Technical and Bibliographic Notes / Notes techniques et bibliographiques

Canadiana.org has attempted to obtain the best 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.

Canadiana.org 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.

- ☐ Coloured covers / Couverture de couleur
- ☐ Covers damaged / Couverture endommagée
- ☐ Covers restored and/or laminated / Couverture restaurée et/ou pelliculée
- ☐ Cover title missing / Le titre de couverture manque
- ☐ Coloured maps / Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black) / Encre de couleur (i.e. autre que bleue ou noire)
- ☐ Coloured plates and/or illustrations / Planches et/ou illustrations en couleur
- ☐ Bound with other material / Relié avec d'autres documents
- ☐ Only edition available / Seule édition disponible
- ☐ Tight binding may cause shadows or distortion along interior margin / La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure.

- ☐ Coloured pages / Pages de couleur
- ☐ Pages damaged / Pages endommagées
- ☐ Pages restored and/or laminated / Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached / Pages détachées
- ☑ Showthrough / Transparence
- ☑ Quality of print varies / Qualité inégale de l'impression
- ☐ Includes supplementary materials / Comprend du matériel supplémentaire
- ☐ Blank leaves added during restorations may appear within the text. Whenever possible, these have been omitted from scanning / Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été numérisées.

☑ Additional comments / Commentaires supplémentaires: Continuous pagination.

THE CANADA LANCET

VOL. XXXIII. TORONTO, MARCH, 1900. No. 7.

PEPTONES IN TYPHOID FEVER.*

FREDERICK FENTON, M.D.,

Demonstrator of Histology, Trinity Medical College.

I desire to present to you the notes of two cases of typhoid fever in which I used peptone feeding with marked benefit.

The first case was that of a man aged 21 years, a patient in Toronto General Hospital during the fall of 1892.

He had passed through a severe attack of typhoid and after a few day's convalescence had relapsed.

His temperature was high (104°) from the begining of the recrudesence with low muttering delerium, carphologia, subsultus, uncontrollable vomiting, pulse almost imperceptible, mouth everywhere lined with sordes. The patient would slip down into the middle of the bed if left for even a few minutes.

He was emaciated to an extreme degree and with the prospects of another three weeks of fever, offered but small encouragement to his attendants. He was given large amounts of stimulant of all kinds, alcoholic and otherwise, but without any perceptible influence on his pulse or condition generally.

To make matters worse, on the second or third day of his relapse a pneumonia developed, and patient apparently lost the power to swallow.

From the first, owing to the vomiting, nutrient enemata of milk had been used to supplement what was being taken by the mouth, but the inability to swallow left us wholly dependent upon rectal feeding.

Four ounces of peptonized milk were given every two hours and retained fairly well for a day or two, but with no improvement in the condition, until the idea of giving completely digested proteid in large amounts was suggested. The whites of ten hard boiled eggs were finely minced and mixed with a pint of an artificial gastric juice made of pepsin and HCl in due proportions and kept at body temperature in a water bath for some hours until no trace of egg was left on inspection.

This quantity was administered every twenty-four hours with an equal amount of thoroughly peptonized milk, being injected high up into the rectum.

* Read before the Toronto Clinical Society.

All stimulants, etc., were given with the enemata and a few miniums of Liq. Opii. Sed. were added when the rectum became irritable.

Improvement was marked in a comparatively few hours and owing to the irritable condition of the stomach nothing was given by mouth till about the third day.

The further progress of the case was uneventful, the disease terminating favorably in about three weeks.

The patient put on flesh even during the period of fever, so that when convalescence was established he was apparently fatter than when first admitted.

The second case is a boy about 11 years who is in the Tor. Gen. Hosp. at present convalescing.

I saw him about the fourth day of his attack and had him removed to the hospital.

He was in a very poor condition, low muttering delerium, carphologia, subsultus, tongue dry and brown, pulse very small and dicrotic, with involuntary motions and very marked distension, all symptoms of grave import occurring so early in the disease.

He was purged and given salol and stimulants, alcoholic and otherwise, freely, but it was impossible to get him to take more than a few ounces of milk daily. Two or three days after admission he developed a troublesome, hacking cough, and began to have attacks of cyanosis during which his pulse became almost imperceptible and his limbs cold.

There was marked consolidation of the base of the right lung and some crackling rales heard over the left, behind. In addition to what he took by mouth nutrient enemata were ordered every four hours, consisting of two ounces of milk and one egg, the mixture being peptonized for some hours.

In thirty-six hours the cyanosis disappeared with a corresponding improvement in the other unpleasant symptoms.

This patient, like the last, was greatly attenuated at the beginning of his illness and had every appearance of poor resisting powers.

Now, while the administration of nutrient enemata is a very old story, the point I wish to make is that when such a procedure becomes necessary the constituents of the enema should be essentially nitrogenous, and that more especially so in febrile diseases.

The large intestine is adapted only for the absorption of water and with it substances in solution. There being no villi or lacteals, the absorption of fats is practically nil, hence the proteid and sugar of the milk are the only elements to be counted on.

Now, milk contains on an average about four per cent. of proteid and as one must be careful to make the enema as small as possible to ensure its retention, particularly in typhoid, the quantity is wholly inadequate to nourish the body under ordinary circumstances without allowing for the rapid tissue destruction produced by the disease.

The large residue of unabsorbable fat in milk also undergoes change and the fatty acids produced irritation of the rectum and rapidly make it intolerant of further feeding.

In the first case pepsin and HCl were used to digest the egg and this possesses decided advantages over the pancreatic extract in that the products of pancreatic digestion if not soon absorbed are prone to undergo further splitting up with the formation of leucin and tyrosin and consequent lessening of its nutritive value and increase of rectal irritation.

Another reason for the increase in proteid aliment is that it is the destruction of the albuminous constituents of the tissues which is most serious in the severe cases.

The fats may be burned up with greater impunity and can be replaced later on, but the heart muscle can only be sustained by nitrogenous material.

Again, the large intestine being devoid of those structures which ensure rapid absorption as well as those secretions which tend to prevent decomposition, it is most important that all substances presented to it for absorption should be in as complete a state of solution as it is possible to make them before their injection and for this reason I think that albumen which has been precipitated (as in hard boiled egg), and subsequently dissolved completely by pepsin is more reliable than otherwise, as here inspection is sufficient to inform one when the process is complete; whereas with egg albumen or caesin in an unperceptible condition one is deprived of that simple test and has no guarantee that the ferment used has been, or will ever be instrumental in producing the required change.

SUBCUTANEOUS ABSCESSES IN CONNECTION WITH A BACILLUS IN THE CIRCULATING BLOOD.

BY THOMAS BRADLEY, M.D.
Late House Surgeon, Toronto General Hospital.

T. P., aged 21 years, has been troubled for the past ten years with what he describes as boils. For the first two or three years they appeared only in the winter, and in successive crops. The favorite situations were the arms, thighs, face and neck. Between eruptions at one or more of these situations, patient was never entirely free from them. After about three years in this condition the time of year seemed to have no influence, eruptions appearing at any season. This continued until two years ago when there was an eruption covering the whole body. At the same time the right fore-arm and arm were swollen to a size nearly half as large again as normal with marked involvement of the epitrochlear and axillary glands. The cervical and submaxillary glands were slightly enlarged. After two months stay in the hospital he was discharged as cured. Shortly, however, the disease repeated itself.

I saw the patient for the first time in Dec. 1898. His left hand was immensely swollen with a discharge of pus at the base of the proximal phalynx of the little finger. The left fore-arm was also much swollen and had two or three points of discharging pus. In most cases these points of breaking down and sloughing were more depressed than the ordinary boil. Others however were not unlike the ordinary furunculus, beginning in a raised angry looking spot and terminating in gangrene of

the central part which was eventually cast off in the form of a slough. For some days before a visitation the patient complained of an intense heat over the whole body. He was dull and indisposed to any exertion. This condition alternated with severe headaches. He was always, but especially at this period troubled with constipation. Other than the above the patient appeared to enjoy fair health As regards urinalysis, of which a number were made, there was nothing abnormal excepting on one occasion when pus was found. The blood was also examined, and found to be in a normal condition.

The patient had been steadily under treatment for two years before coming to me. I learned from a prescription he showed me, that he had been taking iodide of potash and bichloride of mercury. Suspecting syphilis I again went into his history carefully but could find no trace. I put him on arsenic, strychnine and calcium sulphide. He was ordered to take a bath every night followed by a sponging over the whole body with carbolic acid (1 in 60). Under clothes were changed frequently. Calomel in 4 gr. doses followed by salines every 5 days was also ordered. After one week patient was feeling better and boils had nearly all disappeared. Ten days later, however, he was much in the same condition as he was when I saw him first. The hand was even more swollen and painful. Hereupon I made a culture on blood serum from the pus of one of the abcesses that had not yet been exposed. I inoculated another tube of blood serum with a specimen of the blood. After 24 hours in the thermostat a very free growth was present in both tubes. Cover-glass preparations of the specimen taken from the culture inoculated with the pus showed a mixed growth viz:—staphylococcus pyogenes aureus and a bacillus, to be aftewards described. The culture from the blood showed the same bacillus and a few cocci. In like manner another specimen of blood was examined revealing in an apparently pure state the same bacillus as was present in the last specimen I referred the matter to Dr. H. B. Anderson and he advised more strict bacteriological technique, stating that it was possible that the organism found was a contamination. A good hypodermic syringe was selected and allowed to remain in a solution of carbolic acid (1 in 10) for ten minutes after which it was boiled in a strong solution of bicarbonate of soda for 45 minutes. The patient's forearm was washed with soap and water then sterilized with carbolic solution (1 in 20) and finally with ether and alcohol. I thoroughly washed my own hands and sterilized them in carbolic acid (1 in 20). Blood was withdrawn by means of the prepared hypodermic syringe from the median basilic vein and injected into liquified agar and plated at once. After 24 hours in the incubator there were innumerable colonies, of different shapes and sizes, viz:—round, branched and beaded, and on the level or above the surface of the media. Ten different colonies, taking as many different forms and as far removed from each other as possible were examined, revealing in each case the same micro-organism. Again and under every precaution I inoculated slant blood serum with blood in the following order 2 from 1, 3 from 2 and so on to 4. Each time more liquification occurred. No. 1 showed a brownish purulent scum, No 2 slightly liquified and No. 4 thoroughly liquified holding in suspension a

whitish flocculent material. Each tube contained the same organism but it became smaller and apparently less abundant at each inoculation. Another agar plate culture was made and examined for colonies 18 and 24 hours later. At the former period none were visible, but at the latter there were many and of the same appearance as those in first plate. A number were examined microscopically and showed the same bacillus. From original agar plate I innoculated beef broth. After 24 hours' growth in thermostat media contained few bacilli but those present were remarkably well defined. After 4 days, organism was yet quite distinct and more numerous, and the medium contained a white flocculent material clinging to the glass at junction with the bouillion. The bacilli vary much in length from rod-shape to filaments. The rod-shaped are large and more or less uniform in length and thickness. The filamentous structures have not, as yet, under examination shown any movements, although all other characteristics correspond with the short rod shaped forms. In many cases they appear to have transverse markings, many of which are distant from each other the length of one of the short rod-shaped bacilli. In a hanging drop examination the bacillus shows four distinct movements. There appears to be a fifth movement but I am not certain as to its real existence. Its movements are rapid, more so than those of the typhoid bacillus. In one case it moves across the field in a zig-zag manner throwing its body at different angles from right to left thus:—motionless, ⋀⋁ moving,—motionless. In another movement it partially turns upon itself first to one side and then to the other, thus:—motionless, ⌒ ⌣ ⌒ moving—motionless. The third movement is snake-like. The last distinct movement is one in which the bacillus turns completely upon itself, forming what looks like a coccus, after this fashion:—motionless ● ● ● ● moving,—motionless. The doubtful movement appears to be up and down or a turning end for end in a regular manner without bacillus quitting its ground.

