these cases was usually a catarrh of the whole genito-urinary tract, following the passage of the catheter. There could be little doubt that this latter was the means by which the septic virus was introduced. The subsequent course of the disease consisted in the formation of a diphtheritic surface in the bladder, ureters, and kidneys themselves. The introduction of the catheter into a healthy bladder had evidently no effect; it was specially where there had been an old standing cystitis that it was so extremely dangerous.

**TREATMENT OF GLANDULAR SORE-THROAT.**—Glandular sore-throat, by which I mean catarrhal congestion or inflammation in and around the glandulæ of the mucous membrane of the pharynx and larynx, is a very tedious and troublesome affection. It has been known as dysphonia clericorum; it is, in fact, the chronic sore-throat to which persons are liable who use their voice extensively, especially in large rooms or in the open air. I desire to draw attention to the usefulness of the topical application of borax in its treatment. I order a saturated aqueous solution, which the patient applies to his throat by the aid of Corbyn's throat-spray. The spray should be employed for several minutes thrice or more frequently daily, and midway between meals. If the larynx be much implicated, the patient should inspire deeply while the spray is playing upon his throat. I have lately found this very simple method of treatment of striking service. The cure may be expedited by the application of astringent solutions to the pharynx and larynx by means of suitable brushes. When there is much secretion, extract of eucalyptus is a good local astringent, which may be used in the form of lozenge. Half a dozen of Corbyn's or of Cooper's lozenges may be sucked slowly during the day.—JAMES SAWYER, M.D., LOND., M.R.C.P.

From *L'Union Médicale*.

## LOCAL TEMPERATURE IN PLEURISY.

At the meeting of the *Académie de Médecine* on 30th of April, M. Peter communicated an account of his researches upon local morbid temperatures. Following is a *resumé* of what M. Peter has observed:

1st. On the side of the pleurisy, the parietal temperature is always more elevated than the mean parietal temperature, which is about 35.8 (96.6). The morbid super-elevation or local hyperthermy is from about  $\frac{1}{2}$  of a degree to 1,  $1\frac{1}{2}$  or 2 degrees, and may even exceed this figure and reach 40 degrees (104.0).

2nd. The elevation of temperature increases as the effusion, and this hyperthermy may reach  $2\frac{1}{2}$  to 3 degrees ( $5^{\circ}\frac{1}{2}$ — $6^{\circ}\frac{3}{4}$ ).

3rd. The elevation of parietal temperature decreases during the stationary period of the effusion, *i.e.*, when secretion is no longer going on; but, in general, the parietal temperature of the pleuritic side still exceeds by  $\frac{1}{8}$ ths to  $\frac{1}{4}$ ths ( $1\frac{1}{8}$ — $3\frac{3}{8}$ ) of a degree, that of the opposite wall, or of the sound side.

4th. Pleurisy does not elevate the parietal temperature of the side alone on which it occurs, it also elevates that of the opposite side, but the parietal temperature of the affected side is always more elevated (by some tenths of a degree or even one degree and more) than the parietal temperature of the sound side.

5th. The parietal temperature decreases little by little when the effusion is spontaneously reabsorbed, remaining, however, superior (generally by several tenths of a degree) to the parietal temperature of the sound side, and preserves for rather a long time this temperature higher than that of the sound side and than the normal state. This temporary persistence of the local hyperthermy explains the possibility of relapse of the disease.

6th. In cases of pleurisy without effusion, the local hyperthermy is less elevated than in pleurisy with effusion, and the return to the normal temperature occurs more rapidly.

7th. The absolute elevation of the local temperature of the diseased side is greater than the absolute elevation of the axillary temperature; this local hyperthermy precedes the axillary by

perthermy. Two facts which demonstrate the predominant influence of the morbid pleuritic process on the general state, or at least on the general temperature.

All that precedes applies to pleurisy left intact or untapped. M. Peter afterwards states the result of his researches in tapped pleurisy. He arrives at these conclusions:—

That the local hyperthermy, subsequent to puncture, in pleurisy as in ascites, is the consequence of the hyperæmia *à vacuo*.

That, in cases of pleurisy, this, altogether mechanical, hyperæmia is necessarily added to the anterior phlegmatic hyperæmia, against which the puncture has been absolutely devoided of curative effect.

That thus we have two hyperæmias in place of one; that there hence necessarily results an increase of tension in the vessels of the still inflamed pleura.

That thus the fluid effused *de novo* may be richer in leucocytes and in red blood corpuscles; that the possible purulent transformation of the renewed effusion inevitably occurs in certain cases where the tapping has been done during the very febrile stage of the pleurisy.

That thus this accumulation of hyperæmias, the sudden return of blood into the pleural cavity, aggravated by the local hyperthermy, explain the syncope, the pulmonary congestion, the subsequent albuminous expectoration, the pain, the oppression sometimes amounting to suffocation, observed in those cases of sudden depletion, that is to say, of sudden hyperæmia by evacuation, positively demonstrated in his researches on local hyperthermy.

#### TREATMENT OF GLANDULAR ENGORGEMENTS.

—Following the example of Nélaton, Dr. Quinart, a French surgeon, counsels the application of blisters not only on enlarged glands, but on those in which pus had already formed; and he says that by this method he has succeeded in obtaining the resolution of inflamed glands which have already contained many ounces of pus. When the perforation of the skin is imminent, he punctures the tumour at its most depending part, and as soon as the pus has been discharged he covers it with a blister which is extended to a margin beyond its limits. The next day the blistered surface is dressed with mercurial ointment, and a new blister is applied as soon as the first surface begins to dry up.

## Surgery.

### ON THE TREATMENT OF ENLARGED PROSTATE.

BY WASHINGTON L. ATLEE, M.D.

(Read before the Philadelphia County Medical Society, January 23rd, 1878.)

One of the most troublesome, annoying, and distressing diseases that I have been called upon to treat during a long professional career, and one whose treatment until recently has been most unsatisfactory, has been Enlargement of the Prostate. As this has been the universal experience of the profession, I need not collate and record the past history of the treatment of this malady. So far as a reduction of the size of the gland is concerned, it has been an entire failure. The mechanical obstruction to micturition was considered to be a permanent difficulty, and required mechanical means to overcome it.

Neither need I lengthen this paper by detailing the symptoms of this disease, as every member of this Society must be too familiar with them.

I wish merely to call your attention to a few anatomical, physiological, and therapeutical facts, which led me to institute a rational practice in the treatment of enlarged prostate, and which, I am happy to say, has proved highly satisfactory, and has surprised me in its results. My experience has now extended over several years, and although the success of the practice is, perhaps, not what many could wish, yet it accomplishes results heretofore unknown.

“The prostate is essentially a muscular body, consisting of circular or orbicular involuntary fibres, with one large central hole for the passage of the urethra, and another smaller oblique opening, directed upward below the former, for the transmission of the common ejaculatory seminal ducts to the central urinary canal. . . Its circular fibres are directly continuous behind, without any separation, with the circular fibres of the bladder.” *Ellis*. “The prostate is thus essentially a circular involuntary sphincter to the neck of the bladder, and expeller of the seminal fluid; but although it contains many mucous glands and follicles, intermixed with muscular fibres, it is by no means entitled to

the name of *gland*. It contains, further, a small vesicle or uricle, at the mouth of which the ejaculatory ducts open, and which is believed to be the male homologue of the female uterus." *Dewitt*.

Besides the involuntary muscular tissue which enters into the composition of the prostate itself, the vessels of the gland have also in their coats the unstriped or involuntary muscular fibre. The same exists in the coats of the bladder in a very marked degree.

These involuntary muscular fibres are more or less extensible, and, when normally stretched, have an organic tendency to contract. This we see in the uterus, in the bladder, and in the diastole of the vascular system.

Now, these are the anatomical and physiological data on which I propose to base my treatment of enlarged prostate.

Let us further inquire into the pathological condition of this enlarged organ, and its consequent derangements:—

"The affection consists in a hypertrophy or enlargement of the natural muscular structure, and incidentally of the glandular. It may affect the whole organ, especially the lateral lobes, pretty uniformly, in which case the prostatic portion of the urethra is greatly lengthened; or it may affect one side more than the other, in which case the canal will be twisted; or it may affect the posterior median portion, which lies between the ejaculatory ducts, enlarging it into what is commonly called the *middle or third lobe*. . . Hypertrophy or derangement of the muscular fibres at and near the *trigone* may produce a transverse bar at the neck of the bladder. The enlargement, further, may be due to an increase of the organ generally; or to the development of one or many masses of fibrous tumour, exactly similar in structure to those connective masses of muscular fibre which are developed in the womb, and are commonly known as fibrous tumour." *Dewitt*.

It is well known that in consequence of this enlargement of the prostate the accumulation of urine becomes excessive, the obstruction to its passage becomes serious, the coats of the bladder become enfeebled and semi-paralyzed, irritating deposits occur that are never voluntarily expelled, and that the catheter is the usual and only resource. Anything, therefore,

which is calculated to diminish the size of the prostate and increase the contractile power of the bladder will meet all the indications required.

Have we any agent in the *materia medica* possessing the power to act upon unstriped muscular fibre and cause it to contract? It is settled now, beyond contradiction, that we have such an agent in *ergot*, and that in all cases of relaxed or stretched involuntary muscular fibre this medicine will meet the requirements. Witness, for instance, its action upon the enlarged uterus, the distended bladder, in hæmorrhages, in congestion of the capillaries, etc. It is calculated not only to contract the muscular fibre of the prostate, but also its capillary vessels primarily, and also secondarily, as a consequence of muscular contraction, and thus diminish the size as well as the nutrition of the gland. It is likely to accomplish this not only in mere hypertrophy, but also in enlargement from myomatous growths, in the same way as it does in fibroids of the uterus. At the same time that the size of the organ would be lessened and the mechanical obstruction be removed, the power of the bladder would be augmented by the same agent, and the urine is thus expelled without the aid of the catheter.

I may reduce these views to the three following propositions:—

1. That the prostate and its vessels are possessed of unstriped muscular fibre.
2. That the bladder is a hollow organ, with an involuntary muscular coat.
3. That *ergot* will contract unstriped or involuntary muscular tissue, as it does in the uterus.

Therefore, as a corollary, *ergot* ought to be a remedy for enlarged prostate and its effects.

This was the theory on which I based the practice, and whether the rationale is correct or not, my experience in the use of *ergot* in such cases had been most satisfactory. Several patients over sixty years of age have been treated with *ergot*, and have been able to lay aside the catheter after having been the victims of its daily use. When called to a case of retention from enlarged prostate, my rule is first to relieve the bladder by means of the catheter, and follow this immediately by ordering twenty drops of

the fluid extract of ergot every four hours, until the patient gets entire control over his bladder. Until this is accomplished, I continue to relieve him with the catheter every twelve hours. As his power of urination is restored I diminish the frequency of the medicine, and gradually end in giving a dose every night. A gentleman who died last month, at the age of ninety-two, was exceedingly ill in August, 1872, in consequence of retention of urine from enlarged prostate, and had to be regularly catheterized for relief. He was placed upon the above treatment, and in a few days was able to do without his catheter. His urinary organs were kept in a good condition by taking a dose of ergot every night, and he enjoyed much better health in consequence, and died recently of old age. I mention this case in particular, because a post-mortem examination proved to me that the prostate had been diminished in size by the treatment.

In these cases it is very common for sedimentary deposits to accumulate in the bladder, which becomes a source of irritation and discomfort, and if the organ should fail to expel its contents entirely, it is best every few days to introduce the catheter to remove them.—*New Orleans Medical and Surgical Journal*.

**DISLOCATION OF MUSCLES** (*The British Medical Journal*, July 13, 1878).—Mr. George W. Callender, after detailing some interesting cases of this injury, concludes as follows: "If, then, you come across a case in which sudden or unusual movements of the body have been followed by pain,—local in its character,—made worse by certain movements, or preventing certain movements, and especially if such pain be referred to the site of muscular digitations about the spine or to that of long comparatively slender muscles, as in the forearm, it is at least worth your while to try the simple measures which we may use for reducing the dislocation of a muscle. First, guided by the pain, decided as to the muscle or digitation of a muscle probably the seat of the trouble. Secondly, relax this muscle so far as you can. Thirdly, by firm manipulation, such as by rubbing with the hand or by kneading with the thumb, endeavour to replace it. Fourthly, if this fail, make pressure over the part whilst you bring the muscles into action or put it on the stretch; and, if the less painful measures have failed, it is almost sure to bring the muscles into position. All this has to be done without the employment of an anæsthetic. We need guidance from the patient; we require action in the muscle. Some amount of pain is inseparable from the treatment of these dislocations."

### FOREIGN BODY IN THE SIGMOID FLEXURE: SUCCESSFUL REMOVAL.

A rare and curious case is related by Dr. Studsgaard of the Communal Hospital in Copenhagen, in a recent number of the *Hospitals-Tidende*. A man, aged 35, introduced into the rectum, with the open end uppermost, a preserve-bottle nearly seven inches long, for the purpose of stopping a diarrhœa. The next morning, he complained of pain in the abdomen; chloroform was given, and the bottle, which could before this be felt in the rectum, passed higher up, and he was brought to the hospital (January 10th). The bottle could be felt through the abdominal wall, lying in the middle line, with the bottom close to the horizontal ramus of the pubic bone. In the afternoon, he was deeply narcotised, and the posterior linear rectotomy was performed, and an attempt was made to reach the bottle, but without success. Abdominal section was therefore performed, under antiseptic precautions, in the linea alba. An incision having been carried four inches downwards from the umbilicus, a loop of intestine, apparently a portion of the sigmoid flexure, was protruded with the neck of the bottle. The bowel was then divided over the mouth of the bottle and a little way down the neck, and removal was effected slowly. The neighbouring parts were protected by sponges and compresses from the escape of feces; and, after the bowel had been cleaned, twelve or fourteen catgut sutures were applied to it, each being, for safety, tied with three knots. The bowel having been replaced, the wound in the abdominal wall was untied by eight silk sutures. The operation lasted an hour. Recovery was slow, and the prognosis was for a time doubtful in consequence of local peritonitis and the formation of abscesses, which opened partly through the incision in the abdominal wall and partly through the rectum; the patient was, however, discharged quite cured on April 16th,—less than fourteen weeks after the operation. The bottle was 17 centimètres (5.8 inches) long, 5 centimètres (2 inches) in diameter at the lower end, and 3 centimètres (1.2 inches) at the upper end. In commenting on this case, Dr. Studsgaard refers to three others of a similar character; one related by Ogle, in which recovery followed spontaneous discharge of the foreign body (a stick); one by Closmadeuc, where the patient died of peritonitis, without operation; and one in which laparo-enterotomy was successfully performed in 1849 by Reali of Orvieto.

## Midwifery.

### ON DIGITAL DILATATION OF THE OS IN LABOUR.

BY W. STEPHENSON, M.D., F.R.C.S.E.