From original agar plate culture, I inoculated agar slant and blood serum.

The following is the result of examination: In agar tube, bacilli were from ordinary size to very small and thin. Taking two of the same length, one was thick and the other thin. Many appeared to be turned upon themselves. In blood serum tube, organism appeared to be divided into segments, others probably thicker at one end than at the other, and some of ordinary size.

I inoculated another series of tubes as follows:

From original agar plate culture to bouillion; from bouillion to blood serum; from blood serum to blood serum.

The following is the result of examination: In the specimen from bouillion the organism was shorter than usual. The first blood serum showed bacilli varying in size from the smallest to the largest yet seen. Many appeared broken up and others turned upon themselves. In the second blood serum culture organism was more uniform, but also varied in size.

Three agar plate cultures were now made in order to dilute the growth, and so examine the different colonies with more accuracy. The procedure was after the ordinary method. Examination proved the

following: No. 1 plate—Seven colonies, although differing in size and shape, showed the same organism, differing only in a few of the colonies as to length. No. 2 plate—In ten colonies the same bacillus was present, but varied more in size than those of the first plate. In one case the longer, or filamentous, were run together into clumps. This variety is, when present, always associated with the short rod-shaped. No. 3 plate —In five colonies the same bacillus was present.

The following is the result of 44 hours' growth in thermostat on litmus milk, gelatin and potato:

Litmus milk—Bacillus was of medium size and media of a dirty white color. In 48 hours (but 4 hours later) media showed slight coagulation, and was almost clear white in color. After 72 hours there was marked coagulation, and in 19 days nearly half the media was so involved. Coagulation never increased after this time, but the remaining part of the media became like muddy water in appearance.

Gelatin—Bacillus slightly shorter and thicker than usual. There was a light gray or dirty white discoloration of the upper portion of the media.

Potato—Few bacilli, but of ordinary size. The media was furrowed. The parts between the furrows were covered with a creamy scum, while the furrows themselves were dry and brownish.

Stab culture was made out on each of the following: Gelatin, agar, glucose agar and gelatin agar.

Gelatin—After 24 hours at ordinary temperature of a room there was no change in medium. After seven days there was no liquifaction, but a light gray discoloration extended over the course of the stab. The media was slightly split (probably due to drying). The organism was large and spores were present.

Agar—Medium slightly split and the whole surface covered with a scum. In the course of the stab there were two or three air bubbles.

Glucose agar—At entrance of the stab there was a slight elevation, which was of a deeper color than the medium. The surface of the rest of the media presented a thick and dirty cream-like color, which was continued over the whole course of the stab. There were gas or air bubbles in the course of and at some distance from the stab.

Gelatin agar—The surface of the medium was much the same in appearance as that of glucose agar. There was a slight funnel shape along the line of inoculation.

In any of the above cases it is doubtful whether there was any growth below the surface of the media, excepting in glucose agar.

Probably Grows Without the Presence of Oxygen.

A stab culture in agar was made and liquefied agar poured over it. I also inoculated a blood serum tube and applied Buchner's method. These were allowed to remain in the thermostat for 24 hours before examination. In each case the bacillus was present, but I think in not so healthy a condition as under ordinary circumstances.

Action with regard to Hydrogen Gas.

Inoculated agar, bouillion and blood serum, and placed them in an atmosphere of pure hydrogen. At the end of 27 hours the surface of the

agar was covered with a slight scum. The bouillion and blood serum presented no appearance of growth. The three tubes were then placed in the incubator. After 24 hours all except the bouillion showed a growth both from the appearance of the media and under microscopical examination.

Carbolic Acid.

A solution of carbolic acid and boullion (1 in 125) was inoculated and placed in the thermostat. After three days there was a growth, but at the end of the fourth day the organisms were dead.

Gives Reaction for Indol.

It was twelve hours after the addition of sulphuric acid and sodium hyposulphite to the media (Dunham's solution) before any reaction was noticeable. The smaller the amount of the media tested, the deeper the color or reaction.

Action Towards Different Staining Reagents.

It stains by Gram's method and with all the ordinary reagents, but especially well with gentian violet.

Action on Rabbits and Guinea Pigs.

Inoculated a guinea pig subcutaneously. In 24 hours its temperature per vaginam was $101\frac{1}{5}^\circ$ and there was a profuse diarrhœa. The animal was very dull and apparently quite ill. The temperature remained between 100 and 102° for six days. After 10 days the animal died. The autopsy revealed nothing abnormal, further than more than an ordinary amount of fluid in the peritoneal cavity. Boullion was inoculated with specimens taken from the peritoneal and pleural cavities, also from the liver and heart. There was no growth. Selected a large, plump rabbit. Its temperature per rectum was 99° (considered normal). Injected a hypodermic syringe full of a growth on boullion 24 hours old into the posterior auricular vein. The temperature ranged as follows:

	Morning.	Evening.
Third day after inoculation.....	$99\frac{2}{5}$	101
Sixth " "	$102\frac{2}{5}$	$102\frac{3}{5}$
Seventh " "	$103\frac{2}{5}$	104
Eighth " "	102	$102\frac{3}{5}$
Ninth " "	102	$102\frac{2}{5}^\circ$

When the temperature was at 104° (seventh day) there was a profuse diarrhœa. Three weeks after this inoculation inoculated the same rabbit subcutaneously in the flank with a boullion culture 72 hours old. In 24 hours the animal had a temperature of $103\frac{1}{2}^\circ$ and much diarrhœa. At the point of infection there was a semi-solid, raised mass about the size of a chestnut. Twenty-four hours after the swelling was of an elastic feel. The temperature was $103\frac{1}{5}^\circ$ and diarrhœa continued. One week after flank inoculation the temperature was $102\frac{1}{2}^\circ$. For one month after this the fever fluctuated between $102\frac{1}{2}$ and 100°. Six weeks later it was $99\frac{1}{2}^\circ$. There was now merely a scab remaining at the point of inoculation; the diarrhœa had ceased, but the animal was markedly reduced.

Five months after the first specimen of blood was examined another was examined, revealing in every respect precisely the same bacillus in the one case as in the other.

In September, 1899, the patient's left hand, forearm and axillary glands were extensively involved. The hand was swollen fully double its normal size. In the palm was a hard, non-movable mass about half the size of a hen's egg. Over the posterior surface of the forearm a number of abscesses had become confluent and were surrounded by a large purulent surface of a deep red discoloration and much induration of the underlying tissues. A hard mass was present at the bend of the elbow, making flexion almost impossible. At the outset of this attack the whole arm became suddenly powerless and remained so for two days. One month later right axilla, arm and forearm were tremendously swollen. Axillary space was so much filled up that arm could not hang by the side of the body. The sensation conveyed on palpitating was something like the grasping of a base-ball. Nodular masses could be felt throughout.

Although publishing the above as a clinical report, I may say, from the data here given, I have not been able to find a corresponding bacillus under similar conditions or otherwise.

Abdominal Pain.

There is no symptom that is more deceptive than a pain situated in some part of the abdominal cavity. All the intra-abdominal conditions which give rise to pain may present this symptom over the immediate site of the affected region, or the pain may be of so vague a character as to afford little or no exact indication, and, finally, it may be referred to a part of the abdominal region situated at a distance from the part which is affected. It must also be remembered that some active inflammatory disturbances, such as appendicitis, occasionally arise without causing any pain whatever. Moreover, we know that even severe abdominal pain may occur as a consequence of disease which in no wise implicates the abdominal cavity. This occasionally occurs in pleurisies, and the writer within a few days has seen a case of severe infectious pericarditis in which the pain was referred to the umbilical region, and appeared to be of an excruciating character. In appendicitis the pain is not infrequently referred to the right side In cancer of the stomach or duodenum the pain often varies greatly as to its situation. In ulcer of the stomach the pain is often referred to the back, at the site of the lower dorsal spines. In various forms of intestinal obstruction the pain is often of so irregular a nature as to form but an exceedingly slight indication of the location of the trouble. In hepatic inflammation we are all aware that disturbance in the right lobe usually gives rise to pain in the right shoulder, while trouble of the left lobe may give pain in the left shoulder, owing to those filaments of the phrenic nerve which enter the liver. We are also familiar with the pains in the thigh and in the testis due to renal calculus, and with the remarkable variety of pains seen in aneurism of the abdominal aorta. Abdominal pain is therefore so puzzling a factor, and its absence such an insignificant one, in disease affecting the abdominal cavity, that we can but seldom rely upon it alone in making a diagnosis.—*International Journal of Surgery.*

OPERATIONS FOR SOFT CATARACT.

BY DAVID WEBSTER, M.D., NEW YORK.

Case 1. Congenital Cataract.

The youngest person I ever operated upon for cataract was Robert Jones, of Schaghticoke, N.Y. He was brought to me at the Manhattan Eye and Ear Hospital on Oct. 30th, 1889, and I needled his right lens for congenital cataract on the day that he was nine weeks old. There was a history of ophthalmia neonatorum, and it was not noticed that the pupils were white until the child was two weeks old. It was proposed that we should get rid of the cataract in the right eye before we did anything to the left. On Oct. 31st I punctured the centre of his right anterior capsule under cocaine. A weak solution of atropine was dropped into the eye, and it was then closed by a compress of absorbent cotton, held in place by strips of adhesive plaster. There was no redness of the eye during recovery from this operation, and the child was discharged on the fourth day. On the 18th of December following, I needled the lens a second time. The same treatment was pursued and the child was again discharged on the fourth day without inflammatory reaction. On February 7th, 1890, I did a third needling, and three days later (Feb. 10th) I did a hook operation, removing some of the capsule and some of the remains of the lens, leaving a partially clear pupil. A few days later the child was taken home with the understanding that he was to be brought again to the hospital in April to have the other eye attended to. I got a letter from his mother instead, saying that the child had died of congestion of the brain. He died on March 18th, and the eye was "white like the other," and the pupil was clear black up to the time of his death. The cause of the congestion of his brain was unknown, but his mother thought that the excitement produced by the operations on his eye had something to do with it.

Case 2. Soft Cataract.

Mrs. L. B., aet. 21, was admitted to the wards of the Manhattan Eye and Ear Hospital Sept. 21, 1887, with soft cataract of the left eye, and good projection. The history was as follows: In August, 1887, she was very ill from a miscarriage. It was followed by a high fever, and she had six convulsions. To relieve the convulsions, ether, chloroform, etc., were administered. She is sure she could see as well with that eye as with the other before this illness. She noticed that she did not see well with the left eye immediately after her sickness. The cataractous lens was needled under cocaine anaesthesia. There was no reaction and she was discharged at the end of ten days. On March 19th, 1888, I did a second operation, making a free cut across the lens, horizontally, with a knife-needle. No reaction following, she was discharged on the third day. On May 4th, I again freely needled the lens for the third time. The eye remained perfectly quiet after the operation, so that, on May 9th, a fourth needling was done. I operated on the eye for the fifth and last time on Sept. 24th. No reaction followed, and on Sept. 26th, the patient was discharged with Vision=20/50 with + 12. D.s. combined with + o. 75 D c. axis 60°.

There was no cataract in the other eye, nor was there any history of traumatism. There seems to be no reasonable grounds to doubt that the

cataract, in this case, was the direct result of the severe illness which followed the patient's miscarriage.

Case 3. Soft Cataract.

Jefferson Hicks, aet. 4 years, was brought to me at the Manhattan Eye and Ear Hospital on April 12th, 1889, with mature cataract in both eyes. The cataracts had been first noticed when he was two years old. Having dilated his pupils with a weak solution of atropine, and having placed him under ether, I made a small incision in the centre of each of his anterior capsules with a knife-needle. On the 14th both eyes were somewhat more red than normal, and the little fellow had developed an apparent suppression of urine. The house surgeon attempted to pass a catheter but failed to enter the bladder. Some urine escaped soon after, however. On April 15th the child was restless and constipated, and had a temperature of 99¼°. A laxative was administered, but it failed to operate. On the 16th an enema was given, and it relieved the bowels and the bladder also. He recovered steadily after that, and on April 19th, a week after the operation, he was discharged. He was brought back on May 31st, and a second needling was done on each eye. There was no reaction following these operations, and on June 8th the *fundi* could be seen with the ophthalmoscope, and the optic disks looked atrophic. The patient was discharged with clear pupils.

Possibly the suppression of urine was due to the *atropine*, a drop of which was put into the eye operated upon once daily.

Case 4. Soft Cataract.

Gordon Hicks, aged two and a half years, a brother of the last patient, was brought to the hospital at the same time, and had the same history, namely, that his lenses were observed to be cataractous when he was two years old. His lenses were needled on the same day and with the same precautions as his brother's. Five days later (April 17th) it was noted that his cataracts were absorbing very rapidly, and that he was running about the room without colliding with the various articles of furniture. He went home with his brother on April 19th, and was brought back with him on May 31st. His cataracts were on that day needled again, and he was discharged on June 8th with clear pupils. As no note was made of any ophthalmoscopic examination in his case, I infer that he could not be kept quiet enough for that purpose.

327 Madison Avenue.

Incontinence of Urine.

Incontinence of urine in the female due to lack of power in the vesical sphincter is relieved, according to the *Journal of Medicine and Science*, by mimim doses of tincture of cantharides well dilut d.

According to the *Journal de Médicine de Paris* for July 2, Dr. Spaak of Brussels, has obtained excellent hemostatic results from a mixture of two parts of chloroform with 100 parts of water. This mixture is said to rapidly arrest bleeding after tooth extraction.—*Med. Times.*

Oil of erigeron, one to five drops every three hours, is valuable in uterine hemorrhages.—*Med. Times and Register.*

THAT RUNNING EAR.

By Perry G. Goldsmith, M.D., C.M., Belleville, Ont.

One need offer no apology for introducing this subject, since the condition is met with more frequently than any other aural affection and is more frequently disregarded than any other disease an ear may have. How frequently we hear mothers say, "it is only a gathering and will soon stop, anyway I don't believe in stopping it too quickly." Not only do the laity but, I am sorry to say, an occasional medical man declare that it is better not to meddle with these cases as the child will grow out of it. How the growing process takes place will be referred to later.

The object of my paper is to point out as well as I can the immediate and remote consequences of chronic suppurative catarrh of the middle ear, and to give a brief resumé of the various methods of procedure adopted in its treatment. This subject has been threshed out very thoroughly of late years, so I fear I shall be unable to add anything new, but I shall speak from an experience with a large number of suppurating ears which I was enabled to follow closely for some months at the Central London Nose, Throat and Ear Hospital, owing to the kindness of Dr. Dundas Grant. I am also able to draw some conclusions from a large number of private cases, a few of the most interesting of which have been added at the conclusion of this paper.

Frequency.—Barr says that 30-35 per cent. of all ear diseases belong to class called suppurative catarrh, 5 per cent. to the acute and the remainder to the chronic form. In the annual report of the Central London Nose, Throat and Ear Hospital I find that of the 2,953 cases of various ear troubles, 1,695 suffered from suppurative catarrh of the middle ear or of conditions directly due to previous suppuration. McNaughton Jones Stewart giving an analysis of 2,953 cases, places 1,136 under the head of suppuration of the middle ear. Various other authorities give practically the same percentage.

Causes.—Predisposing.

(1) Adenoids.
(2) A pre-existing discharge thought to be cured and with or without a dry perforation.
(3) Extension of disease from the external auditory meatus.

Exciting:—

(1) Exanthemata and influenza, especially scarletina complicated with nasal diphtheria.
(2) Extension through Eustachian tube.
(3) Action of cold both through the external auditory meatus and by causing the occurrence of acute adenoiditis.
(4) Traumatism—blows; foreign bodies and ill skilled efforts to remove them.

To emphasize the importance of diseases of the nose and pharynx as causes of middle ear mischief, I may quote from the report of the Central London Throat and Ear Hospital, 1886, where in 4,946 cases of nose, throat and ear trouble, 2,944 cases of aural mischief were ascribed to the nose or naso-pharyngeal vault.

BACTERIOLOGY.—Recent investigations, especially by Löwenberg, Netter, Zangal and Moss show that otorrhoea may be due to or at least be associated with certain micro-organisms acting either through the eustachian tube or the external auditory meatus. The chief organisms are :—

(1) Streptococcus pyogenes ;
(2) Staphlococcus pyogenes albus and aureus ;
(3) Frankel's pneumonoccus ;
(4) Friedlanders' pneumo-bacillus ;
(5) Tubercle bacillus.

Division.—Acute—during first three months of the discharge. Chronic—after three months. This is an arbitrary division but a practical one.

SYMPTOMS :—

I. Acute suppurative catarrh of the middle ear.
(*a*) A sense of fulness and pressure in the ear.
(*b*) Pain varying in severity from a slight discomfort to a distracting agony which may mask the ear affection entirely, especially in children.

Pain, however, may be entirely absent and nothing but a feeling of fullness and discomfort is noticed.

(*c*) Various disturbances of the digestive, and circulatory centres.
(*d*) Presence of discharge, usually bloody at first and followed by almost immediate relief of pain.

II. Symptoms of the chronic form.

The marked characteristic in this division is the almost entire absence of symptoms other than the presence of discharge which may be markedly intermittent and of varying consistency, and have an odor of all degrees up to a terrible stench. There are, however, symptoms for which the patient seeks relief other than the discharge.

(1) Impairment of hearing. This varies greatly. The amount of discharge and its duration does not give any accurate data from which we can say the amount of hearing our patient has.

(2) Tinnitus—A very annoying symptom but fortunately not nearly so frequent as in non-suppurative cases. Very frequently, however, tinnitus comes on permanently after the discharge has stopped and the membrane has closed up.

(3) Cerebral disturbances,—headache, nausea, giddiness or hemiplegia owing to intra cranial involvement.

(4) Pain—intermittent attacks of neuralgic pain over the corresponding side of the head owing to various degrees of mastoiditis.

(5) Facial paralysis—owing to carious involvement of the bony canal which carries the facial nerve.

COURSE.—This running ear may get well in a few days and the mucous membrane of the tympanic cavity be completely regenerated or it may within one week involve the mastoid cells and meninges. Fortunately, however, it most frequently stops short of the mastoid and leads to chronic thickening of the tympanic mucous membrane, destruction of the drum-head, caries and disintegration of one or more of the ossicles,

disease of the attic and mastoid autrum and later to formation of cicatrical bands which by binding the drumhead to the inner tympanic wall, seriously impair the auditory function.

Thus it is that a running ear may be either a comparatviely trivial affection or a symptom of a very grave and serious condition.

That the membrane lining the mastoid autrum is always involved in these cases has the endorsation of Dr. Dundas Grant of London and many others, but the process generally stops here. After having seen a large number of chronic running ears in which a radical operation was performed, I have no hesitancy whatever in stating that in all cases of old running ears the mastoid autrum is full of foul debris, the removal of which *alone* can *cure* the discharge.

The acute form may progress to mastoid involvement with wonderful rapidity. A case illustrating this occured in a patient under the care of Dr. Percy Jakins of the Central London Nose, Throat and Ear Hospital. The patient was a healthy-looking man 65 years of age, who had a discharging ear producing an earache six days previously. In this instance by firm pressure over the mastoid, pus welled out of the ear. On the other hand one knows of innumerable cases where a running ear has existed for ten, twenty or thirty years and no great inconvenience ensued. A case illustrating the length of time it may take to reach the meninges is shown by another patient of Jakins' where a patient with an otorrhœa of twenty years presented himself with nausea, headache, giddiness, unsteady gait and partial hemiplegia. In this case two ounces of foul pus were removed from the brain, a rapid recovery ensuing.

Some people appear to be very fortunate, for one frequently reads of cases or actually sees a case himself where in a chronic suppurating ear, not only has the mastoid been involved but the pus has worked out through the bone and burrowed into the superficial tissues of the neck, opening here and being cured.

PROGNOSIS.—If ever a guarded prognosis as to the outcome and duration of a case be given, it should be here. There is no symptom or group of symptoms which is indicative of the course the case will take; the apparently mild case at the beginning may lead to cerebral complications, while that case marked by the greatest constitutional disturbance at first may rapidly respond to treatment.

TREATMENT.—To give any routine treatment applicable to all cases is not only difficult, but useless. Each case must be treated according to the conditions present. The general rule which says to find the cause and remove it is the rule to follow before discharge.

(1) Very gentle hot water irrigation of the external auditory meatus is beneficial in relieving the pain. A mild non-irritating antiseptic may advantageously be added.

(2) Eustachian inflation is not advised by many noted authorities It seems to me to be indicated, since we generally have a partially blocked tube and a tympanum filling with serum. Before using a catheter, however, the pharangeal vault should be well cleansed and the mouth of the eustachian tube mopped well with some absorbent wool to remove that plug of mucus which is so frequently present.

(3) Thoroughly cleanse the external auditory meatus, since should we have a discharge it may be simply aseptic serous exudation, and may be rendered septic by influences acting from the meatus.