When in normal labour the membranes are ruptured, whilst the os is not obliterated, the posterior part of the head clears the os first, the anterior being still held back by the rest of the cervical tissue. There is a clear gain by this movement, the head is more flexed, a smaller diameter is presented, and the rotation forward of the occiput becomes easy. This is the movement we must not disturb, but if possible facilitate. In aiding labour, therefore, at this stage the support and upward pressure must be exerted only so as to push, as it were, the lip of the cervix *over the occiput*; it must never be done over the forehead. A careful diagnosis of the position of the head must be made, and the direction of the support determined accordingly. The part selected should never be the *anterior* lip, as described by our authors. In the first position of the head the part corresponds with that opposite the left thyroid foramen, and comes readily to the fingers. In the second position it is opposite the right thyroid foramen. In the occipito-posterior position the treatment is carried out less readily, but can still be accomplished, the direction of the force being towards the corresponding iliosacral synchondrosis. The success of the manœuvre is dependent upon aiding the occiput to descend first. If then it be practised at haphazard, and always in the same direction, failure is certain to follow in many cases. By its improper use the anterior portion of the head may be enabled to lead, and the normal mechanism is disturbed. If the pressure be exerted at the side of the head, as it will be if directed immediately behind the pubes, dilatation does not take place, and the head is really held back. The pressure must be exerted only during a pain, and the patient be directed to bear well down. The efficiency of the uterine action is thereby greatly increased.

This method of aiding labour need not be confined to protracted cases; gentle and properly directed support is of advantage in all. The

force employed need not be more than is represented by the word support. A due amount of chin-flexion is secured, and upon this depends the facility of the subsequent rotation of the occiput. More especially is this of importance in the occipito-posterior positions; if attention be paid to secure early and full flexion of the chin no difficulty will be experienced in the rotation. Before it is possible in the latter cases to slip the cervix over the occiput an initial degree of chin-flexion is necessary. If the forepart of the head is on a lower level the occiput is beyond the range of the fingers, and the manœuvre is impossible. Aid may then be extended by pushing the forehead upwards during the interval of the pains and retaining it as far as possible in that position by pressure during the contraction of the uterine walls, and repeating this manœuvre until the posterior fontanelle can be felt.

Greater precision may be given to our opinions regarding the use of digital dilatation by the more recent advances of our knowledge regarding the changes which occur in the body and cervix of the uterus during the first stage of labour through the researches of Litzmann, Bandl, Braune, and Luschka. The lower uterine segment of the body of the uterus and the tissues of the cervix both undergo dilatation; but in the former the transverse expansion is associated with marked shrinking or shortening of its longitudinal diameter, whilst the latter is greatly stretched and lengthened. The division between uterine segment and the cervix is what is known as the internal os, whilst the external os is what we recognise as the os of ordinary obstetric language. The distance between these, as shown by Braune's frozen section, may be as much as four inches. In normal labour the dilatation of the internal and external os go on simultaneously, the former slightly in advance of the latter. This relation, however, may be deranged. The internal os may be fully dilated whilst the external is very small. We cannot, however, get any degree of dilatation of the external os without the previous opening of the internal. The opinion which I would advance is this: that digital dilatation can exert a beneficial action only upon the cervical tissue, we cannot by this

means aid the expansion of the lower segment of the uterine walls. So long, therefore, as delay is associated with incomplete dilatation of the internal os digital interference should not be employed ; but when delay is due to want of dilatation of the external os whilst the expansion and retraction of the internal has well advanced, we may expect benefit from artificial means. The degree of dilatation of the internal os I believe we can estimate by the condition of the upper portion of the vagina. When the former is complete the latter also is fully expanded and drawn upwards. If the external os has not been simultaneously dilated, the cervical tissue will be felt stretching across like a diaphragm, with a varying degree of thickness and resistance. If, however, the internal os be not fully dilated the upper portion of the vagina will be found lax and attached near to the os, or curving in towards it. Digital dilatation will then have no beneficial effect unless it be by stimulating the uterine contraction. But when the diaphragm is developed it will yield to judicious gentle manipulation ; if the os be small by a rotatory action of the fingers ; when once half-way dilated, and the head in actual contact, by support and gentle pressure of the lip in the direction of the occiput. A clear conviction should also be established that the cause of delay is in the cervical tissue only, and not due to want of rupture of the membranes, or to malposition of the head, to abnormal direction of the uterine axis, or to narrowing of the pelvic brim. Many cases of tardy dilatation are due to these causes, and of course cannot be aided by artificial dilatation.

By care in diagnosis the time when digital dilatation may be employed with advantage can be readily determined, and if practised as I have indicated, with due regard to the mechanism of labour, it may be employed with precision and safety. It affords material aid, increases the effective character of the pains, insures and facilitates the normal movements of the head, and if properly employed is free from all danger to the patient. It is a proceeding, therefore, which merits recognition at the hands of obstetricians, more than it has hitherto received. By extending our aid in the first of labour by watching and furthering the normal mechanism, I am confident that we may very materially lessen the frequency with which in recent times instrumental interference is deemed necessary.—*The Obstetrical Journal.*

## ON SOME OF THE CHANGES IN THE UTERUS RESULTING FROM GESTATION, AND ON THEIR VALUE IN THE DIAGNOSIS OF PARITY.

BY JOHN WILLIAMS, M.D.

The author, after referring to the Wainwright murder, said that cases of a similar nature might unfortunately arise in which the question, "Has a given uterus taken part in the processes of gestation and parturition?" would become one of the greatest moment. The conditions which it was his intention to describe in the present paper were those which remained after the process of involution was over—say, the eighth week after delivery. The characters which usually supplied the data for the formation of an opinion on the question in view were not reliable, as any one of them might arise from other causes than pregnancy. The only certain marks, as he hoped to show, were to be found in the bloodvessels of the uterine wall. The arteries of the uterus underwent enlargement during gestation as well as the muscular elements of the organ, their calibre becoming increased, and their walls hypertrophied. After parturition their calibre became reduced owing to the contraction of the uterus, and the substance of their coats probably diminished ; but they appeared to be affected by the retrograde process in a less degree than the tissues of the uterine walls generally. In a section of a uterus which had undergone involution, the arteries projected beyond the surrounding surface, presented thick yellowish-white walls, more opaque than the tissues around, and their canals remained patent. On microscopical examination, the connective tissue around the arteries was found to be increased in quantity, the arterial muscular coat was greatly hypertrophied, and the inner wall considerably thickened. The vessels appeared, moreover, more numerous than in the virgin organ. To estimate the exact value of these conditions in the diagnosis of the existence of previous pregnancy, three questions should be answered : (1) Was the condition described present in all uteri which had been gravid? (2) Was it a permanent condition? (3) Was it simulated by disease? Setting aside such rare and exceptional cases as those in which the uterus became



reduced after parturition to a mere membranous sac, the author had found the characters he had described in all the uteri which had born children, which he had examined during the last five years. He had found them as long as fifteen years after the last pregnancy, and eight years after the cessation of menstruation, and under such circumstances their pregnancy, he thought, might be fairly inferred. He had never seen the appearances brought about by disease, and neither he, nor as far as he was aware, any other observer, had found them in the virgin organ. It must remain for further experience to decide the question whether similar appearances could be produced by the presence of a fibroid or other tumour. It could not indeed at present be asserted that the state of the uterine arteries described furnished positive proof of parity, but at the same time it must be admitted that it afforded the strongest presumptive evidence we possessed of that condition, while further research might show that it amounted to absolute proof of previous gestation. Passing on to the veins of sinuses of the uterus, the author said that these were all enlarged during gestation, but the enlargement was far more marked in that part of the wall to which the placenta was attached. Friedländer had investigated the condition of this part during the last two months of pregnancy, and found that at the eighth month many of the venous sinuses were surrounded by a wall 0.04 mm. in thickness; this wall contained abundant tolerably large nucleated cells in a clear homogeneous matrix, which became distinctly coloured by carmine solution. The contents of the sinus appeared to consist, not only of blood corpuscles, but also of a greater or less number of dark granular cells, containing two to five nuclei, one of which had the appearance of a vacuole. These, which were regarded by Friedländer as wandering cells from the decidua, at last completely filled the sinuses, and coagulation took place, the clots showing a net work of fine threads. Other sinuses, though not filled with these cells, also contained coagula at this period (eighth month). The author had only an opportunity of examining one pregnant uterus, but after delivery he had not unfrequently found clots with a network of fine

threads, though he had only rarely seen accumulation of large granular cells occupying the sinuses near the inner surface. At the end of four weeks, however, a great change had taken place. The walls of the sinuses at the placental site were much thickened, being due in part to a thin zone of connective tissue, within which was a granular glassy-looking transparent substance thrown into folds. The interior of the vessel was either entirely filled with these folds, or its centre was occupied with the organised remains of a clot, or a narrow lumen might still be left. The folded layer when torn by needles broke into particles of polygonal shape similar to some of the epithelial cells originally lining the sinus, and it appeared to be a distinct growth resulting from the proliferation of these cells. This condition had been found by the author, though somewhat indistinctly, twelve months after delivery. It might therefore be regarded as diagnostic of the previous existence of pregnancy; and when found justified a positive answer as to parity. It was true the structures described were not permanent, but they were discoverable for twelve months after parturition.

The President said that the thanks of the Society were due to Dr. Williams for his interesting paper on a subject the importance of which it was impossible to exaggerate.

Dr. Matthews Duncan expressed his sense of the extreme value of the contribution, and Dr. Playfair, while hesitating to pass any criticism upon the paper, said that he would not like the occasion to pass without bearing witness to the ease with which the changes described by Dr. Williams could be made out under the microscope. He did not doubt that when one had once had them pointed out to him, he would be able to recognise them again.

Dr. Savage asked if Dr. Williams was perfectly sure that what he had described might be taken as a precise criterion of parity.

Dr. Williams stated in reply that he regarded the appearances found in the sinuses of the uterine wall at the placental site as inimitable, and therefore diagnostic of previous pregnancy. With regard to the value of the condition of the arteries which had been described, further research was necessary before it could be estimated at its proper value.—*Obstetrical Journal.*

## Therapeutic Notes.

### CLINICAL LECTURE ON SOME MEDICAL USES OF CARBOLIC ACID.

*Delivered at the Norfolk and Norwich Hospital.*

BY PETER EADE, M. D. LOND., F.R.C.P.,  
*Physician to the Hospital.*

This carbolic acid (or phenic acid, as it was formerly called) is, as you know, one of the products derived from the oil of coal-tar, and has a chemical composition of  $C_{12}H_6O + HO$ . It is met with either as an oily liquid or in the crystalline form, and has an acrid burning taste, and a strong odour closely resembling that of creasote. It is slightly volatile, and is readily soluble in water, oil, or glycerine. One of its most valuable properties is that of preventing the decomposition of animal tissue—a property which it possesses in common with salicylic, boracic, chromic, and other acids and substances; but it is more generally useful than either of these, because it is not only more certain in its action, but may be employed in a more concentrated form without risk of injuring the parts or tissues to which it is applied.

The efficacy of the acid in checking diseased or septic action appears to depend upon its being brought into absolute contact with the part to be acted on, and it would seem to exert no beneficial effect beyond the exact limit of the part so touched.

The diseases in which I have found the carbolic acid especially usefully are—1. All that class of local festering, pustulating diseases of the skin which are at once so common and so difficult to cure. They include all kinds of pustules, boils, and carbuncles; sycosis, pustular acne, and festering ringworm. 2. Such strumous sores (especially of the neck) as come under the care of the physician. 3. Excoriations of the os and canal of the cervix uteri. 4. Phthisis in its second and third stages, and cases of chronic bronchitis accompanied with more or less purulent expectoration.

I have said that in order to be effective the carbolic acid must be brought into contact with the part to be acted on, and I doubt not that in many cases where it has been found ineffec-

tive the failure has been due to a neglect to ensure this contact. In the pustulating and suppurating diseases of the skin I have mentioned it is never sufficient to apply the solution of the acid, of whatever strength, upon or to the outside of the skin. It must always be introduced into the interior of the sore or pustule itself, and so as to come sufficiently in contact with every part of the diseased surface. Of its efficacy thus applied I have now had a very considerable experience, and so certain am I of its curative powers in these cases that I state with the utmost confidence that all cases of boils and carbuncles in their earlier stages can be absolutely aborted and cured, whilst even in later stages their further increase can be almost surely prevented. For this purpose a very strong glycerine solution should be employed, and it is best conveyed into the interior of the pustule, boil, or suppurating spot, by a new quill pen dipped into the solution, and introduced by a rotatory motion through its apex, where a sufficient aperture will generally be found. In carbuncles, which are necessarily larger, and often have several openings, several such introductions may be necessary, or, at a later period, threads of lint soaked in the fluid, may be passed with a probe well into all the sieve-like openings. Occasionally, as when the mass is large and solid, a watery solution of the acid may be injected with a hypodermic syringe into various parts of the hardened growth. The same plan of treatment is often quite effective in cases of sycosis, pustular acne, and festering ringworm. And it is doubtless so because it destroys germs which, living in the involutions of the skin, are the essential cause of these various diseases. In the case of acne, and of boils and carbuncles, the essential dependence of these diseases upon vegetable germs has scarcely been demonstrated,\* but their mode of

\* Mr. Startin has written that in a few cases of boils and carbuncles he has found cryptogamic vegetation like that seen in sycosis; and I have recently had a case of small carbuncle, in which, amongst the masses of plastic and other cells obtained from its interior, I observed, on pressure, a cloud of small rounded granules suddenly to diffuse themselves in the fluid in the field of the microscope, which were undistinguishable from those of the Achorion Schonleinii.

origin and growth, their whole life-history, and their curability by such local means alone, go far to prove that they, like other skin diseases, are due to the development in the cutaneous textures or glands of parasitic growth. As, however, I have already published in the medical journals several papers on this subject, I will not longer dwell upon it now. Not long ago it was stated that the development of the vaccine vesicle could be prevented by the application of carbolic acid to the vaccinated sore. If this is so, it would seem highly probable that the same kind of destructive influence would be exerted upon the small-pox eruption if the acid were applied to the pustules before or during the process of their maturation. The process of introducing a little of the strong acid solution *into* the apex of each pimple would be tedious and disagreeable, but if effective, it might not only save much disfigurement, but possibly even life itself. Darkening of the patient's room, blackening of the face, covering up the pimples with wet clay (as practised by some savage tribes,)—all expedients for preventing the free development of the local disease,—appear to diminish its virulence somewhat, and possibly this more direct interference with the special virus might do much more to mitigate its severity. Various applications to the general surface have been tried and failed more or less completely, and Velpeau has advised the cauterisation of the individual pimples with solid nitrate of silver; but I am not aware that carbolic acid has ever been fairly thus tried, and I recommend it to your consideration when cases of this dire disease come under your notice.