(4) Leeches in front of the tragus not only relieve pain, but deplete the engorged internal vessels. Leeching is particularly indicated in otitis media due to influenza.

(5) Administration of a brisk saline purge, preferably mag. sulph. in small and repeated doses.

(6) I do not think it is advisable to give morphia, as it masks the symptoms. Should the pain demand it, the drum head should be frequently inspected, in order that if there is to be a perforation it will be made by the surgeon.

(7) Poultices are bad, and usually dirty. They tend to produce softening and ulceration of the deeper parts. A compress of hot Lotio Acidi Boraci is not so bad, but the fashion of filling the ear with warm mush filled with micro-organisms is not only unscientific, but is real dirty.

(8) If the membrane bulges, and particularly if a yellowish spot be detected, paracentesis of the membrani tympani is the only sensible action. Not only do we thereby relieve the pain and deplete the engorged vessels, but we assist nature in what she is endeavoring to accomplish.

The amount of relief a patient may receive is shown by the following case: Gentleman aged 56, suffering from an intense ear ache of 12 hours duration to which he had been applying a bran mash. The severity of the pain was so great that when I saw him he was walking up and down his dressing room nearly distracted. After thoroughly cleaning the external auditory meatus I incised the bulging drum head and applied two leeches to the tragus, and within one hour he was sleeping quietly.

Regarding eustachian inflation in any manner after the appearance of discharge, opinions differ greatly. Personally, I am opposed to its adoption for at least 48 hours following the perforation. There are many remedies used as drops in the ear for the relief of pain, some of which are highly recommended but in my hands I must say all have been of but little use.

Barr advises 2 grs.—ʒi. of morphia, another 3 grs.—ʒi. of atropia sulph, Hemitson carbolic acid and glycerine. The alkaloids of cocaine and atropia in oil have been highly recommended, especially for influenza cases. Politzer uses 20-30 minums of equal parts of chloroform and olive oil, applying it on lint which is then placed over the ear.

Domestic remedies are as numerous as they are ludicrous, running from the juice of chewing tobacco (humanized extract) to *hen* oil.

Blisters have a two fold action, make a sore ear sorer and mask any mastoid involvement. The treatment would be very incomplete without immediate attention to the nose and naso pharnyx.

Treatment immediately after the discharge:—

Simple cleansing and retaining the asepticy of the canal is generally all that is required. Small strips of sterile gauze greatly facilitate drainage and in a measure prevent external infection. If the surgeon has incised the drum-head and the discharge remains aseptic the incision generally heals within 48 hours, though should it close and patient again

have pain re-opening will be indicated. Avoidance of cold and alcohol should be advised as well as daily cleansing of the naso-pharyngeal vault. Although there are numberless cases of acute purulent otitis media which without any treatment whatever get well, yet there is usually left a deranged condition of the mucous membrane lining the tympanum and ossicles, which gradually in the course of years brings about interference with the conducting function of the ossicles, and deafness which requires a great deal of time and patience to improve and in which even then relapses and steady progress towards almost total deafness is not uncommon.

Treatment if the Discharge Persists with Treatment of Chronic Suppuration of the Middle Ear.

More gentle catheterization with some soothing oily and antiseptic vapor as menthol and parslene and gentle syringing of the meatus with a mild antiseptic thoroughly drying the canal is usually sufficient. It is not of great importance to use an antiseptic here as in nearly all cases the perforation is so small that practically none of the liquid reaches the tympanum. Should the discharge be very copious syringing every two or three hours may be necessary but usually every four hours is quite sufficient. I attach very great importance to the surgeon himself using the syringe at least once a day as is then seen that no pent up secretion remains and the canal is thoroughly dried and the gauge strips which are of great service in this stage are properly placed.

In the event of this treatment failing to completely stop the discharge we must use bolder measures. Here again attention must be directed to the naso-pharyngeal vault. Douches of solvents for the mucus, and astringent applications to the orifice of the eustachian tube are usually indicated. Again let me urge the importance of thorough removal of all adenoids, even the pad which is so often situated on the roof of the pharnyx and the cause of the œdema of the pharyngeal orifices of the eustachian tube.

The discharge may be quite foul and stained with blood. A thorough examination of the drumhead is very essential and noting especially where the perforation is situated and its size. If the perforation is small and apparently there is not free and easy drainage do not hesitate to enlarge the opening. One may be surprised how rapidly a case will get well when this is done (case No. 3.) Should the opening close up rapidly as it is prone to do it should be again opened as well as any secondary bulgings. If the perforation be high up and so situated that an incision downward is not free from risk a secondary opening in the posterior lower quadrant will fulfil the indications. In cases where we have disease of the attic we frequently have a perforation in Shrapnell's membrane. Here we may use the attic syringe and expect a tedious case.

Granulation and auralpolyps are frequently found in those very chronic cases. We often see a large polypus which has worked its way out through the perforation acting as a sort of plug to the discharge within the tympanum, or again the tympanic cavity may be completely filled with smaller granulations. In these cases it seems to be the general

practice if the growth be large enough to snare it off otherwise use caustic and spirit. Yet one must not too lightly snare an aural polypus as is illustrated in a case occurring in the practice of an eminent London aural surgeon last summer when in an old ottorrhoea case a large polypus was thus removed. Septic meningitis immediately followed and death ensued in a few days. This case suggests the remark that it is questionable as to the advisability of removing aural polypi through the external auditory meatus but preferably to do so from their origin the mastoid antrum. But practically all cases will continue to be attacked from the outer ear, so in whatever manner whether by snare or forceps, a preliminary course of antiseptics should be used to eliminate sepsis as well we can and thereby add to the safety of our operation.

Of cauterizing agents probably those most frequently used are phenol, chromic acid, silver nitrate and the galvano cautery. Phenol is probably the best since, while possessing as much escharotic action as is necessary it is not followed by any inflammatory reaction. Frequently however in cases of small granulations the use of absolute alcohol with or without sulphate of zinc is followed by good results.

Should we have granulations existing on the posterior wall of the bony canal or on the posterior superior especially with sagging down of the superior wall we must strongly suspect mastosid involvement. Some authors say in such cases the mastoid is always involved. Here the case demands a radical operation at once delay being useless and dangerous. In cases where we can detect roughened bone either by a cotton tipped probe or a blunt one, we have a very tedious case to deal with.

At times the character of the discharge assists us in diagnosing caries. The discharge is frequently thin, brown and copious, especially when a sequestrum exists while persistence of foul odor after thorough use of antiseptics points strongly to caries. Presence of asseous particles is of course pathognomonic.

Granting we have no evidences of granulations or dead bone what course of procedure are we to adopt. Here again each case must be treated according to the conditions found. The general rule above mentioned which says remove the cause is the one to follow. If the discharge be associated with naso-pharynygeal trouble this must be corrected especially adenoids. The removal of this apparently innocent pad of adenoid tissue in the vault of the pharnyx will often work wonders. In children when practically all have adenoids my rule is to clean the pharyngeal vault in every case where there are even slight evidences of adenoid hypertrophy previous to doing anything to the ear whatever. In many cases I have completely cured a running ear of months duration by simply cleaning the pharyngeal vault of its mass of adenoids. (Case No. IV.) Maintaining the patency of the eustachian tube and the injection of various antiseptic sprays frequently add success to our treatment. The practice of injecting irriating antiseptic liquids in any quantity through the eustachian catheter should certainly be condemned.

Now comes the use of remedies applied through the external auditory meatus. Let us consider what our object is in using remedies here. I take it to be as follows: (1) Dissolving of the discharge; (2) its removal; (3)

disinfection of the tympanum; (4) regeneration of the tympanic mucous membrane; (5) closure of the perforation.

(1) To dissolve the discharge.

In order that we may scientifically do this we must know of what constituents the discharge consists Mr. Wingrave, of the Central London Nose, Throat and Ear Hospital, after a careful analysis of aural discharges states that it consists of a small amount of mucin and gas globules, and a large amount of globulins. Then our object is to find something non-irritating which will dissolve these substances. Mr. Wingrave has found that a solution af sodium sulphate 2%, and sodium carbonate 2%, to be the only neutral salts to do this, leaving out of consideration the mucin which is but a small element. Moreover, they are practically the only neutral salts which when mixed with a solution of bisulphide of mercury will not precipitate the globulins.

(2) Disinfection, still quoting Mr. Wingrave, bisulphide of mercury in 1-1000—1-2000 solution is by far the most potent antiseptic, and does not precipitate the globulins when mixed with the above mentioned solvents. Bi-chloride of mercury used as a disinfectant forms the albuminate of mercury, a very insoluble compound. Boracic acid is used so extensively, and advised by so many authorities, that I shall devote some attention to it. That it is but feebly antiseptic and slightly astringent is universally admitted. It is only in those cases where there is a very large perforation, in reality a mere rim of drum membrane, that the boracic powder blown into the external auditory meatus reaches the tympanum. But supposing it should reach the tympanic cavity, its insolubility in serum or pus simply renders the exit of the discharge more difficult, besides acting as a mechanical obstruction to the canal. Two cases may be cited as illustrations of the dangers of the boracic powder insufflution. They are numbered A and B at the conclusion of this paper.

But boracic acid used as a very fine dusting to the tympanic cavity when free exit is present and simply a moistening of the tympanic structures remains, is admissable. Here the mere presence of a fine layer of powder may be a sufficient stimulus to ensure healing. At any rate if pulv. acid borici is used, it certainly should be used by the physician himself and a lotion of borax given for subsequent syringing since the powder is soluble in a solution of borax. In my own practice I do not use boracic acid at all, unless it be in a solution of absolute alcohol.

I attach great importance to the patient's being shown how he should use the solutions in his ear. Many patient's simply get the solution in the outer part of the canal while the bony portion is never cleansed. Again having, as they think, washed the ear out well, they will tilt their head to one side and have a few drops poured in the ear and immediately get up and place a piece of absorbent wool in the canal which succeeds, is absorbing the drops that have not run out, the tympanic cavity being left severely alone. To properly use drops, one must insist on the patient's lying down with the affected ear uppermost and while gently drawing the ear upward and backward have the medicine, previously warmed by heating the spoon, poured into the canal and allowed to remain there for at least twenty minutes. Occasionally inflating the ear by Valsalva's

method is beneficial since the air clearing the perforation allows some of the liquid to trickle into the tympanum. By careful attention to these details one will be surprised how rapidly some previously annoying case will succeed.

REGENERATION OF THE TYMPANIC MUCOUS MEMBRANE.—Here cleanliness is of the greatest importance. The use of alcohol (absolute) in varying degrees of strength with or without boric acid or sulphate of zinc is of great utility. Frequently the spirit treatment is followed by very sharp pain but this usually passes off very quickly and seldom occurs after the first few applications. Nitrate of silver in varying strengths even to an almost saturated solution is advocated by some authorities.

CLOSURE OF THE PERFORATION.—If this is not done by nature after the stoppage of the discharge the application of Blake's paper disks to the membrani tympanii may be followed by a rapid closure. Various cauterizing and stimulating applications may have to be used—the most common of which are tri-chlor acetic acid, chromic acid, silver nitrate and the galvano cautery.

But the case may not go on as we would wish though we have tried faithfully a line of treatment similar to the above. The discharge continues, with the odor greatly modified or unaffected. The course best to adopt may be indicated, I think, in a few lines. Granted we have a case of chronic suppurative middle ear catarrh which presents no acute bone involvement and in which after, say three months careful treatment there is no marked amelioration in the amount of discharge or the character of the odor we should at once resort to ossilectomy.

Should this fail to stop the discharge the clearing of the mastoid antrum and adjoining structures if necessary, after the manner of Stacke or Swartz should be done. This appeared to have been the general opinion of the members of the International Otloogical Congress held in London last August.

In conclusion, let me offer a word of warning to those who consider their patients cured because the patient says the discharge has all stopped. Frequently in chronic cases a small amount of discharge occurs which drys to the walls of the meatus and never appears externally, or the exposed tympanic mucous membrane will only give off an exudation when it too takes part in the general hyperæmia of the naso-pharyngeal mucous membrane seen in a common head cold. Careful searching with a cotton-tipped probe will render this mistake very exceptional. Let there be no moisture for three months before pronouncing the case cured, and avoid too frequent or prolonged douching, especially where there is but slight discharge, as it alone may keep it up.

ILLUSTRATIVE CASES.

I. USE OF PULV. ACIDI BORACI.—A young lady, 21 years of age, with a running ear was given one ounce of powdered boracic acid, a portion of which she was directed to blow into her ear after syringing. She succeeded in getting the powder well into the ear, as I saw when first consulted, some weeks later. Her complaint then was a severe earache

and a feeling of fullness on that side of her head. No wonder; as her external auditory meatus was completely filled with a mass of hardened boric powder. So hard was it that I could not break it up, but succeeded, by use of a solution of borax and alcohol drops, in freeing the mass, giving vent to a lot of foul pus and relief to her pain. In this case, had the surgeon seen his patient a few days subsequent to giving the powder, no trouble would have ensued, or had he ordered a solution of borax, no accumulation would have occurred.

Another case, a man 56 years of age, with acute suppurative otitis media, with copious discharge, was given pulv. acidi. boraici to put into his ear. He did so, blocking the aperture and driving the pus back to his mastoid cells, where it was evacuated.

2. USE OF IRRITATING ANTISEPTICS.—A young man with acute suppurative otitis media was given a strong solution of hydrarg bichlor, and later acid carbolic to syringe his ear. The week following when I saw him he had acute external otitis and an irritative pustular rash extending downwards from his ear. The stoppage of all syringing except with plain boiled water, and gauze packing was all that was necessary to remove his trouble.

3. EXAMPLE OF THE GOOD EFFECTS OF BETTER DRAINAGE OF THE TYMPANUM.—A lady 36 years of age consulted me for a running ear of six months' duration. On examination of the drumhead a small perforation was found situated high up in the posterior segment from which I could with a Seigles' speculum suck some thin pus. I at once enlarged the opening and in one week the discharge had stopped and never returned.

4. GOOD EFFECTS OF REMOVAL OF ADENOID.—Boy 12 years of age subject to a running ear of one year's duration. He had enlarged tonsils and adenoid growths in his pharynx, the removal of which was alone sufficient to cure the discharge and restore his hearing.

USE OF PAPER DISKS.—A lady 33 years of age with a perforation in each drum-head, the discharge from which had ceased some months previously. I used disks of paper which after moistening were applied on the site of each perforation resulting in the complete closure within three weeks. The disks were changed every third day.

WHAT MIGHT HAVE BEEN AVOIDED.—A man aged 45 consulted me for an intense ear ache of about 24 hours duration. On examination I found a very thin drum-head and a large bulging situated mostly posteriorly. As he was sitting in my consulting room chair and without any traction on the auricle, he suddenly exclaimed, "Something has broken and the pain is nearly gone." I examined again and found the canal full of bloody serum and a ragged perforation over the site of the former bulging.

SELECTED ARTICLES.

THE MORTALITY AND TREATMENT OF ACUTE INTUSSUSCEPTION.*

BY FRED. KAMMERER, M. D.,

Visiting Surgeon to the German and St. Francis Hoipitals, New York.

The subject of intussusception, especially in the very young, is a fascinating one to the surgeon, and, presenting as it does, so many points of interest from a pathological, as well as a therapeutical point of view, it has been well worked out during the past ten or fifteen years. The clinical contributions to the subject are innumerable. But, unfortunately, with a few exceptions, they are limited to a personal experience of only a few cases. This has made the collection of statistics of non-operative, and especially of operative treatment of intussusception, a very arduous labor. But the work has brought fruit, and much light has been thrown on the question uuder discussion.

The pathology of intussusception, barring, perhaps, its etiology, is well understood. The diagnosis is generally easy, and the condition unmistakable. The measures for its relief are purely mechanical, and have been clearly defined. The surgeon knows what he has to expect when opening the abdominal cavity for intussusception, and the numerous complications of other abdominal diseases are not present here, to tax his ingenuity, provided he has a fair amount of experience in intestinal work. Thus, every case has a value in the consideration of the subject, and large individual experience, while desirable, is not really essential.

Taking a broad survey of the recent literature of the subject, one conclusion can be readily reached. Non-operative treatment of intussusception is less in favor than formerly, and early operative interference has become more popular with the profession. This change is not due to great improvements in surgical technique during the past years, for such have not been made, but rather, to a careful consideration of the literary material at our disposal.

Of the bloodless methods, there is, I think, only one which deserves any serious consideration in the treatment of intussusception, the injection of fluids into the rectum. Manipulations of the tumor, the use of electricity, abdominal taxis, are means which may have been occasionally employed with, perhaps, some semblance of success. They are mentioned in text-books, I imagine more for completeness sake than because they ever have been methodically employed. Inflation of the rectum with air, carbonic acid or hydrogen gas, is still perhaps more in use than are the methods just mentioned. I know of one case, by Williams, in which inflation by carbonic acid was successful in reducing the intussusception and curing the patient. I, personally, have no experience with it, nor do I know of anyone else who has.

The case is different, however, when we come to consider the injection of water into the rectum. This method still has many advocates, and a number of successes are occasionally reported. We may state at the out-

*Read before the Section on Pediatrics, the New York Academy of Medicine, December 14, 1899, as an introduction to the discussion of the subject.

set, that the method is applicable only to cases of intussusception in the large intestine (the colic and ileo cecal varieties), according to Leichtenstein, in about 68 per cent. Intussusception of the small gut cannot and should not be treated by water enemata. It is true, some experiments have shown that water may be forced through the cecal valve into the small intestine on cadaver, but I do not believe, from some personal experiments made years ago, that a fair amount of pressure can be attained in the small intestine without great danger of rupturing the colon. The success of the experiment is dependent, in the healthy gut, upon so many undefinable factors, that I do not think accurate figures can be quoted. Mortimer found cracking of the serous coat of the colon when he allowed water to flow from an elevation of only five feet into the bodies of young children These are experiments on the healthy, although not living intestine. But, if the pressure which the intestine can successfully resist, without rupturing, has been shown to be an uncertain quantity in these experiments, how difficult, nay, how utterly impossible would it be to estimate the pressure which we can safely apply to a perhaps already injured intestinal wall, in cases of acute intussusception. Medical literature contains quite a number of records of rupture through an attempt at reduction by enemata, and many others have very likely never been published, Is it astonishing, then, that the tendency in all recent publications on acute intussusception has been in the direction of discouraging forcible enemata after the first twenty-four hours? Even this time limit is arbitrary. We know that in very acute attacks, changes may have already taken place at the neck of the intussesceptum after the first day, that will make the use of enemata a very hazardous proceeding. In chronic cases, on the other hand, enemata may he employed with impunity, many weeks after the onset of symptoms It is somewhat surprising, in this connection, to note that reference is so frequently made to the quantity of water injected. This would seem to me to be a point of minor importance, as the capacity of the large bowel varies so much in different persons. It does not matter how much water is injected, but we should never allow a hydrostatic pressure of more than three or four feet in children.

The most serious objection to the use of distention, however, is our inability to recognize that reduction has really been accomplished. Barker, in his large personal experience of fifteen operative cases, reports eight in which enemata were tried unsuccessfully. Of these eight failures, two were recognized as such, but in six others, reduction had been apparently accomplished. It was only when abdominal section was done later on, that this was found not to have been the case.

It has often been said that recurrences after reduction by distention are more frequent than when reduction has been effected by manipulations after laparotomy, but I do not think that we will go wrong in attributing many of these recurrences, in the face of such testimony as Barker's, to incomplete reduction at the time. It should be said, on the other hand, that trustworthy observers have reported cases of genuine recurrence after distention. For the application of forcible enemata, I think, the following rules can be laid down:

In acute cases, an attempt at reduction should only be made very early in the case, and once only.

This attempt should always be made under complete anesthesia, with relaxed abdominal walls.

Hot water should be employed in preference to iced water, although the latter is said to have effected reduction when the former failed.

In very acute cases, the method should not be employed.

After one failure, laparotomy is indicated.

When laparotomy has been determined upon in the treatment of intussusception, the question of paramount interest to the surgeon, is that which relates to the reducibility of the tumor.

When the latter has become irreducile. important changes in the intestinal wall will have generally occurred.

The mortality in reducible cases has been shown to be less than half that in irreducible cases.

The causes of the high rate of mortality in the last instance are generally the septic condition of the intussusceptum, and the necessity of extended surgical interference.

The mechanical conditions in intussusception have often, and very aptly, I think, been compared with those, existing in strangulated hernia. They are more urgent, indeed, than in some cases of intestinal obstruction by bands and kinks, where the vitality of the intestinal wall is often not impaired. Who would think of opposing abdominal section in the latter cases? But, in the former, we hesitate because an uncertain and occasionally very dangerous proceeding now and then brings relief. Although statistics will never be at our disposal, I, personally, have the feeling that the mortality from intussusception could be vastly reduced if all cases were operated on immediately after the diagnosis has been made.

I should like to refer to a few points in the technique of laparotomy in small children. My own personal experience is limited to two cases—children of six and three months of age. In both of these, reduction was possible; in one, at the end of the third day, and in the other, during the second day. In the second case, although of shorter duration, there were found distinct signs of beginning general peritonitis at the time of operation, although the disinvaginated bowel did not show any marked lesions. The little patient died a day and a half later, after rallying well from the operation itself. In this case, I refrained from making any traction on the entering layer, as I did in my first case, and succeeded equally well by compressing the sheath a little below the point at which the apex of the intussusceptum could be felt. This seems, certainly, a safer method, for it combines pressure upon the apex with traction on the sheath, thereby lessening the force of traction.

In both of my cases I had not the slightest difficulty in exposing the intussusception through a median incision. The latter was employed, reaching from the symphysis beyond the umbilicus. If the tumor lies to one side in the abdominal cavity, some surgeons prefer a lateral incision at the external border of either rectus muscle. Treves condemns it, especially in children, but I really do not see on what grounds. If an intestine, strangulated within the abdominal cavity, is for some reason fixed, it is better, I think, to go as near as possile to the seat of trouble,

by making a lateral incision. I have had some experience in adults, that strengthens me in this view. I think the same arguments will hold in intussusception in children.