2. The healing of strumous sores may be frequently much expedited by the bringing into contact with their interior or open surface a sufficiently strong solution of carbolic acid; and old stationary sores will often at once begin to heal when acid is so applied. So, too, when they are first opened, their immediate healing may be sometimes brought about by injecting into them a solution of the acid, and keeping the opening closed against the admission of air. This method of treatment, on a larger scale, has been advocated by Mr. Callender in the case of spinal abscesses, and

some very successful results have been recorded.

3. In excoriation, or so-called ulceration of the neck of the uterus, the strong glycerine solution is a most valuable application, and in my hands has been far more efficacious than nitrate of silver or other usual caustics. In these cases the denudation of epithelium is, commonly, not only of the vaginal surface of the os, but it extends up along the canal of the cervix, and often (as Dr. Playfair has shown) into the cavity of the uterus itself. I have found no ill effect from applying the strong glycerine solution freely with a camel's-hair brush within the cavity of the cervix; and, indeed, it is not only well and painlessly borne, but is often very effective in promoting the healing of the "ulcerated" surface. I have thought it possible that its undoubted efficacy may be partly due to a power of destroying any bacteria or other germs living in the uterine mucus, and by their presence irritating the secreting surface, and so preventing the formation of healthy covering epithelium.

4. In cases of phthisis which have passed their earliest stage, and in which the sputum is of a muco-purulent character, you have almost daily opportunities of witnessing the efficacy of carbolic acid inhalations. In three patients now in the hospital the cough has been greatly lessened by its use, while at the same time the secretion of purulent mucus has been greatly diminished in quantity. As you have seen, we employ it in the simplest fashion. We give the patient a solution of the acid in water containing ten grains to the tablespoonful. We tell him to add this to half a pint of hot (not boiling) water in a narrow-mouthed jug surrounded by a towel or handkerchief, and then to inhale this for about ten minutes; and we order the inhalation to be repeated three, four, or five times in the twenty-four hours, according to the necessities of the case. The inhalation can of course be made through any ordinary inhaler, or it can be used with the acid in more concentrated solution, or in the form of spray; but I have found the above method not only simple and always available, but perfectly efficacious. In these cases, as in others, I believe the carbolic acid to act entirely

by its local influence. The vomica of a phthisical lung contains two elements: (a) the muco-pus already secreted, and lying more or less free in the cavity; and (b) less perfectly formed and separated mucus, still attached to the pyogenic or secreting surface. As atmospheric air laden with germs is constantly entering with the breath into these cavities, and as this animal mucus is a fertile soil for these germs to develop in, it is almost certain that such tendency to settle and multiply upon it exists; and the power of carbolic acid to prevent such life and growth would well explain its efficacy. But it is also known that carbolic acid does in some way prevent the rapid production of new pus and mucus cells, and in this way, too, some of its good influence may be exerted. But, whatever the explanation, there is no doubt that the use of carbolic acid in the form of vapour is a distinct addition to our therapeutical resources in the treatment of this disease. Many years ago tar-vapour was in much repute for the same purpose. The greater efficacy of carbolic acid is probably due partly to its purity and partly to the greater concentration in it of the active detergent principle, upon the presence of which the beneficial influence on the disease depends.

I will only detain you further to-day by mentioning one other form of medical disease in which carbolic acid is of some small help to us: I allude to those disorders of the stomach which are not only accompanied with fermentation and the flatulence induced thereby, but which show the actual presence of another form of low vegetable life. In the decomposing contents of the stomach in some of these cases may be detected by the microscope immense numbers of a small vegetable growth called *Sarcina ventriculi*. These little bodies are observed in clusters of adherent cells arranged in squares, each square containing four, or some multiple of this number, and they often present an appearance which may be roughly likened to that of corded woolpacks. In cases of this singular disease, some advantage is occasionally derived from the administration by the mouth of carbolic acid in doses of one or two grains; but as the presence of these bodies is usually, unfortunately, only the result and

accompaniment of other and more serious change, its efficacy is generally proportionately slight.

I may mention to you that when carbolic acid is very freely applied to the surface of the body for any length of time, the urine is apt to become stained of a dark or blackish colour. But although this symptom is one which at once challenges attention, it appears to be of no real or serious importance, and at once disappears on the withdrawal of the producing cause.—*London Lancet*.

---

HINTS FOR THE ADMINISTRATION OF ETHER-VAPOUR.—Dr. Cheever, in the course of some clinical remarks published in the *Boston Medical and Surgical Journal*, gives some useful hints on the management of the administration of ether, which are particularly valuable as coming from a medical centre in which ether has long been regarded as the anæsthetic *par excellence*. "When the head of an etherised patient is allowed to fall too low, you will invariably find that trouble begins. The tongue naturally gravitates backwards, because the patient has no muscular control over it. Whenever this happens, stertorous breathing will at once be heard. It will then be necessary simply to raise the patient's head. The tongue comes forward, and respiration again becomes easy. There is another condition in which an etherised patient becomes tetanic. He has opisthotonos, draws himself forcibly and convulsively backward, and his movements are spasmodic. In such a case, the need is air, and the ether should be withdrawn. If he throw himself back with great force, turn him on his side, and the condition will pass off. Our patient is nauseated. After he has vomited, he will go to sleep easily."

---

TURPENTINE EXTERNALLY IN VARIOLA.—Dr. Farr of Lambeth claims that turpentine relieves smarting or irritation, corrects unpleasant odours, arrests pustulation, and modifies, and often entirely prevents pitting. It also tends to prevent the spread of infection. Dr. Farr uses 1 part of turpentine to 3 or 4 of olive oil, applied by means of a feather, night and morning.

## AMENORRHOEA.

Powdered rue . . . . .	5 centigrammes.
“ savin . . . . .	5 “
“ ergot . . . . .	5 “
“ aloes . . . . .	25 “

ft. pil.

Of these, 3 are taken the 1st day; 6 the 2nd; and 9 the 3rd day, always in three doses. Foot baths, sitz baths, and fumigations are ordered before beginning the pills, and leeches are applied to the labia while the pills are being taken.

## FOR PRICKLY HEAT.

R. Sulphur sublimat . . . . .	80
Magnesiæ oxid . . . . .	15
Zinci oxidi . . . . .	5

M.

Place the powder on a plate and press a wet sponge on it. Rub the body with the sponge for fifteen minutes. Wash the parts clear of adhering particles.

## FOR ECZEMA.

R. Acid salicyl. . . . .	gr. 40
Tinct Benzoin. . . . .	ʒss.
Alcohol . . . . .	
Glycerinæ . . . . .	aa q.s. ad. solut.
Unguent emol. . . . .	ʒi.

M.

Rub in gently twice or thrice a day, after washing with soap and water.

## FOR TAPEWORM.

R. Flor kouso . . . . .	ʒvi.
Kamela . . . . .	ʒiv.

M.

Take half at 8 a.m., at 9 a dose of salts, and at 10 the other half.

**RHUS POISONING.**—Dr. D. J. Parsons in the *Pharmacist* claims that tinct. sanguinaria applied locally 4 times in quick succession is a specific. It must be spread pretty thick by means of a brush or feather.

**GASTRIC ULCER.**—Hertka of Buda treated a severe case successfully by chloral, given in 5 grain doses, well diluted, every two hours, so that 30 grains were given daily.

The combination of an opiate with quinia insures an earlier and more complete cure of malarial fevers, and less quinia is required.

## Original Communications.

## INFANTS' FOOD.

BY ADAM H. WRIGHT, M.A., M.B., M.R.C.S., ENG.

[Read before the Toronto Medical Society July 25th, 1878.]

My aim in this paper will be to describe briefly the different kinds of food given to infants and the proper modes of administration. According to the ordinary acceptation, infancy includes the period extending from birth to the age of two and a-half years, *i. e.*, until the completion of first dentition. Statistics show an alarming mortality among infants. Without going into minute details, I may say that those who have investigated the subject most carefully, tell us, that of all infants born alive in the civilized world, from one-quarter to one half die under the age of five years. One of the main causes of this mortality, especially among the poorer classes, is unsuitable diet, combined with irregular and improper methods of administering the food. I have often been struck with the appearance of children brought to hospitals for treatment, with their little old faces, and emaciated bodies, tugging away at some dirty-looking mixtures in bottles, and as a matter of curiosity, enquired from their mothers concerning the character of their food, and have found the varieties innumerable. In the majority of young infants three months old, they contained starchy foods, very commonly nothing but flour and water. I once heard Mr. Jonathan Hutchinson, when examining an infant about twenty months old, ask the mother what she fed the child; and on receiving the very common reply, "He eats the same as we do, sir," he (Mr. Hutchinson) remarked to those standing near, "that very often means beer and red herrings." Among the better classes, *i. e.*, those able to procure ordinary necessaries for their families, there is a better condition of things, but as far as my experience goes, even among them, regular feeding with proper food is the exception rather than the rule.

Infancy is a period of comparatively rapid growth and development. The mouth, in its formation, is well adapted for suckling immediately after birth. The stomach is small, and

somewhat resembles the large intestines in form. The intestines are relatively smaller and shorter than in the adult, and their peristaltic actions are more rapid, so that excrementitious matters are quickly evacuated. The mucous membrane of the whole alimentary canal is thick, soft, very sensitive, and easily irritated by improper food. The saliva commences to be secreted in the third month, but at that time contains little or none of the active principle necessary for the proper digestion of starchy foods. According to Archambault and Chambers, the infant requires, during the first day after birth, 3 to 4 drs., during second day 4 oz., third day 10 to 11 oz., fourth and fifth day about 1 pint. The amount required gradually increases until the sixth month, when 2 or 2½ pints are required. Dr. Wm. Henry Cumming tells us, the infant after three months requires from 1½ to 2 qrts., but I think few will agree with him. It is almost universally admitted that the mother's milk is the proper food for young infants. There are, however, exceptions; the most remarkable one, so far as I know, being the famous chemist, Van Helmont, who called milk "brutes' food," and proposed instead, as more suitable nourishment, "bread boiled in beer and honey." The healthy mother's milk appears to be perfectly adapted as to quantity and quality for all the requirements of the infant during the first months. The colostrum at first present acts as a purgative, carrying off the meconium. Although the secretion of milk is not fully established before the third day, yet there is generally a sufficient quantity for the child. The milk contains aqueous, saccharine, albuminous, and oleaginous principles. As compared with cow's milk, it contains more sugar, but less butter, casein, and salts. In addition, human milk is more alkaline. The fatty constituents are more finely emulsified. The casein is neutral, or slightly alkaline, easily soluble in water, coagulates in loose, fine flakes, and is digested quickly; while cow casein has an acid reaction, is insoluble in water, and coagulates in large, adhesive lumps. For these reasons, no artificial preparation of cow's milk (and the same may be said of other animals) can be made so digestible as human milk. The character of this milk is subject to various

modifications. It may be scanty, or though sufficient in quantity, too watery. The colostrum, which should disappear between the third and eighth day, may not do so for several weeks, or it may be affected by errors in diet, nervous impressions, acute diseases, menstruation, or pregnancy. It is the duty of the physician to observe carefully these changes, and, when possible, to apply the remedy for them. Dr. Cumming says that nine-tenths of the mothers of the United States are unable fully to supply their infants with milk. He may be led to this conclusion by the high estimate of the amount required by an infant three months old—*i. e.*, 1½ to 2 quarts. Drs. Muir and Whitehead, of Manchester, from an examination of 952 mothers in the Children's Hospital of that city, found that nearly half had sufficient food for six months after delivery, and some for two years. In this country I think that half the mothers, at least, have a sufficiency. Dr. J. Lewis Smith thinks that the appearance of the menses during lactation does not generally injure the milk, unless excessive in quantity, though it may sometimes, but pregnancy is more injurious, because then the milk is more likely to contain a considerable quantity of the viscid substance found in colostrum.

When the mother's milk is insufficient or absent, we have to supply the deficiency by procuring a wet-nurse, or by artificial feeding. Statistics of hospitals for foundlings show a great difference in mortality between the wet and dry-nursed. In Lyons and Parthenay, where the children are wet-nursed, the death-rates were 33 and 35 per cent.; while in Paris, Rheims, and Aix, where the children are dry-nursed, the death-rates were 50, 63, and 80 per cent. This shows the importance of wet-nursing; but at the same time the medical attendant should always exercise great care in his selection of a wet-nurse.

In artificial feeding cow's milk is most generally used; and our object should be to make it as nearly like the natural food as possible. For the first six weeks Eustace Smith recommends equal parts of new milk and lime-water sweetened. Sir. Wm. Jenner adds to this cream in the proportions of 2 drachms to a

half-pint, the cream preventing the lime-water from causing constipation. After six months the milk may be taken undiluted. If a curd still forms, and is vomited, add isinglass, 1 drachm to 4 ounces of milk and water. This is said to prevent the running together of the curd. If this will not answer, we are advised to try a little farinaceous food, such as Ridge's, or boiled or baked flour, which, acting mechanically, prevents the curdling. This may be true, but I am strongly opposed in young infants to the use of such food, which, according to its advocates, simply splits up the casein on the same principle as carpet-tacks would act, but must, at the same time, be a source of irritation to the whole alimentary canal.

J. Lewis Smith thinks it is preferable to take the upper third of the milk after it has stood two or three hours, because the casein, having a high specific gravity, tends to sink, and dilute it with one-third to one-half water. Dr. W. Henry Cumming, who, while in Toronto eleven years ago, published a small work on this subject, favours this method of preparing the milk; but also proposes what he considers a better method: *i. e.*, to take the latter half of the milk given by the cow, which contains what the country people call "the strippings," and is very rich, having  $\frac{5}{1000}$  of butter, while the first half has only  $\frac{1}{1000}$ . This should be diluted with  $1\frac{1}{4}$  parts of water. Dr. Eustace Smith recommends as an addition to breast milk when it is scanty, the following mixture,—

One	tablespoonful of Cream.
One	" Whey.
Two	" Hot Water.

The whey is made by adding one teaspoonful of prepared rennet to a pint of new milk.

During the last few years concentrated cow's milk, known as condensed milk, has been largely used. It is prepared by taking the milk immediately from the cow and putting it two inches deep in shallow boilers with flat bottoms, and heating by a water-bath. White sugar is added in the proportions of one ounce to the pint; and when it is reduced about four-fifths in bulk it is poured into cans, hermetically sealed, and subjected to a heat of 218° Fahrenheit. The heat destroys ferments, but has the objection that it gives it the taste of boiled milk. It is

prepared in another way by evaporating by means of a vacuum apparatus. Dr. Franz Peters says that this is better than fresh cow's milk, as it causes no digestive disturbance of any consequence; but adds that it causes deterioration of the bones. He advises the following proportions: one of condensed milk to twenty-two of water for the first three months, one part in eighteen for the next five months, and after this one part to twelve. This is rather weaker than I have been accustomed to use it. The kind known as the "Swiss Condensed Milk" is very largely used in England, as well as several parts of the continent. In New York they use mostly the American brands. Roberts, Bartholow and Porter, of New York Dispensary for Sick Children, praise it highly; and those who use it in this city are, so far as I know, very well pleased with it. For the last two years I have seen it used a great deal, and have given to my own three children; and while I cannot think it superior to fresh country milk, still, in a city, I prefer it to cow's milk as it is offered to us, especially when it is sold at three cents a quart. Even under the best of circumstances cow's milk is subject to a variety of dangers. The dishonest milkman may add various impurities too numerous to mention; and the honest man may, through carelessness or ignorance, make mistakes: such as selling the milk too soon after calving, in which case it will contain colostrum; or the milk may be contaminated by the various vessels in which it is retained up to the time of delivery; or the cows may have some disease, or bad food. Even if all these dangers are avoided, there remains the churning process to which it must be subjected in its carriage from the dairy to the consumers. Of course, condensed milk may be liable to some of the same dangers; but as those concerned in its preparation make it their especial care to avoid these sources of evil, and have a good knowledge of their business, I think the milk is less likely to suffer from adulteration and contamination. As a matter of fact, all who have observed carefully its use thus far admit that it is pure (*i. e.*, so far as I have seen or read), but, as Chambers says, "Extensive use will probably teach ingenious methods of sophistication."

The milk of other animals, such as the ass, goat, and ewe, is also used, but so seldom in this country that I need not say much about them. Asses' milk is apt to cause diarrhœa, but that may be prevented by adding a-quarter lime-water. There is an objection to goat's milk on account of the unpleasant odour it often possesses from the presence of hircic acid, but the goat has the advantage of cheapness and convenience, and may be treated as Paddy does his pig, when he makes it one of the family.

Eustace Smith recommends raw meat, beef or mutton, when other kinds of food having been tried, and being indigestible, have produced diarrhœa in children, about one year old or upwards. In preparing it for use, the meat being freed from fat and gristle, is minced and pounded in a mortar, and strained. When giving the meat he stops all other food entirely, and no fluid is allowed excepting thin barley water or something of a similar nature.

After the age of six or nine months eggs, especially the yolks, are, as a rule, digestible and nourishing.

Cod-liver-oil is often useful in strumous children, and easily digested when given in doses not greater than ten drops to infants under two years of age. The external use of oils is thought by some to be very beneficial in chronic wasting. Eustace Smith advises it to be warmed slightly and smeared over the whole body with a piece of fine sponge, after which the child is to be wrapped in flannel. Smith thinks that this, besides rendering the circulation more vigorous, promoting the action of the skin, and quieting the irritability of the nervous system, introduces a certain amount of nourishment.

I will now take up a different class of food, *i. e.*, farinaceous. It is generally conceded that starchy food is unsuitable for the young infant, and yet I have seen very few children at the age of six months who have not had more or less cornstarch or arrowroot, or something of that description. Many mothers appear to get disgusted at the monotony of feeding nothing but milk, and are quite unhappy until they get their babies' stomachs well plugged with some kind of dough, and then they wonder why

flatulence and colic should exist. Certainly they should not be blamed when they pursue this course in ignorance; but I have often seen such a plan of feeding followed after directions to the contrary had been given.

As I said before, saliva begins to be secreted during the third month. Drs. Bidder and Schmidt found that saliva collected from an infant four and a-half months old converted starch into glucose with great difficulty, and very slowly. Prof. Schiff says the active principle of saliva in man only appears at the period of first dentition, or about the sixth or seventh month. Dr. Prospero Sonsino, after noticing these results, performed experiments on certain young animals: *viz.*, the dog, cat, and rabbit, at ages from five to fourteen days, and found that the pancreatic emulsion of these animals could not transform starch into glucose, even after long contact; while the same emulsion of adult animals did so almost immediately. From these facts he thinks that in the human race the enteric and pancreatic juices in young infants have no more effect on starch than the saliva has at the same age; therefore he concludes that in young infancy there is a physiological dyspepsia, or even apepsia, for starchy matters. After the age of six or seven months farinaceous food may be given, but in small quantities at first and increasing very gradually. I can only mention a few of the various kinds of this class of food.

Liebig's food for infants is recommended by Tanner, Eustace Smith, and J. Lewis Smith, who say it is well digested even by the youngest infants. The following is the composition:

Wheaten Flour	- -	$\frac{1}{2}$ ounce.
Malt Flour	- - -	$\frac{1}{2}$ ounce.
Potas. Bicarb.	- - -	$7\frac{1}{4}$ grains.
Water	- - - -	$\frac{1}{2}$ ounce.
Cow's Milk	- - -	5 ounces.

This is well mixed, heated gradually at first, and then boiled and strained. The object is to convert the starch into dextrin and sugar. Chambers, however, says that "Laputa never devised anything more preposterous than this food," and after enumerating all the risks incurred in its preparation, adds that "sensible parents will be content to leave the recipe to some coming race who may prefer art to nature."



Ridge's and Nestle's food are highly recommended by some, and are very much used; but I cannot give their composition. It is very important that Ridge's food should be fresh; and as Nestle's is slightly laxative, it is not suitable when there is any tendency to diarrhoea. Eustace Smith speaks highly of wheaten flour prepared by putting a pound in a pudding cloth and tying it up tightly. This is boiled about ten hours. When cold the cloth is removed, and the outside soft portion is cut away, and the nucleus is reduced to powder with a fine grater. Dr. Underwood's baked flour is prepared by slowly baking wheaten flour for a long time in a small covered jar until it breaks into a soft, greyish-coloured-powder. I may mention, as among the best farinaceous foods, stale bread, plain biscuits, and barley prepared as barley-jelly or barley-water.

In making a few remarks on methods of feeding, I will suppose that all admit the importance to the infant of nursing from the mother or a carefully-chosen wet-nurse. If the supply be scanty, or the mother's health be suffering from the constant drain, a small amount of cow's milk, properly diluted, may be given to the infant in third or fourth month. It is important that the greatest care be exercised during the hot months of summer, especially in cities, and artificial feeding should on no account be commenced at this season if it is possible to avoid it. The infant should be weaned between the ninth and fifteenth month. The time should, however, be influenced by various circumstances: such as the strength or debility of the mother and the occurrence of menstruation or pregnancy—but even the existence of pregnancy should not cause the child to be weaned during the hot months, unless the milk is found to affect the child very injuriously. If in any case it is found necessary to wean a baby living in a city during hot weather, and if no wet-nurse is obtained, it should, if possible, be sent to the country, where artificial feeding is found to be less dangerous. Dr. J. Lewis Smith says that more than half of the spoon-fed children of the United States who enter the summer months die before the return of cool weather, unless saved by a removal to the country. Weaning an infant should always

be a gradual process, as the child tolerates this better than the old-fashioned mode of consulting the first page of the almanac and the stars, and then weaning on a certain day. When the mother's milk is wanting wholly or in part, and no wet-nurse is obtainable, we are compelled to resort to artificial or mixed feeding, *i. e.*, milk diluted according to the methods advised by Eustace Smith and other physicians to which I have alluded. If it is found that the child is failing on one kind of food, make a change and give some other kind from the various formulæ given. Many improve on a change from ordinary cow's to condensed milk. Try to make the change in time. Don't wait until it is nearly exhausted by chronic wasting and diarrhoea. It is a safe rule to prohibit entirely the use of farinaceous food during the first six months, and, I may add, in many cases, till the infant is eight or nine months old. As Dr. Sinsino has proved, before this period, it cannot be digested, therefore it can only be a source of irritation, and when given during the hot weather it is the most common causes of diarrhoea, which in the cities of this continent makes such sad ravages among our children. The doctor is in a position to do a great deal towards educating people on this important question. The mother who has the welfare of her young babe at heart is anxious to do everything for the best; but she is sometimes surrounded with such an army of meddling busybodies and wise old women, each of whom has such a variety of foods to offer "the dear little one," especially when it is sick, that she is in despair, and in her confusion gives a little of everything, and very often the baby gets the greatest variety, when the stomach and bowels are in an irritable condition, and the addition of indigestible food at such a time is only adding fuel to the fire. In such cases as these the Dr. may do incalculable good by giving his directions distinctly, with his reasons for them, and if he wins the mother's confidence in such a way, his orders will be obeyed. If we commence farinaceous food after the sixth month, very little should be given at first. In using the boiled flour, Dr. Smith says, one to two drachms is sufficient for the child during twenty-four hours, and this should be given in two doses. The

child can thrive with very little in addition to good milk, and it is a good thing to err on the safe side and give little else. After six to nine months, occasional changes may be made by giving beef or veal broths, or the yolk of an egg. After one year they may gradually commence bread and butter, potatoes, and towards the end of the second year a little solid meat, but whatever the additions may be, let milk be as largely consumed as possible to the end of infancy, and though it is beyond our limits to go past infancy, I may add, let it be continued as long as possible.

In feeding infants, one of the most important elements is regularity. Donnè says, "Mathematical exactness in this matter would be ridiculous," but it is well to come as near it as we can. As a rule, the babe should not be disturbed while sleeping; but, as Lewis Smith says, "ill-nourished children, after long wakefulness and great prostration, become drowsy, and sleep a great deal." In such a case increased nutrition is required, and the infant should be roused frequently to be fed. The most common mistake is too frequent feeding. A great many mothers feed their children every time they cry, and as they are most apt to be cross and fretful when they get "out of sorts" from indigestion, they are likely to get their food very frequently just when it is most important they should not do so, and flatulence, colic, vomiting, and the various disorders of digestion are apt to ensue. If to this error in feeding is added the one before mentioned of giving starchy food when it cannot possibly be digested, or in larger quantities than can be digested, you get a combination of evils which is very trying to the digestive apparatus, which is so sensitive in infancy. Particular directions should be given on this point, and if the nurse or mother begins to feed the baby every hour and a-half, or two hours, during the day, and about twice during the night, it will, as a rule, soon be educated into good habits. The interval between meals may be gradually increased, and at six weeks should be about three hours during the day. From this time until the end of the first year the interval should vary from three to four hours. No matter how distinct the directions may be,

they are not always faithfully carried out, especially after a mixed diet has been allowed. To guard against mistakes, the suggestion of Eustace Smith is, I think, an exceedingly good one, *i.e.*, to write down your directions, giving the hours of the meals, together with the kind and quantity of food, and the mode of preparation.

Although you have all probably seen Smith's tables, still I feel that I cannot do better than give you one in full as a sample, which is called—

Diet 5, for a child about ten months old.

First meal, 7 a.m.—A dessertspoonful of pearl-barley jelly, dissolved in a breakfastcupful of warm milk and sweetened with loaf sugar.

Second meal, 10.30 a.m.—A breakfastcupful of milk, alkalinized, if necessary.

Third meal, 2 p.m.—Yolk of one egg beaten up in a teacupful of milk.

Fourth meal, 5.30 p.m.—Same as first.

Fifth meal.—Same as second.

I have tried this mode of giving written directions in a few cases lately, and although it involves a certain amount of trouble, still the results have been so much more satisfactory than they were under my former habit of giving verbal directions, that I am resolved in the future to pursue this method more than I have in the past.

As you can see, Mr. President, this paper makes no pretence of originality. I have only brought before you known facts concerning the importance of proper feeding of infants, and although these truths may be well known to the profession, they are not known, and are still less appreciated by the general public. There has been considerable improvement during the last few years, as medical men have been showing people the importance of these matters, and I hope the members of the profession will continue with more diligence than ever to practise and teach those rational ideas concerning the correct methods of feeding children which are so well described by many living authors, and by none more ably than Dr. Eustace Smith.

Dr. A. Davidson has been admitted a member of the Royal College of Surgeons, England.

## THE SUMMER DISEASES OF INFANTS.

BY J. H. BURNS, M.D.

(Read before the Toronto Medical Society, August 9th.)

The greatest amount of difference has existed among writers regarding the nomenclature and varieties of these diseases. On one hand French authors give no fewer than fourteen different varieties, distinguished from each other according to the portion of the intestinal canal attacked, nature of discharges, &c.; while on the other hand, especially with later writers, and more particularly with English and American observers, it appears to be the aim to describe the varied conditions of infantile summer diseases under a few comprehensive names.

Dr. West, in his *Diseases of Children*, gives two classifications, viz., simple and inflammatory diarrhœa. Dr. Flint, in his *Practice of Medicine*, confines the subject to a chapter upon cholera infantum, and makes that caption do service for all; whilst Dr. J. Lewis Smith, whose work on *Diseases of Children* is at once the most complete text-book in the language for students and reliable guide for physicians practising on this continent, sums up his experience under three or four headings.

Regarding the causes, symptoms, and pathology of the summer complaint, a suitable classification appears to me to be the following:—1st. Simple non-inflammatory diarrhœa. 2nd. Inflammatory diarrhœa, or, according to Smith, intestinal inflammation of infancy, and 3rd. Cholera infantum, or choleric diarrhœa, which may be the disease known in Britain as Watery Gripes.

Before entering into a description of the above classes, it may be well to state that the usual course of unchecked non-inflammatory and choleric diarrhœa is to become inflammatory.

The chief cause of non-inflammatory diarrhœa is error in diet—either unsuitable food or excessive quantity. It is not necessarily a disease of summer months, but may occur at any time from the presence of indigestible food, or an amount of nourishment taken into the stomach greater than the child is able to digest.

The great majority of children are guarded from the evils of over-feeding by the provision

made by nature that any excess is vomited. Those not able to get rid of the surplus in this way are especially liable to disordered action of the bowels. The retained excess over-stimulates and irritates the intestinal follicles. The child's food may also disagree with it owing to the unhealthy condition of its nurse or to colostrum retained in the nurse's milk. Another great cause is cold. Ill-clad children and those unprotected by that most important article of an infant's dress, a flannel abdominal bandage, are especially liable to attacks of this form of diarrhœa. Among other causes are teething, worms, and mental impressions, retrocession of cutaneous eruptions and some particular article of diet disagreeing.

Symptoms vary with the cause. If produced by fright or cold, diarrhœa begins immediately. There may be some constitutional disturbance when improper diet is the cause, such as restlessness, passage of undigested food, tenesmus and flatulence. As the disease advances loss of flesh is noticeable, and a waxy paleness of the face. There is no constantly feverish condition.

I shall not here allude to the anatomical differences found in the three classes of these diseases, but shall hereafter refer to what are considered by pathologists as characteristic appearances.

The form of disease now being described is not dangerous in itself, in fact, at times it may be a means of removing irritants from the intestines. The danger is that if unchecked and if suitable diet, &c. be not given, the disease may become inflammatory. The treatment consists in removing the cause.