Shall we do anything to prevent reinvagination? I should hardly think so, as this is a rare occurrence after laparotomy. But if, for any reason, the surgeon fears recurrence, and is anxious to guard against it, I should prefer to shorten the mesentery by folding it in the direction of the long axis of the intestine and retaining the folds by several sutures. Fixation of the bowel itself to any part of the abdominal cavity I do not consider advisable.

The mortality of laparotomy, when reduction is impossible, is frightful. Still we cannot trust to spontaneous elimination of the intussusceptum as a means of cure, although a number of cases have ended favorably in this manner. When the abdomen has been opened, we must relieve the intussusception in one way or another. A number of operative procedures are available for this purpose:

I. Resection of the entire intussusceptum, with end-to-end suture or the establishment of an artificial anus.

II. Resection of the intussusception after longitudinal incision of the sheath.

III. The establishment of an artificial anus or of a lateral anastomosis, leaving the intussusception untouched.

The results from these procedures do not seem encouraging, and are, in part, conflicting. The establishment of an artificial anus alone, unless we are driven to it by the very desperate condition of the patient does not commend itself. Intestinal anastomosis, in other words, side-tracking of the fecal current, is not viewed with more favor by most surgeons, as it also leaves the intussusception within the abdomen, and exposes the patient to the risk of septic infection. A curious accident has lately been reported by Ludloff, as the result of this procedure. Some weeks after a communication had been successfully established the intussusceptum moved down further and closed the anastomosis, causing acute obstruction and necessitating another laparotomy, which finally led to the patient's death.

Resection, either of the entire intussusception or of the intussusceptum alone, are the methods which should be employed in irreducible cases. To which of the two preference should be given, is still an open question. Total resection was first tried, with uniformly fatal results, and was abandoned for partial resection of the intussusceptum, according to the Barker-Rydygier method. Of nineteen patients so operated on, eleven recovered. But only lately Kocher has published five cases of total resection and v. Eiselsburg four, all of which were successful.

Before concluding these introductory remarks, I would like to return once more to early operative interference in acute cases in children. We so often read and hear that children do not bear major operations well, and rapidly succumb to shock. This is, certainly, not my experience with laparotomies. On the contrary, I find that children bear these operations exceptionally well, fully as well as adults, provided there be no great loss of blood. In my two cases of intussusception in children, the age of the patients was three and six months respectively. Both

operations lasted over half an hour. In one evisceration was practised; in the other, most of the intestines were removed from the abdomen; they were, therefore handled considerably. I could instance another laparotomy in a child with atresia of the rectum, upon which I did an abdominal section two days after birth, and which I kept under chloroform for one hour and a quarter, finally establishing an artificial anus, and still this infant recovered and lived for several weeks. I could further instance, in older children, the successful removal of large renal tumors, more especially at the hands of Dr. Abbe. Barker, who has, perhaps, the largest personal experience in the operative treatment of intussusception in children, does speak of the fact that they bear the operation as well, or even better than adults. We can avoid hemorrhage with almost absolute certainty, during these operations and shock, as the result of manipulations of the intestines ought to be much less severe in children than in adults with a well-developed nervous system.—*Archives of Pediatrics.*

THE CAUSE AND CURE OF CONVULSIONS AFTER LABOR.*

BY A. K. BOND, M.D.,
Baltimore, Md.

The occurrence of convulsions in the adult, an event always of grave import, is never more alarming and discouraging than immediately after the termination of labor. If it take place during the later stages of labor, the physician has at least the comforting probability that it is due in some way to the child's presence *in utero*, and that delivery, either natural or artificial, will cause the cessation of the convulsive tendency. If it occur after labor has ended, he can ascribe it to no such physiological irritant, but is in the dark as to both its causation and the proper means of relief, and is oppressed, at this time which should be full of happiest anticipations, with the gloomiest forebodings as to the issue of the case. Therefore, although so much has been written concerning the convulsive seizures of pregnancy and the lying-in chamber, I make no hesitation in presenting to you the following case, which exhibited the disorder in its gravest aspects, yet terminated in full health; with some references as to the possible causation and prevention of such attacks.

The patient, a healthy-looking woman of 23, in whose home I had for some time been family physician, and whose domestic surroundings were of the happiest description, the older people taking all unnecessary care from her shoulders, came under my care on March 7, 1898, eight months after her marriage; being pregnant thirty weeks, as reckoned from the beginning of the last menstrual period. She stated—and I have never known her to be untruthful or to exaggerate facts—that she had never taken a doctor's prescription in her life; had never had any disease except measles; had never had greater disturbance at menstrual periods than could be met by resting a little; had never had leucorrhea nor any sign of dropsy. She had during her pregnancy had a little nausea on

* Read before the Baltimore Medical and Surgical Association, November 13, 1899.

two or three occasions, and sometimes vomited. For two months she had had occasionally, on lying down, a twitching of lower limbs which would compel her to sit up, when it would pass away. She had to take aperent pills two or three times a week. She slept well; appetite in last two weeks not so good. Urine at the date of this first visit was normal, color natural, subacid, specific gravity 1010; cold nitric acid gave no cloud; microscope showed no sediment at all. In fine, my investigations of the patient, fortified by her general appearance, made me think I had an ideally healthy parturient to deal with.

The only possible source of danger lay in the rather small build of the patient. On May 12 I made external measurements of the pelvis, finding the interspinal 9¾ inches, that between crests 11 inches, the external conjugate 7½ inches, or a deficiency of about a half-inch in each. Vaginal examination was refused. The child's head was well fixed in the pelvis, the buttocks up near the gall bladder. The patient had no dropsy; passed urine which looked normal; had normal appetite and sleep; daily stools; felt no discomfort anywhere in body; walked out each evening.

As the date of expected labor passed (May 17) I felt some anxiety lest an overgrown baby might, in the probably somewhat narrowed pelvis, cause serious parturition trouble. On the evening of May 26 I found labor in progress. The head, in left occipito-anterior position, had not engaged deeply, as in normal first pregnancy, but was movable at the pelvic inlet. Though there was little amniotic fluid, the uterus reached high to the ensiform cartilage. There was a distinct souffle heard over both sides of the lower uterine segment. The patient lay propped up on pillows, unable to lie flat. (This high uterus, vessel souffle, and discomfort I suspect all pointed toward a large child). The fetal heart beat normally at 140. The first stage was carried through by the uterus without considerable aid from the abdominal muscles and without excessive pain. The lower parturient canal was dilatable, with soft, moist walls. The cervix was thin and distensible. The urine was free; the bowels had been moved daily by the pills till labor came on, and the patient considered the movements quite satisfactory, having been warned of the importance of this daily evacuation. The patient repeatedly vomited bilious matter throughout the whole of the first and second stages of the labor—a symptom which I disliked, but which I thought might be due to the pressure of a large child on the upper bowel.

At 4 a.m. the cervix was wholly dilated and the bag of waters projected sausage-shaped into the lower vagina. The pains became less frequent, the patient sleeping between them. I broke the membranes, and the pains became stronger and more frequent. The head came down with excessive slowness, in normal position and well flexed, until the scalp parted the vulva during the pains, showing a scalp area of about two and a half by one inch in diameter. It retired well between pains, came strongly down with them, but, while it ceased to make headway, the patient's agony increased and became continuous between the pains. I tried to reach the chin with finger in the rectum, but even with scalp parting the vulva the head seemed to the rectal finger endlessly long,

and I could not, after thrusting in the whole finger, reach beyond the hairy scalp, and so could not use it in aiding delivery.

At 6 a.m. I found the fetal heart beating irregularly at 70. Dr. Hundley kindly giving his advice and chloroforming. I delivered the child with forceps, putting three sutures into the resultant perineal tear, which reached to the rectal muscle and about two and a half inches upward into the vagina. The head was very large and covered with a permanent suit of very long hair. The family reported child's weight at 12½ pounds. He is still a finely thriving and very vigorous child. The mother had very little bleeding during delivery, and none afterward except normal lochia. Her uterus contracted well, her pulse and temperature were good. The whole labor difficulty was apparently due to the very large size of the child's head and the small pelvis, which might, however, have let a smaller, softer head pass easily.

At 4 p.m. of this same day I was summoned in haste, as the mother had had a convulsion. I found that she had complained of headache during the middle of the day, but had slept off and on naturally. She told me later that the spell occurred because she "could not bear headache." At 4.30 p.m. the temperature in axilla was 100.3°, pulse 120 and hard, respiration 28. I drew off the urine at this time, finding it very abundant, acid, of normal color, specific gravity 1010, containing neither casts nor cells under microscope, but giving, both with the cold nitric acid and with the heat and acid tests, a very slight opalescence of albumin. This seemed to me to be, not the albuminuria of nephritis, but that following convulsive states. The convulsion had been a full one, with tongue-biting. She remembered only the twitching of the right arm with which it began. I gave her a hypodermatic of morphia one-eighth of a grain, atropia one-three-hundredth of a grain.

At about 6 o'clock Dr. Hundley saw her with me again. We found her conscious, with persistent headache. It seemed to us that the kidneys and parturient tract were not at fault, but that there must be an acute intestinal poison of a nervous system worn out with a hard labor. We gave morphia one-quarter of a grain, atropia one-one-hundred-and-fiftieth of a grain hypodermatically, and directed that thirty grains of chloral and forty grains of potassium bromide should be taken every two hours, beginning at 8 p.m. Dr. Hundley then returned home. Under these remedies the convulsions returned, seven or eight occurring between our consultation and midnight. All were general and violent, and at one time there was a "status epilepticus" (consciousness not returning between the convulsions), which yielded to chloroform inhalation. Vomiting occurred from time to time, so that it was uncertain how much of the chloral mixture was retained. At 11 p.m. (a convulsion having occurred after the chloroform had restored consciousness) I bled at the end of each elbow, as had been agreed on at the consultation, but, being inexpert in the practice, got altogether not more than three ounces of blood. This bleeding did much to soften the pulse and helped to quiet the tendency to spasms. I believe there were no convulsions after the bleeding.

Believing that the patient would not be safe from the convulsive tendency until free bowel tendency was obtained, I had given at 7.30 p.

m. a half-drop of croton oil in sweet oil on the tongue, and repeated this dose at 8 p.m. Later I had placed five grains of calomel in powder on the tongue. At 1 a.m., the convulsions having ceased, but the condition of the patient still threatening their return, I gave to the now conscious patient a drop of croton oil in improvised bread pill on the tongue, and at 4 a.m., the stomach having quieted, a strong vegetable cathartic pill. At about 6 a.m. the bowels acted gently for the first time, with a foul-odored passage, and two or three easy passages followed at intervals during the forenoon. The headache and nausea hardly recurred at all after this purging, and it seemed to render permanent the good effect of bleeding. I kept up a gentle aperient action with less powerful drugs during this and the following day, the temperature standing about 99½°, the respiration being about 20, and the pulse 108 and still slightly hard and nervous.