If the child is wet-nursed, make sure that the nurse is in good health. If spoon-fed, change the articles of diet until it is discovered which is most suitable. The medical treatment is very simple. If the discharges are acid, as they nearly always are, give an alkali in combination with a mild laxative, and a sedative if necessary. In general an alkaline laxative will be sufficient. If such treatment is not capable of relieving the patient, it will be found that the disease has likely assumed the inflammatory character.

This disease is more common among weakly children than those of more robust constitution.

consequently it may be necessary to begin stimulating early in order to counteract prostration.

The second classification, intestinal inflammation of Smith, inflammatory diarrhoea of West, entero-colitis of Meigs and Bouchut, is the prevalent form of summer complaint and the class to which the large proportion of fatal cases must be credited. This form may develop itself at once, or may be the result of simple diarrhoea or cholera infantum. Its causes are very similar to those of the disease already described, depending upon improper or insufficient food, scant clothing, close, damp, ill-ventilated dwellings, cold and defective sewerage. It may be associated with a malarial poison, and hence is frequently endemic in certain localities. A common cause is changing the child suddenly from a warm to a cold atmosphere, or permitting it to sleep uncovered. Proceeding from the above-mentioned causes, this disease occurs in the country as well as the city, and the premonitory stage is simple diarrhoea. It is in its epidemic form that this complaint is so very fatal in the large cities of America during the hot months from May to September.

Smith says that judging from autopsies he has made, and from information received from others who have been familiar with post mortem examinations, that four-fifths of the cases reported in the city of New York as deaths from cholera infantum in the year 1863 were cases of intestinal inflammation, and except consumption, there is no one disease so prevalent and fatal in that city during its epidemic occurrence in the summer months. The state of the atmosphere most favourable for the development of this inflammation is chiefly found in cities, owing to the high temperature acting upon garbage, sewerage, &c., and where many persons are crowded into small, ill-ventilated, and badly drained tenements. The rapid development of the follicles and crypts of the intestines is a predisposing cause of this affection, as also are dentition and weaning.

The first symptom of this disease is usually slight diarrhoea. Three to five evacuations a day of acid stools, and a greater or less degree of fever. This may continue for a few days

when vomiting of undigested particles of food begins. Great prostration ensues. The child from having been restless and fretful becomes emaciated and exhausted, apparently too weak to cry. The features are pinched, the skin hangs in folds from the thick parts of the arms and legs. The pulse in this form of diarrhoea is accelerated and there are exacerbations of fever, sometimes periodical, until, should the disease continue, through general feebleness, the temperature of the body is cool, and the extremities become pallid and cold. The skin is dry, and the urinary secretion diminished in the inflammatory condition. This urinary suppression is a very common symptom. After long continuation the irritating stools produce excoriation of the buttocks and scrotum, and boils break out upon the scalp. In the latter stages the child again becomes uneasy and fretful, and there may be indications of cerebral complication. At length the infant sinks, either quietly from exhaustion, or death is preceded by convulsions, in consequence of uræmic poisoning, or intercurrent bronchitis may supervene and destroy life.

A frequent complication in this form of diarrhoea is thrush, especially in children under the age of four or five months; occurring in this connection it is generally thought a very unfavourable symptom. The treatment may be considered under two heads: First, regimenal or hygienic, and secondly, medicinal. In children previously healthy; when the attack occurs from exposure to cold, diet should at first be diminished in quantity. If an infant is nursing it should be suckled less frequently, not only on account of the lengthened interval between the times of nursing, but because the milk which remains in the breast becomes more watery and less nutritious. If the child is weaned it should receive an equal reduction in the quantity of its nutriment. Gentle counter-irritation over the abdomen, followed by poultices, or a constant inunction of olive oil, are now indicated. After the acute stage has passed more nourishing food, more frequently administered, is necessary, and this may be supplemented with advantage by alcoholic stimulants. In cases where children, under the age of twelve months,

who are bottle fed, are attacked by this disease, decided advantage may be obtained by procuring a healthy wet nurse. On the other hand a wet-nursed child may suffer from this disorder owing to presence of colostrum in the mother's milk, which may be ascertained by the microscope. In such a case it will be found advisable to change the nurse, or if that is not possible it may be safe to wean the child and begin a diet as nearly as possible approaching that of the natural aliment of a child of this age. Should these changes in diet, in conjunction with proper medicinal remedies, prove ineffectual, one very important measure still remains at our command, that of change of air. Attributable as this complaint is so very largely to atmospheric influences, and prevailing as it does so severely in crowded cities, the best possible results are obtained from removing the patient to an elevated, pure atmosphere. In my own limited experience I have had some opportunity of testing the benefits of such a change. During the summer of 1873 very many infants were brought to Collingwood from Toronto and Hamilton for change of air, many of whom were emaciated to the last degree. Some of these were taken on the boats sailing to Lake Superior, whilst others, apparently dying, were withheld from the long journey, because in their cases death appeared inevitable. Several of these latter were gently carried to the top of the Blue Mountains, which lie four or five miles to the west of that town, and are from 900 to 1,000 feet above the level of the Georgian Bay, and the result was almost magical. The puny, wasted little creatures seemingly began to improve as soon as they had reached the pure clear atmosphere of that elevation. I have had opportunities of observing the result of taking them upon the water also, and although the great change, quickly felt, might deter many physicians from sending delicate children upon those northern waters, yet from the opportunity of observing many such instances, I can speak most favourably of those that have come under my notice.

As one attack of this complaint predisposes to another, it would seem wise counsel to advise the parents of these children to not risk a return to the source of the disease until the

heat of summer has passed. The medicinal treatment of inflammatory diarrhoea as to selection of drugs is variety itself.

If called at the early stage it is no doubt a good practice to administer a laxative dose of rhubarb or castor oil, in order to remove undigested or indigestible substances from the intestines, after which preliminary treatment opiates, alkalis, and astringents are indicated, with enemata and external applications. Of the last I would like to notice the good effects I have obtained from anointing with olive oil. The child should have the oil gently rubbed over the stomach and bowels in considerable quantity, after which the abdomen should be supported by a flannel roller. The inunction should be repeated two or three times a day, and I would here suggest the preference which I believe will be found for olive oil over cod-liver oil. The latter, from its generally disgusting odour, is very apt to produce nausea and vomiting—conditions usually complicating these cases, and which are sometimes less easily controlled than the diarrhoea itself.

To recapitulate, it will be seen that the two forms of summer complaint now briefly described are closely allied to each other, they prevail chiefly at the same season of the year: they are, to a considerable degree, dependent upon the same causes, and are in a measure amenable to the same treatment, while the milder complaint not unfrequently passes into the more severe. There yet remains to be described a variety of summer disease which is of the greatest interest to the practitioner in a city, viz., cholera infantum or choleric diarrhoea, so called because of the violence of its symptoms, which, in that respect, chiefly resembles Asiatic cholera. It is, however, quite distinct in its nature, and is not connected with epidemics of that disease. The term has been commonly applied to the greater portion of the diarrhoeal troubles affecting children in the summer months; but cholera infantum has sufficient points of difference to entitle it to be considered as a separate and distinct disease, and the term should only be employed to designate that variety of infantile summer complaint characterised by frequent watery, perhaps serous, stools, accompanied by vomiting.

and rapid and great exhaustion. After these symptoms cease to be observed it may be called by any other name more indicative of the pathological condition which has supervened. The succeeding disease is in most cases intestinal inflammation, and should be considered and treated as a distinct affection, just as in the adult when enteritis results from cholera morbus. The term cholera infantum is not employed by English authorities, but there can be no doubt that this affection is just as prevalent and fatal in the large cities of Britain as in those of America, and is described under West's comprehensive classification of inflammatory diarrhœa.

Cholera infantum depends mainly upon uncleanliness, and a residence in a poisoned atmosphere loaded with the gasses of decomposing animal and vegetable matters, and abounds in ill-ventilated and badly-drained houses. It occurs commonly under the age of two years, during the period of the rapid development of the intestinal follicles. It sometimes begins abruptly, the child having had good health previously, and it is not an unusual thing to witness a healthy infant in a few hours brought down to death's door. The only symptoms being one, or perhaps two most copious dejections of watery stools containing perhaps a small quantity of fecal matter. At other times it is preceded by a premonitory stage of simple diarrhœa, the stools being somewhat increased in number and thinner than usual, when suddenly the evacuations become more frequent and watery, and all the appearances of rapid sinking supervene. Occasionally the antecedent diarrhœa may have continued several weeks, attended with emaciation and intestinal inflammation. The stools are characterised by a peculiar musty odor, not fecal, but most offensive, and readily detected upon entering the apartment in which the child lies. They are colourless, or produce a mere stain upon the diaper. They may be subsequently very small in quantity and squirted, as it were, from the anus, in which case there is usually more or less tormina and tenesmus. Great irritability of the stomach is another symptom which rapidly increases the prostration and danger. The child rejects

everything as soon as swallowed. There is intense thirst; cold water or the breast being taken with avidity. The tongue is moist at first and clean, except occasionally a very light fur. The pulse is accelerated, and respiration is somewhat increased in frequency. The temperature is speedily reduced. I can find no thermometric observations recorded by authors who have described this disease, and have made none myself, but feel that if we could obtain them they would be most interesting. We know from reported cases of sporadic cholera how rapidly the temperature of the body sinks, and how tolerably correct prognoses are arrived at from the average temperature discovered in that disease.

An early symptom is great restlessness, due to the craving for water. The urine is scanty or almost entirely suppressed. The disease is attended with more rapid prostration and emaciation. The child from health and plumpness may in a few hours become a melancholy picture, with eyes sunken and bleared, the eyelids permanently open, and the skin drawn like parchment over the face. A condition of stupor results from which there is no relief, and which after a few hours ends in death.

It will now be well to briefly describe the different anatomical characteristics discovered in the three varieties of this disease, and the distinctions as revealed by post-mortem examination. Billard says that he has observed in the intestines of those who die of non-inflammatory diarrhœa, isolated follicles and follicular plexuses of the intestinal tube in considerable numbers, and developed without being inflamed. The follicles appear at the commencement of dentition. In 12 infants three were aged from eight days to three weeks, two aged two months, and seven from nine to twelve months. Ten of these were affected with diarrhœa of liquid, white mucous matter, which is really the serous diarrhœa of authors; and every symptom leads to the belief, that there is a direct relation between the development of these follicles and the augmentation of their secretion. He does not consider this development of the muciparous follicles as a true inflammation, but the state of excitability which causes the augmentation of their secretion is, as it were, an intermediate

stage between the normal state and the state of inflammation. In these views he is supported by Barrier.

J. Lewis Smith gives an analysis of Post-mortem appearances as found in 82 examinations of deaths from inflammatory diarrhoea as follows:—The upper parts of the small intestines embracing the duodenum and jejunum were found inflamed in 12 cases, free from inflammation and of pale colour in 51 cases. Ileum inflamed in 49 cases, and the cœcal portion, including the ileo-cœcal valve, was the part in which the inflammation was most intense. In 16 cases there was no ilietis.

In most cases the inflamed mucous membrane was perceptibly thickened. Ulcers of small size were found in the mucous membrane in five cases. In one instance these were in the jejunum. In 81 cases there were indications of inflammation in the colon. The solitary glands both of the large and small intestines and Peyer's patches, were involved and thickened in nearly all these cases. He has carefully examined the condition of the liver in every instance, and says that the prevalent belief that this organ is greatly affected in the summer epidemic of intestinal inflammation receives no corroboration from its inspection. He frequently found intussusceptions of the small intestines, which he believes generally occur shortly before death; and he advances the opinion that if any form of diarrhoea continues more than a week in the summer season, it becomes inflammatory.

After death from cholera infantum, turgescence of the intestinal follicles without inflammation, attended by more or less softening of the mucous membrane, is found. Dr. Hallowell in 1847 says of the anatomical character of the first stage, that it consists of undue development of the follicles both of the stomach and intestines, or one of these organs, without inflammation of the mucous membrane. Dr. Parker writing in 1857 says, when death occurs from exhaustion produced by the profuse diarrhoea and vomiting the walls of the intestines, are found translucent, bloodless, and apparently thin. Those of the stomach are natural. Throughout the whole extent, the solitary and agglomerated glands are very prominent, like beads upon the

surface. The weight of evidence thus shows that in cholera infantum post-mortem examinations reveal no inflamed condition.

Its diagnosis is formed by observing the suddenness of the attack, the frequency and character of the stools, their thinness, forcible expulsion, absence of colour, peculiar smell and absence of fecal matter, the intense vomiting and thirst, rapid sinking and emaciation. During the prevalence of Asiatic cholera, differential diagnosis is nearly impossible. The duration of the attack is short. It either ends fatally very soon, or ceases, or becomes transformed into an inflammation.

The treatment of cholera infantum must necessarily be prompt. If supposed to depend upon the retention of irritants in the stomach or intestines, a laxative is indicated, and the choice seems to lie between the preparations of rhubarb and calomel for this purpose. The latter is most highly extolled by many writers, who believe the liver is at fault. However this may be, from the view now taken of this disease as depending upon excessive heat and vitiated atmosphere, and knowing as we do that every hour is of the utmost importance, valuable time may be lost in waiting for the action of any medicine which may take from two to four hours to produce such an effect. All authors concur in considering opium, in some of its forms, as constituting our main reliance. Dr. Jackson says we have no substitute for it. But how, I would ask, are we to administer this important drug, when the stomach is so irritable that nothing is retained by it? And it is upon this point, Mr. President, that I wish to speak of a method of treatment which, in several instances, I have adopted with marked success; one which recommended itself to me from its wonderful efficacy in cholera morbus—I mean the hypodermic injection of morphia. The plan I pursue is to combine about one-twentieth of a grain of morphia with one-half grain of quinine and inject, for a child about one year old. The effect of this injection has proved just as beneficial as a similar practice has been in cholera morbus in the adult. The vomiting ceased, as also the diarrhoea, and the child slept quietly for some time after.

The cases in which this method was practised went on satisfactorily to convalescence. It must be remembered that this treatment was adopted in cholera infantum only; and although always successful, it is not unlikely that even after the hypodermic injection certain cases might go on to inflammatory diarrhoea. What is claimed for the treatment is that it averts the stage of collapse, which is so frequent and fatal.

Should the watery discharges continue, Condie speaks most approvingly of the usefulness of acetate of lead in combination with chalk or opium. West recommends the extract of log-wood with tincture of catechu. Others depend largely upon oil of turpentine. Smith prefers the combination of bismuth with the compound chalk powder, giving bismuth in large doses. External, slightly counter-irritant applications may be advantageously employed; and enemata, astringent and sedative, form a usual addition to the treatment. I trust I have produced sufficient evidence to show that well-founded reasons exist for establishing such a classification as described; and although all these classes eventuate in inflammation of some portion of the intestinal tube if continued too long, ample proof is given that until that time they are separate and distinct diseases.

In conclusion, Mr. President, I may say that I feel as if an apology were necessary for reading a paper on those diseases with which you and the gentlemen present are so familiar, that no efforts of mine can bring anything new for your observation; but at this season of the year, when bowel complaints in children abound, I shall feel that my endeavour is not considered amiss if it elicit, as I trust it may, a discussion which must be profitable to all of us.

**MILK AS A VEHICLE FOR QUININE.**—If one grain of sulphate of quinine be dissolved in an ounce of milk, we shall find that the bitterness of the draught is hardly perceptible; with two grains there is rather more bitterness, but it is not at all marked—a dose of five grains may be taken in two ounces of milk without any unpleasantly bitter taste, and if the same quantity be put into a tumblerful of milk the bitterness is all but lost.

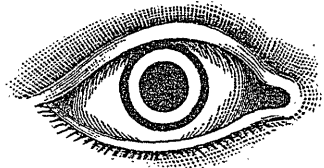
## CLINICAL REMARKS ON CATARACT AT THE TORONTO GENERAL HOSPITAL.

BY R. A. REEVE, B.A., M.D.,  
Oculist to the Institution.

(Continued.)

**LAMELLAR CATARACT—*Iridectomy.***—This lad, æt. fifteen, was brought by his father a fortnight ago with the statement that when four years old it was found he could just see large letters, and the sight had gradually become worse.

The eyes appeared normal, except that the pupils, which were active, had a gray shade. Right eye,  $V = \frac{1}{200}$ ; left,  $\frac{3}{200}$ ; that is, letters which can be read at two hundred feet by the normal eye could be seen no further than a foot off with the right eye, and six inches with the left. However, on partly closing the eyes and looking askance,  $V = \frac{3}{70}$ . The case was regarded as lamellar cataract, but in order to enable you to make the diagnosis, the pupils have been dilated.\* You now see that the centre of each pupil looks gray and the periphery black; and (in the ophthalmoscopic room), by using the lens alone—oblique or focal illumination—the iris is found to cast a shadow into the lens, showing that its anterior layers are clear. And the eye being lit up with the mirror, the reflex appears as a red ring around a central semi-opaque disc, instead of the whole pupil being uniformly red. The margin (cortex) of the lens is therefore transparent, and the centre cataractous. You can see that the nucleus is not quite opaque, for you get a faint red reflex through it.



LAMELLAR CATARACT WITH TRANSPARENT PERIPHERY.

This is, then, *lamellar* cataract, in which between the transparent cortex and heart of the

\* The mydriatic should not be of a strength to paralyze the accommodation, else the sight may appear to be worse than it is, especially if hyperopia is present: sol. atropiæ, gr.  $\frac{1}{2}$  ad  $\frac{3}{4}$ , will generally suffice.



nucleus there is a gray zonular lamella, which encases the latter as in a shell of ground-glass, transmitting some light, and therefore not wholly opaque. The less transparent the central parts of the lens, the more dim the sight. With a little manœuvring the optic disc, retinal vessels, &c., can be seen on using both lens and mirror.

You now learn the real nature of the apparent short-sightedness and have the clue to the proper treatment. The patient's sight only permits him to do rough work, but by partly closing his eyes the pupils expand, and a little of the transparent cortex is exposed, when by looking obliquely the sight is for the nonce much improved. Now as the margin of the opacity is well defined, and the lens periphery is clear and not studded with opaque striæ or dots, showing that the cataractous process is at a standstill, the removal of a piece of the iris is indicated; in other words, a small *iridectomy* for *artificial pupil*, so as to uncover in one meridian the clear cortex without going beyond its outer border. This will give permanently the visual acuity got by dilatation of the pupil, the gain in sight far outweighing the slight disfigurement; while mydriasis, which has several drawbacks, cannot very well be kept up always. When the opaque striæ and dots are found reaching to the lens margin and mydriasis does not improve the sight, the affection is likely progressing, and iridectomy is of course contra-indicated. Removal of the lens by needling or linear extraction will then be required. The coloboma (artificial pupil) should be made preferably inwards or in the lower inner segment as the rays of light will then enter the eye most nearly in the line of the visual axis; but if the clear margin is broadest below, the pupil should be made downwards, or downwards and outwards.

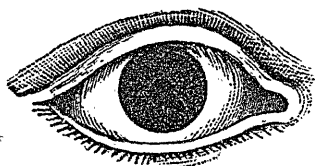
As the subjects of this trouble generally try to improve the definition of objects by bringing them unduly close to the eyes or bending the head over them, spasm of the accommodation, and lateral compression of the eyeballs from tension of the recti, are apt to ensue, which early in life frequently produce abnormal depth of the globes, the anatomical condition of myopia or true shortsightedness.

And owing to the excessive tonic contraction of the internal recti, convergent squint may develop; or the physiological visual impulse being wanting, one eye may roll out if the external rectus predominate, or nystagmus (oscillation of the globes) may result. In this instance there is little or no squint, but there is some amblyopia, or defective sight, from functional disuse of the retinae.

If lamellar cataract be detected at an early age the pupil should be dilated so as to find out the area of the opacity, and the eye examined a few months later to learn if it be increasing; but if there be any sign of developing squint or nystagmus, the pupils should be kept dilated, or an iridectomy done if the degree and nature of the affection are evident. Amblyopia will thus be warded off and the other secondary effects likely prevented. [Florence R., æt. 2½ years: when one year old a "gray spot" was noticed behind the left pupil, and a "cast" appeared soon after. Diagnosis—single, lamellar cataract, the cortex clearest below; secondary convergent strabismus of left eye. Treatment:—small iridectomy downwards and slightly inwards. Ten months later the squint had almost gone.] Lamellar cataract is presumably congenital, though it may not be always so. In the case of the infant, F. G., whom some of you examined lately, the lenticular opacity was seen by the attending physician a week after birth, but in this instance it was single, while, as a rule, it occurs in both eyes. It is found in children who have had convulsions, but possibly both conditions result from the same centric cause; and also in subjects of hereditary syphilitic (strumous?) taint. This lad has "rachitic" teeth, prominent frontal bosses, &c., which are suspicious indications of this diathesis.

In iridectomy for *therapeutic* ends, as in glaucoma, &c., the segment of iris is taken away up to the ciliary border, often a large piece, one-sixth to one-fourth being excised: in that for *artificial pupil*, which is for optical purposes merely, as in this case, the aim is to remove as little of its tissue as will give the best visual result. Hence, the cut in the cornea is made short and a half-line from its margin; the iris forceps being then passed in and a narrow portion of the iris seized near the

pupillary border, and drawn out only so far as to permit the points of the scissors to pass between the forceps and the corneal surface, when it is snipped off. If the iris does not retract it should be freed from the lips of the wound by passing a blunt probe or point of strabismus hook from end to end, and then, if necessary, stroking the cornea lightly with a "spoon" from its margin over the cut. If the lens opacity be small a shaving off the pupillary edge will likely suffice; but if the clear border be narrow a larger piece of iris must be removed. [Two other operations have been suggested and are sometimes done, namely, *iridesis* and *iridotomy*. In *iridesis* the anterior chamber is entered at its periphery by a short oblique cut, and a knuckle of iris is brought out through a loop of thread which has been put into the conjunctiva, the ligature being then tied. By the traction thus made on the iris the portion on the other side of the pupil from the incision is drawn partly over the central opacity and the clear border of the lens exposed on the same side; but this procedure has several drawbacks. In *iridotomy* one blade of the scissors is passed under the pupillary edge of the iris, which is snipped through; but there is some danger of wounding the lens and making it altogether cataractous. Bowman's plan of pushing a blunt-pointed knife within the pupil and behind the iris, and cutting forwards so as to make a gaping slit is hardly less safe. The method suggested by T. B. Carter, to cut out the pleat of iris that rises between the blades of the iridotomy, when these are laid on its surface, is less risky. On the whole, however, iridectomy done as described is the best operation because the safest and most easy of execution, and the visual result is generally satisfactory.]



ARTIFICIAL PUPIL FOR LAMELLAR CATARACT.

The operation was done on the left eye September 24th, and on the right, September

28th, a notch being made downwards and inwards about half-way to the periphery, and atropine, which had been used previously, continued for a few days.

November 16th. You can now test the result of the operations, which some of you saw done. The effect of the atropine has quite passed off, and the vision has risen to  $\frac{20}{100}$ , which is better than we expected.

**PYRAMIDAL CATARACT.**—I have shown you at least two examples of this form; in which there is seen on the centre of the face of the lens a miniature white or pearly cone, which shows plainly in profile. Around the opaque dot the pupil appears black, and the mass of the lens is transparent. The primary cause is perforating ulcer of the cornea or fistula, the contact of the lens with the posterior surface causing localized opacity beneath the capsule; the latter being also drawn out somewhat as the two surfaces separate on the re-forming of the anterior chamber, if adhesion have taken place. In both these cases the nebula from the old ulcer could be seen on the cornea. Operative interference is rarely required.

A white, chalky, or small degenerated lens is sometimes found with excluded pupil, and again with tremulous iris; and in such cases, some of which you have seen, the sight is generally very defective, or lost, not even the lamp-flame being discerned, or part of the field is blind; in such cases there is, as a rule, some disease at the fundus, often of the choroid, and perhaps also detachment of the retina, which would contra-indicate any operation.

**TRAUMATIC CATARACT.**—Traumatic cataract may be due to jostling of the lens from concussion of the eye-ball, or luxation, the mal-nutrition induced ending in diffuse opacity. This is more apt to occur in mature than young subjects, when the lens has become somewhat firm and its capsule less resilient. It more often results from lesion of the capsule in penetrating wounds of the globe, the aqueous humour rendering the lens tissue turbid. In some instances also, an undetected rent in the capsule occurs without external wound. Once the aqueous humour gets within the capsule, even through a small opening such as is often caused by the prick of a pin, needle, sharp-

pointed tack, or fine spicula of metal or glass, &c., and the whole lens will soon almost inevitably become opaque or cataractous. In very rare instances of violence the opacity is confined to the site of the injury or is quite localized; but it is well in all cases to act on the presumption that it will become general. The following case illustrates some points in regard to cataract due to traumatism.

Sept. 26th. R. F., æt. 21, private patient,\* Toronto General Hospital; received charge of blank cartridge in his face at Volunteer review, Montreal, forty-eight hours previously. Cold or ice-water applications had been constantly used. The patient was free from pain, but still suffering from the effects of shock. The left half of the face was closely peppered with powder. Two or three grains were embedded in the sclera of right eye; and others, removed by the friction of the lids, had struck the lower part of the cornea. There was slight ocular congestion and moderate photophobia. The lids of the left eye were swollen, and were with difficulty separated. Several grains had entered the left sclera and cornea, one penetrating the latter. There were, chemosis of ocular conjunctiva, ciliary congestion, discoloration of iris from hyperæmia, and a narrow band of iris (anterior synechia) reaching from outer edge of pupil to the wound at the outer middle third of cornea, the lips of which were infiltrated and ununited; pupil, medium-sized and gray from cataractous lens; tension, below normal; can see large objects to the left. To have atropia, 4 gr. ad.  $\bar{3}j$ . instilled every three hours, and the ice-water applications continued. Atropized oil\* was used for a few days after removing the powder from the cornea by means of the spud, the aqueous solution being then employed. The right eye showed no signs of irritation from the presence of the

particles in the sclera, and required no further attention than the use of cold water for a few days and a few instillations of atropine. The pupil of the left eye yielded but slowly to the mydriatic, June 2nd, being dilated only one-half, with some adhesions to the lens capsule (posterior synechia); the lens being opaque and swollen, but the tension not yet normal (— T); eye moderately congested but free from pain. June 5th. The corneal wound healed; anterior synechia ruptured by mydriatic; pupil two-thirds dilated, and almost circular, the lens-matter protruding through it and almost touching the cornea; tension, normal, having risen the last two days; only slight circumcorneal (ciliary) congestion; no pain or tenderness; can discern when the hand is moved to and fro: did *linear extraction*—making the incision in the corneal cicatrix; used cystitome to insure thorough division and retraction of the anterior capsule. The lens substance escaped readily by the curette, and the pupil became pretty clear. The cut was gently cleared of debris, and also the palpebral sac; dropped in some 4 gr. ad  $\bar{3}j$ . sol. atropia, and put a light bandage on both eyes: ice-water to be applied; straps to be removed in six hours, and the atropine applied every hour for four hours, and hourly in the morning. June 6th, 9.30 a.m. Eye became painful at 10 p.m., and pil. opii given; not suffering now; general congestion of the eye, more conjunctival than ciliary; lips of wound coapted, and anterior chamber re-formed; pupil only one-third dilated; globe soft (— T<sup>1</sup>), but not tender. To apply 8 gr. ad  $\bar{3}j$ . sol. atropia sulph. every hour during the day, and twice in the night, continue cold water, and give hypodermic of morphia and  $\frac{1}{6}$  gr. of atropia at bed-time, or p.r.n. June 7th. No pain or tenderness; pupil one-half dilated and clearer; can see articles about the room; can get up tomorrow; continue cold water, and use the 8 gr. sol. atrop. every two hours. June 10th. Pupil two thirds dilated; V =  $\frac{1}{10}$ : use 4 gr. ad.  $\bar{3}j$ . atropia sol. every three hours. June 12th. V =  $\frac{5}{10}$ . June 14th. Trifling ocular congestion; pupil well dilated; large, clear central opening encircled by opaque thickened capsule; tension normal (Tn); with + 3 lens

\* Seen in consultation with Drs. Thorburn and Bethune.

† The alkaloid itself should be dissolved in hot absolute alcohol, gr. j. ad. minim, and incorporated in pure bland castor oil, the spirit being then expelled by gentle heat: or ether may be used without heat. The atropized oil is superior to the aqueous solution in exposure of the corneal nerves from abrasion or ulceration, and in effecting prolonged contact of the mydriatic with the eye.

$V = \frac{1}{3} \frac{0}{0}$ . To maintain dilatation of pupil for several weeks with the atropine.

Preserving the normal central, movable pupil, this patient got useful sight for ordinary purposes, and also for reading, &c., by the use of a cataract glass—a very good result.