On the third day the milk came freely in full breasts, and she thenceforth for many months wholly nourished her vigorous child on the breast with great satisfaction to both parties. The urine continued free and seemed in every way normal to the attendants. From the fifth day for about two weeks there was a temperature rise, which was considered by me and by an experienced adviser to be a simple "surgical fever" from the laceration of the cervix and perineum, and from a tear, made apparently by the forceps blade, running along the side of the vagina near its roof from a point close by the vulva to the cervical region. It is separate from the perineal tear, Under antiseptic washing of cervix and vagina the temperature soon came to normal as the parts healed. The lochial discharge was at no time offensive. A year after this confinement I met the patient and was much pleased with her vigorous appearance. She was feeling perfectly strong and looked a rosy-cheeked, healthy girl.

Reflections upon the Case Presented.—There are two points in the case which seem worthy of especial notice. First, the causation of the attacks. I think it is pretty well settled that for convulsions in the adult (I am not sure that this is not true of epilepsy, which is not now under consideration) there must be usually at least two coincident causes: one, which predisposes the nervous system to excessive action; the other, an immediate, exciting cause. The predisposing cause is, I think, not usually able of itself to bring on a convulsion, as it is a comparatively long-existing condition and the nervous system has gotten used to it. This predisposing cause may be an inherited state of nerve tissue or of nerve nutrition; or may be an acquired irritation of the nerve centres, as a chronic inflammation, the disturbance left by an old wound, the retention materials of a long-standing nephritis, the unwholesome state involved in chronic alcoholism, or some other blood-polluting or nerve-exhausting cause of considerable duration.

When to this predisposing cause the immediate cause is added, a convulsion occurs, and convulsions continue to occur as long as this immediate cause acts, when they cease and the patient goes back to his chronic state with its original symptoms, having another onset of convulsions only if the immediate cause again comes into play while the predisposing cause still obtains. Neither the predisposing cause nor the immediate cause can of itself, as a rule, occasion convulsions. If this is

true, as I believe it is, it is an extremely important fact as concerns the relief of the convulsions, as I will explain when I speak of treatment. Among immediate causes may be classed extreme pain or agony, (perhaps) exsanguination by excessive blood loss, mental shock, acute nephritic disorders (perhaps), a very foul atmosphere and acute stercoremia. I have records of several cases in which the predisposing cause was nephritis and the immediate cause acute stercoremia, several others in which the predisposing was chronic alcoholism and the immediate cause the acute stercoremias of influenza, and one case where the predisposing cause seemed to be nephritis and the immediate cause the agony of a non-progressing severe second stage of labor where the head failed to engage well in the pelvic cavity.

In the case which I have now brought before you I believe that the predisposing cause was the nerve exhaustion of a severe, protracted instrumental labor, and the immediate cause an acute stercoremia. Although the grandmother and an aunt have sensitive kidneys (showing albuminuria on occasion), the patient in the history I have given shows, I think, no clear sign of nephritis. Her normal kidney and health record in pregnancy; the absence of sediment and of more than the faintest nebulosity in the abundant urine, tested after a severe labor and a convulsion; and her perfect lactation record, with return of fine general health and ruddy beauty, seem to contra-indicate nephritis. There was no sepsis from the genital tract, as shown by the wholesomeness of the discharges, the quick healing of her extensive wounds, the perfect, full lactation, the rapid return of general health. Moreover, the short interval after labor, in absence of foul discharge, pointed away from blood sepsis from this source. The patient's general nervous system was, and is, excellent in its stability. She certainly was greatly exhausted by the hard labor, as every woman must be as concerns nerve force.

As the labor was over and there was no pain nor sense of discomfort and no abnormal oozing of blood, I do not believe the immediate cause of the spasms was connected with the parturient tract or the effect of labor shock. There was no emotional strain brought to bear upon the patient after labor. The room was well ventilated, it being daylight.

There was, however, some disorder in the digestive tract, as shown by the continual bilious vomiting during the labor; and there was the expulsion of a very foul stool (coincident with marked relief from the convulsive disposition, as shown by hard pulse, headache, nausea) in a patient whose normal accumulations in the rectum had been daily removed by her purgative pills. It may have been an old decaying accumulation in the cecum, whose poisons got sudden access to the blood stream during the exhaustion and circulatory relaxation following the emptying of the uterus. Croton oil will remove such accumulations, as I have many times observed, when ordinary purges pass by them into the rectum.

The other point of interest in the case is the treatment used. Bold therapeutics is as much demanded in vital emergencies as is gentleness

in ordinary cases. I believe that with the ordinary measures advised by some text books my patient might have died. (Her only hope would have been the possible self-limitation of convulsive states, which seems occasionally to occur.) An authority of some years back, Leishman, says of postpartum convulsions: "Full doses of chloral or opium, the administration of chloroform, cold to the head, perfect rest and quiet, and the emptying of the bowels, if necessary, by a simple enema, are the main points to be attended to." Lusk, who is still an authority, and usually a wise guide, says: "In the treatment of convulsions during the child-bed period the agents should be opium, chloral, veratrum, or digitalis. Chloroform and venesection should be employed with extreme caution, if, indeed, they are ever entitled to confidence at that time." The only agent worthy of consideration in the above lists of remedies that I did not try was veratrum viride. It was mentioned by Dr. Hundley, but, having no experimental acquaintance with it, I preferred the drug in which I had learned to trust for softening of the pulse and stoppage of the convulsive status. Veratrum is certainly a drug which acts, when it acts, along very dangerous lines. It has, I learn from text books, to be vigorously pushed until heart weakening begins, and then tends to produce emesis. It is evident that the amount of such a drug absorbed from the stomach by a patient already frequently vomiting is very uncertain, and it is clear that if there was, as we believed, a poisoning mass in the large bowel, veratrum could not cure by simply lowering arterial tension. The same is true of blood-letting, which latter, if moderate, goes well with purging; and, indeed, the old-time doctors so used it. I should not care to give a strong purge after depressing the heart and pulse by veratrum. Hot baths were undersirable, as favoring hemorrhage; and high enemata were not readily attainable nor likely to be free from harm in a patient just over a hard forceps labor and a deeply sewn perineum. On careful review of the case I believe that venesection sufficient to lower arterial pressure by nerve reflex, and stopping well of exhaustion and heart weakness of large blood loss, with croton oil just sufficient to carry off the septic mass, was the correct treatment for stopping the convulsive tendency. With a less robust parturient I would, of course, use still greater care not to excessively weaken the heart. I am inclined to think that however valuable morphia may be in convulsions from other sources, in those from fecal poisoning it is either inert, of very brief benefit, or positively harmful in rendering the intestines still less ready to part with their poisonous contents.

I have determined in future, whenever I have reason to believe that a patient is on the verge of incipient labor, to advise her to take a good dose of castor oil, followed by such other simple measures as will insure a thorough cleaning-out of the large bowel. The possible bringing-on of labor at this time by the purge would be no disadvantage, and the additional security against complications of intestinal origin would compensate for the nastiness of the dose. Especially is this desirable in cases where for the daily stool it has been deemed necessary to take one of the milder aperient pills at bed time each night.—*Amer. Jour. of Obstetrics.*

DIET IN TYHHOID FEVER.

Manges has a lengthy article on this subject in a recent number of the *Medical Record*, from which we take the following:

Shattuck after arguing against the fallacy of the old doctrine of depletion in acute febrile disorders, urged that although typhoid fever was a self-limited disease, yet its long duration rendered it necessary that, inasmuch as we could not directly attack the cause of the disease, our duty was to support the patient's strength to the utmost by maintaining nutrition at the highest level. We have no fear of feeding febrile patients in other diseases, and he calls attention to the forced feeding in the suppurative fevers, whether tuberculosis or not. Furthermore, he says that no matter how we feed a patient there will be intestinal peristalsis, and the waste products must pass over the ulcerated areas. Furthermore he does not accept the old idea that relapses are due to dietetic errors alone, but that nervous excitement, undue fatigue, etc., also cause rises of temperature; nor does he believe that these factors can cause fresh infection by bacilli. Thus for twelve years, from 1886 to 1897 inclusive, three hundred and eighty cases were under his treatment. From 1886 to 1893, two hundred and thirty-three were upon exclusively milk diet, with a mortality of 10 per cent.; from 1892 to 1897, one hundred and forty-seven were upon a more liberal diet, with a mortality of 8.1 per cent. Shattuck admits that the number of his observations is small, and that other factors in the treatment, such as the introduction of hydrotherapy, may have had something to do with his better results; but one factor remains, namely, that the more liberal diet at all events did no harm. Shattuck does not advise eating everything, but he insists that we should treat the patient and not the disease, that we should feed him with reference to his digestive powers, and not with reference to the fever; and furthermore, that there is no increased danger of irritation from food which leaves no irritating residue, and which cautious trial shows is digested without disturbance. His diet includes:

1. Milk, hot or cold, with or without salt, diluted with lime-water, soda-water, Apollinaris, or Vichy water; peptogenic and peptonized milk; cream and water (*i. e.*, less albumin); milk with white of egg, buttermilk, koumyss, matzoon, whey; milk with tea, coffee, or cacao.

2. Soups—beef, veal, chicken, tomato, potato, oyster, mutton, pea, bean, squash; carefully strained and thickened with rice (powdered), arrowroot, flour, milk or cream, egg, barley.

3. Mellin's food, malted milk, carnipeptone, bovinine, somatose.

4. Beef juice.

5. Gruels—strained corn-meal, crackers, flour, barley-water, toast-water, albumen-water with lemon-juice.

6. Ice cream.

7. Eggs, soft boiled, raw, egg-nog.

8. Finally, minced lean meat, scraped beef; the soft part of raw oysters; soft crackers with milk or broth; soft puddings without raisins; soft toast without crust; blanc mange, wine jelly, apple sauce, and macaroni.