*The cardinal point in nearly all cases of injury to the eye involving the lens, is to get the maximum dilatation of the pupil at the earliest moment, and keep it up by frequent instillations of a strong mydriatic: so far, the best is sol. atropiæ sulph. gr. 2—8 ad. ʒj. Smearing the brow with extract of belladonnæ, or using fofus belladonnæ, will often be quite futile, as it also proves in idiopathic iritis. The above rule is the surest preventive of secondary iritis and worse mischief, and its observance a necessity to a good result. Its neglect will likely end in closed pupil and adherent iris, with a final unsatisfactory visual result, which may indeed be nil. The softening lens is an irritant, and therefore the iris should be kept away from it and reduced to the smallest area. The constant use of cold or ice water applications for the first few days is of great service; afterwards hot fomentations may be necessary to relieve pain or ciliary irritation. The tension of the eye must often be tested, for undue hardness of the globe is a prime indication for immediate removal of the lens. With this precaution it is well to wait, as in the above case, until the lens becomes softened and flocculent before doing the linear extraction. And this operation may be unnecessary in some cases, solution of the lens quietly taking place; or the process begun may be completed by means of needling. In older subjects a dislocated or cataractous lens generally requires early removal by the modified (or peripheral) linear operation.*

We lately noted some interesting observations of the occurrence of distinct tubercular formations in voluntary muscles, and now we have to call attention to recent facts which demonstrate that tubercular ulceration of the tongue is met with; rarely it is true, but with a distinctness which suggests that when its occurrence is generally known its rarity may be found to be less than is commonly supposed.

## Translations.

From *Rivista Clinica di Bologna*.

### THE SALICYLATE OF SODA IN DIABETES MELLITUS.—(Bozzolo.)

(*Giornale della R. Accademia di Medicina di Torino*, 1878. N. 1, 2.)

Some observations have already been published, especially in Germany, on the treatment of diabetes mellitus by salicylate of soda. Thus Ebstein tried this remedy in two cases; and in the one saw the glycosuria disappear, and in the other become notably diminished. G. Müller-Warneck also noted in one case the total disappearance of the sugar, and its diminution in another. In both cases, however, things resumed their former condition after the suspension of the remedy. Ryba and Plumbert, in two grave cases, witnessed the absolute disappearance of the sugar; in two other cases a marked diminution, and in another no result. Brinken has asserted that he observed in two cases the permanent disappearance of the sugar. Lastly, in one case Bouchardat did not obtain the least result.

Bozzolo relates the history of a rustic of fifty-eight years, robust, and of healthy descent. He had not suffered from any injury of the head, nor had any bodily disease, and had always lived upon a chiefly amylaceous diet, as residents in rural districts commonly do. In December, 1876, this man commenced to suffer from inappetence, general malaise, intense thirst, and abundant micturition; then debility, virile impotence, emaciation, and lastly, an insatiable appetite. At first he was treated with a flesh diet and lactic acid, but the medical prescription not being attended to regularly, much benefit was not derived. The patient, on entering the Clinica Medica di Torino, was placed for the first few days upon the ordinary diet. At that time the urine varied from 3000 to 3500 cubic centimeters in the twenty-four hours; its density was 1035; the quantity of sugar 57.5 grammes; the weight of the body 48 kilogrammes. We had therefore to do with a rather mild case of saccharine diabetes, in which, probably, grave lesions of the liver had not yet occurred. On the 1st of May, 1877, the patient was subjected to a flesh diet, together with eggs,

butter and alcohol: in consequence of this the sugar notably diminished so that on the twenty-first day it had completely disappeared. Upon a return to a mixed diet the urine increased in quantity up to 2960 c. c. per day, density 1033; sugar 48.6 grammes; weight of the body 51 chilogrammes.

On the 14th of June, along with a mixed diet, we began to administer the salicylate of soda, at first in the dose of 5 and then 10 grammes per day. After eight days this was the result: quantity of urine, 1750 c. c.; density, 1015; sugar, 5.25 grammes, equal to 3 per 1000. The remedy was omitted for a short time, but was afterwards regularly continued from 28th June to 20th July, in the dose of 5 grammes per day, and with a mixed diet. The quantity of urine diminished little by little; the sugar also diminished, so that on the 9th July it had completely disappeared. On the 21st July the remedy was again suspended; and after a few days the sugar reappeared to the amount of 17 grammes, or 11.90 per 1000.

The patient was then subjected to the Thymic acid treatment, from 1 to 3 grammes per day—(Thymic acid, 1 gramme; alcohol, 20 grammes; water, 100 grammes.) This new treatment could only be followed for a short time, and in an imperfect manner, so that we can say nothing of the effects obtained; the quantity of sugar, however, steadily diminished, although but little. \* \* \* Not wishing to draw any absolute pathological or therapeutical conclusion from a single case, the author confines himself to pointing out the fact—a sufficiently satisfactory one—that with the salicylate of soda, and a chiefly amyaceous diet, the quantity of urine and of sugar diminished, and the body weight, the nutrition, the strength, and the general well-being increased.

From *Gazette des Hôpitaux*.

#### THE CAUTERIZATION OF HÆMORRHOIDS.

For the cauterization of Hæmorrhoids Prof. Richet has for a long time employed special forceps, which he has had made especially for this operation. These large forceps are made of iron, with a broad and flat bite; their form reminds one of that of the irons which ironers

use in preparing laces. The forceps are heated red-hot.

During this time, the patient being under chloroform, the surgeon, introducing his finger into the rectum, causes the hæmorrhoidal tumours to project. He passes through their base an iron wire threaded on a strong suture needle, so that by drawing on the wire the hæmorrhoids are kept well out. An iron wire is thus passed in all directions, according to the number and size of the varicose dilatations. An assistant holds the wire and makes each hæmorrhoid as prominent as possible. The surgeon then, seizing the forceps, heated to a red heat, successively crushes each hæmorrhoidal lobule within the bite of the forceps. The cauterization is rapid, and in a few moments the whole hæmorrhoid is completely destroyed, and the iron wire is set free. All the hæmorrhoids are successively cauterized. It will be understood that an iron wire is used to draw out the hæmorrhoid because an ordinary thread would be burnt at the first contact with the fire. To avoid the caloric action on the parts surrounding the anus during the cauterization, it is prudent to place compresses, wet in cold water, all around the anal margin.

M. Richet has employed this process more than two hundred times, and has not met with more than a single accident; and moreover the misfortune in this case is to be attributed to a pneumonia occurring in consequence of a chill on the very day of the operation. This process of cauterization is simple and easy; any one can have forceps of this kind made anywhere, and will be able, to use a happy expression of one of our assistants, to *volatilise* all hæmorrhoids.

From *L'Union Médicale*.

#### POMADE FOR IMPETIGO.—(BULKLEY.)

Take of oxide of zinc ʒss; and of subnitrate of bismuth ʒss; and of unguentum rosæ ʒi. Make a pomade to be spread on lint and applied to the impetiginous pustules. These latter should not be washed, but should be allowed to dry beneath the crusts formed by the exudation and the ointment. It is well not to forget that the pustules require above all to be protected from every source of irritation, and that there is more to be feared from doing too much locally than from doing too little.

THE CANADIAN  
Journal of Medical Science,

A Monthly Journal of British and Foreign Medical  
Science, Criticism, and News.

TO CORRESPONDENTS.—*We shall be glad to receive from our friends everywhere, current medical news of general interest. Secretaries of County or Territorial medical associations will oblige by sending reports of the proceedings of their Associations to the corresponding editor.*

TORONTO, OCTOBER, 1878.

CANADA MEDICAL ASSOCIATION.

The eleventh annual meeting of this association was in point of numbers as successful as former meetings. As many papers, too, as were on the list at Montreal last year were prepared, though as usual the time was too short to read and discuss all. We must again point out to members the great importance of giving timely notice of their intention to read papers, and of the titles thereof, much saving of time and much more profitable discussions would be the result, as members knowing the subjects for discussion beforehand would prepare themselves and say what they had to say in a shorter time and make remarks much more to the point than many do at present. We are glad that it is to be understood that the entertainments that it has been the custom to give, pleasant and enjoyable as they always have been, are discontinued. More time will thus be available for scientific recreation, and it will be possible to hold our meetings in many of the smaller towns of the Dominion, which hitherto, doubtless through inability to afford the attendant expense, have not been able to have meetings of the association held in their vicinity. It will greatly add, we are sure, to the membership of the Canada Medical Association to visit places throughout the Dominion where there are many physicians who up to this time have taken no part in its proceedings. A change is necessary in the by-laws of the association as regards the various committees. We are of the opinion that it would be more profitable if, instead of reports on medicine, surgery, and

midwifery, &c., certain subjects were chosen in each department, and a discussion thereon opened by some one previously appointed. Carefully prepared and able as were the reports this year, each was after all but little more than resumé of the original communications to our journals during the year. If everyone were to keep an accurate record of the cases coming under his observation, and as they accumulate analyze them carefully, much valuable experience (at present lost to the profession), from which useful deductions might be drawn, would be turned to good account. The membership fee should be raised sufficiently, to cover the expense of publishing the transactions, as at present the sum is so small that papers are not likely to be published unless by the liberal subscriptions of a few of the wealthier members. We are strongly of the opinion that the transactions should be published every year as this will greatly tend to improve the character of the papers prepared.

COLONIAL DEGREES.

The editor of the London *Lancet*, in a reply to a correspondent, signing himself *M.R.C.S., London and Foreign M.D.*, writes as follows in the issue of August 24th: "The collapse of medical legislation this year renders it wise to postpone the questions raised in our correspondent's letter. It will, of course, be the most urgent duty of the Medical Council, in the event of a Bill passing requiring the recognition of Foreign and Colonial degrees, to investigate most carefully the character of the examinations required for obtaining any given degree, and to refuse recognition to any degrees granted after such an absurdly defective education and examination as are described by our correspondent in the case of some so-called Canadian Medical Schools." We had only last month to refer to the ignorance of English writers when referring to Canadian affairs. What a pity they don't try to be better informed as to "so-called Canadian Medical Schools." Statistical tables of pass and pluck at the Royal College of Surgeons show that our schools are in advance of many English institutions. Whoever has given the editor of the London *Lancet* reason to suppose

that the education and examination of any Canadian Medical School is "absurdly defective" is either misinformed or has wilfully written nuttruths. We are satisfied that he cannot be a Canadian. Dr. Storrar, at the last meeting of the Medical Council of Great Britain, spoke in most flattering terms of the degrees of the University of Toronto, and we ourselves heard Mr. Callender, of St. Bartholomew's Hospital, and at that time examiner at the Royal College of Physicians London, encourage a timid candidate by the remark that "*Canadians always get through.*"

DINNER GIVEN BY THE HAMILTON MEDICAL AND SURGICAL ASSOCIATION TO THE MEMBERS OF THE CANADA MEDICAL ASSOCIATION.—After the close of the meeting of the Canada Medical Association the Hamilton Medical and Surgical Association entertained the members at a sumptuous dinner in the Royal Hotel on the evening of Sept. 11th. Dr. Macdonald, the President, occupied the chair, and Dr. Mullin, the Vice-chair. Among the guests were Mr. Kilvert, the Mayor of Hamilton; and Hon. F. Leland, U. S. Consul. A very large proportion of those who are mentioned elsewhere as having been present at the Association attended the dinner, which was all that the most fastidious epicure could desire. The usual loyal and patriotic toasts were drunk and suitably responded to. Drs. McCargow and Powell favoured the company with some capital songs. The company separated about half-past twelve, having thoroughly enjoyed the hospitality of the profession in Hamilton.

CANADA MEDICAL ASSOCIATION. ENTERTAINMENT BY DR. AND MRS. MACDONALD, OF HAMILTON.—On Wednesday evening, Sept. 11th, Dr. and Mrs. Macdonald entertained the members of the Canada Medical Association at their hospitable home on Duke Street. In spite of the wet weather a large number were present, and spent a very pleasant evening. The party broke up at a late hour, after partaking of a substantial supper. The courteous and cordial efforts of the host and hostess rendered the evening exceedingly agreeable.

## CANADIAN VINE GROWERS' ASSOCIATION.

The well-known firm of Cramp, Torrance & Co., of this city, have become proprietors of the business of the Canada Vine Growers' Association of Cooksville. This association has recently been reorganized, and, according to the reports of experienced analysts, such as Prof. Croft, of Toronto University, and Prof. Ellis, of the School of Practical Science, manufacture wines and brandies, perfectly pure, as far as chemical tests can prove them so. Prof. Croft says, "The wines are in my opinion, most excellent, equal to many of the best wines of France." "The brandies, also seem, as far as my judgment goes, to be of the most excellent quality, the finer ones quite equal to any of the best French brandies."

Mr. James White, the representative of Cramp, Torrance & Co., has shown us commendatory letters from several physicians of this city who have received samples of the wines. Mr. White intends shortly to make an extended tour throughout Canada, and hopes to secure the approval of the profession and a large patronage from the general public. Samples of the wines Sauterne, Savigny, Vin de Porto, and Madeira were exhibited at the meeting of the Canada Medical Association in Hamilton, and highly approved of by many of those present. The stock now offered, four years old, was made at Cooksville, from the Clair House Vineyards, where there are over seventy acres producing the various kinds of grapes used. The wine of the Canada Vine Growers' Association was awarded a Medal at the Paris Exhibition in 1867, and also in 1876, at the Centennial Exposition at Philadelphia. For patients requiring mildly stimulating wines these appear to be well adapted.

TORONTO SCHOOL OF MEDICINE.—Owing to the rapid increase of the numbers of students attending this school, the faculty have been obliged to provide greater accommodation by the erection of a new lecture-room. The old lecture-room forms the new dissecting-room, and the whole building will be thoroughly renovated. These alterations will make the Toronto School of Medicine building second to none in every comfort and convenience. (See advt.)

WYETH & BROS'. EXHIBIT AT THE CANADA MEDICAL ASSOCIATION.—During the meeting at Hamilton, Mr. E. Muir, of the firm of Perry Davis & Son & Lawrence, Montreal, had on exhibition samples of many of the preparations of Messrs. John Wyeth & Bros., Philadelphia. We have previously referred to these elegant pharmaceutical preparations which seem to lose none of their popularity. They are prepared specially for the use of physicians and not for sale to the general public. Wyeth's Dialysed Iron is, according to analysis, the most reliable preparation of the kind sold. Their elixirs are the most palatable we have used and make even the most nauseous of our drugs almost pleasant. There was also shown the paper fibre lint made by Parker & Son, of New Haven. It is much cheaper than patent lint and it is claimed that it is an efficient substitute, being used in many of the large hospitals in the States.

WILLIAM WARNER & Co. AT THE PARIS EXPOSITION.—By a cable telegram it has been announced that an award of the highest prize for Wm. R. Warner & Co.'s, sugar-coated pills has been given by the judges at the Paris Exposition. This makes the 5th Grand Prize awarded for their superiority over all competitors to the well-known Philadelphia firm of manufacturing druggists. We congratulate them on their well-merited success, which is clearly due to the excellence of their goods.

OBITUARY.—We regret to have to announce the death of Dr. Washington L. Atlee, of Philadelphia, in his 71st year. He was well known as one of the most successful ovariectomists in America, having operated in more than three hundred cases.

CANADIAN ABROAD.—By an Imperial irade his majesty, the sultan, has conferred the 4th class of the order of Mejidie on several surgeons who served in the late war. The name of Dr. Kirkpatrick of Canada appears among the number.

Dr. Eason Wilkinson, President of the British Medical Association for 1877-78, died on July 26th.

## Book Notices.

*Tubercular Laryngitis.* By WM. PORTER, M.D., St. Louis.

*Post-Nasal Catarrh.* By WILLIAM PORTER, M.D., St. Louis.

*Bibliotheca Medica.* ROBERT CLARKE & Co., Cincinnati, U.S.

*Boston University School of Medicine, Sixth Annual Announcement and Catalogue, June, 1878.*

*Transactions of the Medical and Chirurgical Faculty of the State of Maryland, 80th Annual Session, 1878.*

*On the Nature and Pathological Histology of Psoriasis.* By A. R. ROBINSON, M.B., L.R.C.P.S., Edin. New York, 1878.

*Report of the Resident Physician at Brigham Hall, a Hospital for the Insane, for the year 1877.* Canandaigua, N.Y., 1878.

*Treatment of Strumous Disease, by the Solfataria Method.* By HORATIO R. STORER, M.D., Newport, R.I., Cambridge, 1878.

*The Treatment of the Genito-Urinary Organs, The Use of Electricity, Damiana, &c.* By John J. Caldwell, M.D., Baltimore.

*The Pocket Therapeutist and Dose Book.* By Morse Stewart, jun., B.A., M.D. Detroit: Emil Schobar, Printer, 1878.

*Involuntary Action of the Nervous System.* By John J. Caldwell, M.D., Baltimore. Read before the American Dental Convention, Aug. 17th, 1877.

*Medico-Legal Evidence, relating to the Detection of Human Blood, presenting the alterations characteristic of Malarial Fever.* By JOSEPH JONES, M.D., New Orleans.



*A Case of Cleft Palate with Acquired Deaf-muteism; Staphylophary. Recovery.* By ADOLPH ALT, Toronto; New York: WM. WOOD & Co.

*Batley's Operation.—Three Fatal Cases, with some Remarks upon the Indications for the Operation.* By GEORGE J. ENGLEMAN, M.D., of St. Louis, Mo.; New York: WM. WOOD & Co.

*Address Delivered before the American Medical Association, at its 29th Annual Session, held at Buffalo, June 4th to 7th, 1878.* By T. G. RICHARDSON, M.D., of New Orleans, President of the Association.

*A Case of Endothelioma of the Intervaginal Space of the Optic Nerve—Removal with Attempt to Preserve the Eyeball—Subsequent Enucleation on Account of Uncontrollable Hæmorrhage—Remarks.* By DR. ADOLPH ALT, Toronto; New York: WM. WOOD & Co.

SCROFULA.—Dr. T. C. Albutt said he had long discarded scrofula as a misleading term. He had taught for fifteen years that a scrofulous patient was simply a bad healer, one in whom light lesions were not easily thrown off and forgotten. The so-called scrofulous neck, long regarded as the expression of a special systemic vice, probably always took its rise as a bubo from some irritation of mucous membrane in the throat or ear. Mr. Teale and himself had treated several of these cases—most successfully by free incision and enucleation. In some cases, this had been before the constitution had given way, and in these the results were brilliant. It was found that under the larger glands often lay lesser ones, these in turn leading to some deep-seated, perhaps half cretified "kernel," the unnoted offspring of some long forgotten tonsillar or other irritation.

CARBOLIC ACID POISONING.—Dr. Senftleben recommends sulphuric acid as an antidote; it produces sulpho-carbolic acid, which is innocuous. R. Acid sulph. dil, 1 part; gum water, 200 parts; syrup, 30 parts. One tablespoonful to be taken every hour.

## Meetings of Medical Societies.

### CANADA MEDICAL ASSOCIATION.

#### ELEVENTH ANNUAL MEETING.

The eleventh annual meeting of the Canada Medical Association was opened on September 11th at Hamilton, when there was a large representation present. The President, Dr. Workman, Toronto, occupied the chair, and beside him were Drs. Macdonald, Hamilton, Vice-President for Ontario; Botsford, St. John, and Brodie, Detroit, the latter gentleman coming as the representative of the American Medical Association.

The following members were in attendance:—Drs. Thomas Pyne, Charles W. Covernton, Toronto; A. G. David, Montreal; A. E. Malloch, Hamilton; Joseph Workman, Toronto; J. D. Macdonald, T. S. Covernton, Hamilton; A. Alt, Toronto; S. B. Botsford, St. John; Wm. Canniff, Toronto; Wm. A. Mullin, Hamilton; James Kerr, Londonderry, N.S.; Henry T. Ridley, Charles F. A. Locke, Hamilton; B. H. Lemon, Thorold; James Stuart, Brucefield; George M. Shaw, Hamilton; A. H. Wright, R. B. Nevitt, Toronto; J. M. Wallace, Hamilton; L. McFarlane, Toronto; James White, Hamilton; N. E. Mainwaring, St. George; Jas. Leslie, W. L. Bullen, T. H. Wilson, Hamilton; A. T. Fraser, Sarnia; Robert A. Pyne, Toronto; F. Burt, Paris; Albert Senkler, Toronto; R. M. Bucke, London; A. Woolverton, Hamilton; I. H. Cameron, Toronto; Edward O'Neil, G. L. McKelcan, Hamilton; E. Robillard, Montreal; R. Zimmerman, Toronto; I. Ryall, Hamilton; W. Philp, Waterdown; W. Oldright, Toronto; T. Mack, St. Catharines; E. N. Brush, Utica, N.Y.; T. W. Mills, Hamilton; J. A. Temple, Daniel Clark, Toronto; John M. Fraser, London; H. Orton, Ancaster; J. Fulton, Toronto; D. McLaren, Paisley; John S. Bray, Chatham; A. McKay, Ingersoll; H. M. McKay, Woodstock; H. H. Scott, Ingersoll; J. T. Moore, Tilsonburg; Thomas Bowers, Ingersoll; T. M. Burgess, London; A. A. Riddell, Toronto; Robert J. Colenso, London, Eng.; Thomas White, Thomas Miller, Hamilton.

#### NEW MEMBERS.

The following were elected during the meet

ing:—Drs. L. McFarlane, R. B. Nevitt, A. H. Wright, Toronto; James White, Hamilton; F. Burt, Paris, Ont.; R. A. Pyne, A. E. Senkler, Toronto; Titus Crooker, A. Woolverton, Geo. Mackelcan, C. F. Bullen, George Shaw, Ryall, C. F. A. Lock, Thomas White, W. Miller, E. O'Neil, J. H. Wilson, Hamilton; R. M. Bucke, London; J. M. Wallace, Hamilton; B. H. Lemon, Thorold; J. Stewart, Brucefield; W. L. Billings, J. Leslie, T. W. Mills, Hamilton; R. J. Colenso, Visiting Member from England; A. S. Fraser, Sarnia; N. E. Mainwaring, St. George; Dr. McCallum, Dunville; Dr. Clark, Paris; Beemer, London; Burnett, Peterboro'; Dr. Kittson, Dr. Reid, Hamilton; McCargow, Caledonia; Powell, Ottawa; Dr. Read, District Asylum West Pennsylvania; O'Reilly, Paris; O'Reilly, Toronto; Drs. Harrison Selkirk, Stark, Hamilton.

After routine business, the chairmen of the following committees reported:—Surgery, Dr. Malloch; medicine, Dr. Mullin; medical literature, Dr. Ridley; climatology, Dr. Playter; necrology, Dr. Riddell. These reports, with the President's address, and the various papers were referred to the Publication Committee, and will, we hope, be published. The President's address was listened to with great attention and called forth frequent applause. During the second day's session, Dr. Brush of the Utica Asylum, N.Y., exhibited some beautifully prepared sections of the brain, showing various pathological conditions. Dr. Roddick of Montreal gave a demonstration of Lister's antiseptic dressing.

The following are the officers elected for the ensuing year:—

For President—Dr. Macdonald, of Hamilton.  
 General Secretary—Dr. David, of Montreal.  
 Treasurer—Dr. Robillard, of Montreal.  
 Vice-Presidents, Ont.—Dr. Bucke, of London.  
 Quebec—Dr. Howard, of Montreal.  
 Nova Scotia—Dr. Kerr, of Londonderry, N. S.  
 New Brunswick—Dr. George Hamilton, of St. John, N. B.

Committee of Arrangements—Drs. Bucke, Fraser, Stevenson, Payne and Cattermole.

Committee of Publication—Drs. Osler, F. W. Campbell and Fenwick.

Committee on Medicine—Drs. I. H. Cameron, Toronto; George Ross, Montreal, and R. Zimmerman, Toronto.

Committee on Surgery—Drs. Canniff and McFarlane, Toronto, and Roddick, Montreal.

Committee on Obstetrics—Dr. McCallum, Montreal; Dr. Fraser, London; and Dr. Robillard, Montreal.

Committee on Therapeutics—Dr. Parker, Halifax; Dr. Kollmyer, Montreal; and Dr. Fraser, Sarnia.

Committee on Medical Education—Drs. C. Covernton, Workman, and Marsden.

Committee on Climatology.—Drs. Botsford, Larocque, Kerr, and Oldright.

Committee on Ethics—Drs. Howard, McDonald, Hingston, Robillard, Parker, Grant, Botsford, Marsden, Bucke, and Clark.

On motion it was decided that London, Ont., should be the next place of meeting, and that the time should be the first Wednesday in September, 1879.

The following papers were read and discussed:—

1. Double Synchronous Amputation of Thighs.—Dr. Bray, Chatham.
2. Joint Disease.—Dr. Hingston, Montreal.
3. The Functions of Ophthalmoscopy.—Dr. Reeve, Toronto.
4. Cheyne-Stoke's Respiration.—Dr. Zimmerman, Toronto.
5. Extra Uterine Pregnancy.—Dr. Kerr, Londonderry, N.S.
6. Removal of Retained Secundines.—Dr. Howard, Montreal.
7. Diseases of the Eye in Relation to General Diseases.—Dr. Alt, Toronto.
8. Displacements of Uterus—Dysmenorrhœa and Sterility.—Dr. Rosebrugh, Hamilton.
9. Indications for Enucleation of the Eye-ball.—Dr. Rosebrugh, Toronto.
10. Medical Testimony.—Dr. D. Clark, Toronto.
11. Diphtheria.—Dr. Canniff, Toronto.

#### PAPERS ON

12. Aphasia.—By Dr. Freeman, Milton;
13. Posology.—By Dr. Kollmyer, Montreal;
14. Rotation of the Fœtal Head from Occiput Posterior.—By Dr. Ross, Toronto;
15. Cheiloplastic Operations.—By Dr. Oldright, Toronto;

were read by title, there not being time to get through the list. Dr. Roddick, of Montreal, read a paper on Listerism, and gave the details of several cases treated antiseptically.

### Miscellaneous.

**VOMITING OF PREGNANCY.**—Tannin in one and a-half grain doses, morning and evening, has been recommended as efficient.

**CRACKED NIPPLE.**—Immediately after the child has sucked, acacia powder should be thoroughly dusted over the surface.

**OXYURIS VERMICULARIS.**—Inject hot tar soap suds, followed by weak solutions of sulphate of zinc.

Dr. W. E. Bullard reports a case of anæmia from hæmatemesis cured by intravenous injection of milk.

Dr. Crawford W. Long, of Athens, Georgia, the discoverer of modern surgical anæsthesia, died on June 15th, 1878, aged 63.

**ACUTE ATROPHY OF THE LIVER IN AN INFANT.**—Senator reports a case occurring in a child 8 months old.

Bartholow points out that bromine acne may in part at least be prevented by the conjoint administration of Fowler's solution in doses of 3 to 5 minims thrice daily.

**SCIATICA.**—Ether hypodermically behind the great trochanter in doses of from 15 to 30 drops is said to cure some obstinate cases of sciatica.

**UNUNITED FRACTURES.**—Mr. Fitzgerald, of Australia, strongly advocates the injection of glacial acetic acid, 5 to 10 minims, between the ununited ends of the bones.

**HIGH TEMPERATURE.**—Mr. Seale, of Scarborough, brought before the Clinical Society of London a case in which the temperature reached 122F., and yet the patient recovered.

**GONORRHEAL TESTIS.**—First apply a layer of carded cotton, and then over this some caoutchouc cloth, the parts being supported by a suitable suspensory. The scrotum may be painted with iodine first.

**NECROLOGY.**—We learn of the death, at Toulouse, of Dr. Foville, formerly physician-in-chief of the Asylum of St. Yon, at Rouen, and of the *Maison de Charenton*. During his *internat* at *la Salpêtrière*, where he served under Pariset, Rostan, Terrus, and Esquirol, he published important works upon the structure and functions of the nervous system, and notably upon cerebral localizations. In 1825, on the recommendation of Esquirol, he was appointed physician-in-chief of the newly-instituted Asylum of St. Yon, at Rouen. In 1833 his failing health obliged him to resign, and for some years he travelled as medical adviser to the Prince *de Joinville*, and took part in scientific excursions in Africa and America. In 1840, on the death of Esquirol, he was appointed physician-in-chief of Charenton. In 1844 he published a volume and an atlas on the anatomy of the brain. Dr. Foville leaves three sons, of whom two are brilliant pupils in the Polytechnic school, and the third, Dr. Achille Foville, now physician-in-chief to the Asylum of *Quatre-Maries*, at Rouen, is already known for his very remarkable and justly esteemed works upon mental diseases, and bears most worthily his father's name. Dr. Bouneau, formerly *Médecin des Hôpitaux de Paris*, died on the 1st of July last, aged 87. He was of the Seniors amongst French physicians, and one of the last survivors of that great generation which has produced so many distinguished men. Honours were not wanting in his career: physician for 30 years to the Hospital of *l'Enfant-Jésus*, one of the Inspectors of the Paris Asylums; he was remarkable for a courageous devotion during all epidemics, notably during the cholera of 1849, and was rewarded therefore by the decoration of the *Légion d'Honneur*.

### Births, Marriages, and Deaths.

#### BIRTHS.

At Toronto, on August 26th, the wife of E. W. Spragge of a son.

#### MARRIAGES.

On September 18th, at Beamsville, Dr. J. T. Gilmore, of Kettleby, to Emma, third daughter of Mr. Morgan Hawkins, of Canton, Ont.

On September 18th, at Toronto, Daniel McKenzie, to Alice Maud Mary, daughter of the late Dr. Buchanan, of Toronto.

At Toronto, on September 17th, W. Britton, M.D., to Mina, second daughter of F. A. Moore, Esq.

At Toronto, on September 12th, Beresford T. Gahan, M.D., M.C.P.S., Ont., to Fanny Gray, second daughter of the late Wm. Strike, Esq., Co. Waterford, Ireland.

#### DEATHS.

At Uxbridge, on the 26th inst., at the residence of his son-in-law, J. Bascom, M.D., of paralysis, Benjamin Workman, M.D., formerly of Toronto and Montreal, aged 83 years and 11 months.