In the admirable address at the recent general discussion on typhoid fever at the last spring meeting of the New York State Medical Association, Dr. R. H. Fitz, of Boston, presented the statistics on typhoid fever at the Massachusetts General Hospital, extending from 1821 to 1899. In the course of this address, among other things, he directed special attention to the influence of diet upon the course of typhoid fever, upon the general mortality, the occurrence of hemorrhage, and of perforation:

"For the thirty years from 1839 to 1869 the diet of patients was liquid, the fluids often containing some farinaceous ingredients. From 1869 to 1879 beef tea and beef juice were largely used in addition to the milk, and from 1879 to 1899 the liquid portion of the diet has been chiefy milk. Between 1893 and 1898 the patients under the care of Dr. Shattuck [namely, the cases which have been referred to above] have received, in addition to the milk, minced meat, raw and soft-boiled eggs, macaroni, soft crackers, toast, and puddings. Patients under the care of Dr. E. G. Cutter, during a like period, have been fed on skimmed milk, buttermilk, eggs and milk, albumin-water, chicken broth, and beef juice with barley water. The mixed foods were so strained as to be freed from solid particles. During the thirty years of liquid farinaceous diet, the average mortality was 14.1 per cent. In the milk and beef-tea decade it was 16.6 per cent., although in the immediately preceding liquid farinaceous decade it was 15 9 per cent. From 1879 to 1899, among those patients using milk as the principal article of food, the mortality was 14.6 per cent., which was about the same as during the period of liquid farinaceous diet. The mortality was only 11.3 per cent., however, among the patients between 1893 and 1898, who were fed upon the liquid and soft solid diet prescribed by Dr. Shattuck. This mortality compares very favorably with that of 15.1 per cent. noted among the patients using a largely milk diet, and with a 16.6 per cent. mortality occuring among patients taking strained, starchy, and proteid fluids As regards the occurrence of hemorrhages, it was noted among patients living on a milk diet in 10.6 per cent.; among those fed on proteid and amylaceous fluids it was 16 per cent., while it was only 9 per cent. among the patients liv- upon fluids and soft solids. The inference from this comparison is that a diet of soft solids not only does not provoke an intestinal hemorrhage, but also rather lessens the tendency to this complication. On the other hand, the strained mixed diet may increase somewhat the frequency of the hemorrhages.

"The frequency of perforation could be noted with sufficient accuracy to permit comparison only in the cases reported within the last thirty years. From 1869 to 1879 the average frequency of this occurrence was 1.1 per cent; from 1879 to 1889, 0.3 per cent., and from 1889 to 1899 1.6 per cent. These differences are so slight as to make it doubtful if dietetic treatments have had any effect in modifying the frequency to these grave complications of typhoid fever patients. Of ten patients with perforation, between 1893 and 1897, five, or 2.8 per cent., were using a largely milk diet; two, or 1.8 per cent., the strained liquid diet; and three, or 3.4 per cent., were fed upon liquid and soft solid diet.

"As to frequency of relapses, careful thermometric records having only been made at the hospitals since 1869, it is possible to make com-

parisons only since then. It is to be noted that the frequency of relapses has increased from 8.7 per cent. of the decade from 1869 to 1879 to 13 6 per cent. in the next decade, and 11.3 per cent. in the last decade, namely, 1889 to 1899. This frequency may possibly, as has frequently been maintained, be due to hydriatric treatment of the disease.

"It is to be noted that relapses were rather more frequent among patients living upon a largely milk diet, since among them the ratio of relapses was 13.1 per cent.; it was 11.1 per cent. among patients living upon strained proteid and amylaceous diet, and 10.2 per cent. among the patients fed upon fluids and soft solids." Fitz, therefore in his conclusions maintains that a considerable variety in the diet may be permitted not only without detriment, but also with possible benefit to the patient.—*The Dietetic and Hygienic Gazette.*

OPERATION ON THE PHARYNGEAL TONSIL, HAEMOPHILIA, DEATH.

The history of the following case of death from hæmorrhage following the removal of the pharyngeal tonsil in a hæmaphylic will prove of interest. It is reprinted from the February issue of The Journal of Laryngology, Rhinology and Otology. It emphasizes the need for greater care in dealing with adenoid operations, than is usually displayed. Indeed it is questionable whether the surgeon is ever justified in operating upon these growths, except where the patient can at once be put to bed, as cannot be the case when the operation is performed as the private office or the outservice of a hospital. Instead of being styled a "minor" operation, the liability to accidents at the time, and, the sequelæ too often found in its train, combine to make it one which should never be looked upon as trivial.

D. J. G. W.

Dr. Sachs, Hambury, reports :—

On October 10th a boy, ten years old, was sent to me for an examination of his nose and naso-pharynx. The boy complained of headache, sleeplessness, suffered often from colds, and as different remedies had not been of any avail the boy was put under my care. I found a chronic hyperplasia of the pharyngeal tonsil, septal spur in the left nostril, and a chronic swelling of the right inferior turbinated bone. I proposed first to remove the adenoids ; the parents consented, and so I operated on the child under chloroform.

The operation went off well ; the pharyngeal tonsil was cut off in one piece as large as a walnut. I always remove the pharyngeal tonsil with a modified knife, a combination of Gottstein's and Beckmann's pattern. Some time after the operation, when bleeding had ceased, the father drove home with the child. At six o'clock in the evening the parents telephoned to me to come as quickly as possible, as the child was bleeding very profusely and felt very weak. I went at once, and found

the child very anæmic, blood running out of both sides of the nose. I put tampons of iodoform gauze in both sides of the nose, and the bleeding seemed to stop; two hours later I called again and found the child still very pale, bleeding again, not complaining of any pain, only of thirst. I took the iodoform gauze away, and put fresh tampons with a weak solution of fresh ferric chloride in the naso-pharynx and the nose; when I saw that no blood came through the tampons I left. Two hours later I was called again, and was told that the child was bleeding again, felt weaker and had fainted several times. Now I told the parents that I thought the whole case very unusual. Of course one sees at times a very severe loss of blood after an operation on the pharyngeal tonsil, but always after a certain time one can stop the bleeding. When I mentioned this to the parents the mother said that six months ago the child had had a tooth drawn, and that it was very difficult for the dentist to stop the bleeding; only after four days the bleeding stopped. Once the child cut his finger, and again it was very difficult, and took a long time, to stop the bleeding; the child always taking several weeks to recover from these attacks. Then the mother told me that her father died, at the age of forty-two, of hæmophilia. He had a fatal parenchymatous bleeding of the kidney. I told the parents that I thought the child was also a hæmophile, that the case was a very serious one, and that it was very wrong on their part not to have told me all these details before the operation was performed, because under such circumstances I certainly should not have operated. The temperature, as always in these cases of hæmophilia, was higher than usual, up to 102° F. The next day we tried everything we thought advisable, and gave the child champagne, port wine, camphor, etc.; tampons with ferric chloride in the nose and naso-pharynx; transfusion of physiological solution of sodium chlorate, and also, as suggested by Heymann (Leipzig) a physiological solution of sodium chlorate, with 2½ per cent. of gelatine. But unfortunately everything was unsuccessful, and four days after the operation the child died. The child felt perfectly well the whole time, and never complained of anything but thirst; but the bleeding never ceased, and it was utterly impossible to stop it.

Veils and Red Noses.

A German physician formulates an indictment of the veil as a cause of acne rosacea affecting the nose, and he relates a number of instances in which young women, otherwise in excellent health. developed this distressing condition consequent upon the habit of riding, cycling, etc., in veils. His view is that the lesion is caused by the friction of the skin against the veil, impregnated with moisture from the breath, the effect being exaggerated by the tightness with which it is necessary to attach the veil when indulging in athletic pursuits. The remedy is obviously to abandon the use of the veil or to wear it loose, anointing the nose with lanoline or other suitable lubricant. — *Med. Press and Circular.*

THE RECOGNITION OF THE POISONOUS SERPENTS OF NORTH AMERICA.

Dr. Howard Kelly (Johns' Hopkins Bulletin), has an interesting article on the above subject.

Snakes are reptiles distinguished from the frog family by the fact that they undergo no metamorphoses and do not pass through a tad-pole stage of existence. They are distinguished from lizards by possessing widely dilatable mandibles, their head bones are united by ligaments and they possess no limbs or shoulder girdle and have no eyelids and no external ear or tympanum.

The body of the snake is covered with scales, arranged in rows—the head, as in the lizards, is covered with a series of large plates of constant arrangement in the same species.

It is not always easy to determine whether or not a given animal is a snake,—for example, the Amphiuma is widely known as the "Congo-snake," yet on inspection you will discover four short, rudimentary limbs. The Amphiuma is one of the tailed Batrachians. Again the Ophisaurus ventralis—known everywhere as the "glass-snake," belongs to the lizards and is distinguished from the snakes by the solidity of the head, the well defined openings near the angle of the jaw, and the distinct eyelids. These are both harmless creatures—there are no known poisonous members of the lizard or frog families save the Gila monster (Heloderma suspectum).

Among the true snakes, Ophidians, we must distinguish poisonous from non-poisonous species. The ignorance, which leads people to destroy all snakes alike, does not tend to promote the destruction of the poisonous species, as their worst enemies are some of the harmless varieties as the Black and King snakes. Further this indiscriminate destruction tends to disturb the balance of nature by favoring the increase of small animals as toads, frogs and field mice on which they naturally feed.

There are certain differential points between the poisonous and non-poisonous forms.

The poisonous snakes of this country, except the Harlequin snake of Florida, belong to the "pit vipers,"—they possess a curious, blind depression in the fore part of the head between the eye and the nostril—the function of which has not been determined.

The "pit vipers" differ from the harmless snakes in having triangular heads with massive, maxillary development. They have fewer, large scales on the head—the increased number of small scales gives the head a warty appearance. The snake is thicker in proportion to length, has a shorter tail, and the dorsal scales are keeled. The pupil is elliptical. In the lower jaw there is a row of recurved, short teeth towards the centre of the head, and just outside of these under the lip are two, long, mucous folds hanging like veils over the powerful, recurved fangs which lie concealed. These poison fangs are shed from time to time.

Of the pit vipers there are three genera with about eighteen species – the genera are Agkistrodon, Sistrurus and Crotalus.

To the Agkistrodon genus belongs the Copperhead. The color is light chocolate, with wave-like, dark, alternating patches on the sides, the belly is yellowish. Its bite is less liable to prove fatal than that of the rattlesnake. The Mocacassin (A. piscivorus)—a water-snake is dark, greenish brown in color and is distinguished from the Copperhead by the color and the absence of the loral plate—from the Rattlesnakes by the absence of the caudal appendage.

Of the Rattlesnakes there are two genera—Sistrurus and Crotalus. The two species of the Sistrurus are S. catenatus (the massasauga) and S. miliarius (the ground rattlesnake). The bite of these rarely, if ever, proves fatal. There are two species of the Crotalids—the C. horridris or banded rattlesnake, and the C. confluentus or Prairie rattlesnake.

The Colubers or harmless snakes are more numerous—they are distinguished by their slender form, large scales covering the head, smooth scales on the body,—absence of the maxillary pit. The bite of these is quite insignificant.

An example, is the Corn snake, (Callopeltis guttalus) reddish brown in color with blotches down back; another is the Coach-whip snake (Masticophis flagelliformis)—the fore part of the body is black above and below and shades backward into a dull white. The eye is large and the pupil surrounded by a reddish iris.

It is most important to learn to recognize harmless snakes which, through ignorance, have acquired a bad reputation. The puffing adder (Heterodon) is one of these. It is everywhere considered to be deadly poisonous, yet it is harmless. There are two species, one blackish and the other yellow or reddish. They are easily distinguished by the turned up rostral scale (Hognose).

Another snake known as the Orange bellied mocassin is really a large water-snake (Tropidonotus). He is confused with the true mocassin because he is dull in color and is found about the water in the same localities—distinguished by elongated head and absence of pit.

A. T. S.

Neurasthenic Headaches.

Dr. Joseph Collins states that in neurasthenic headaches, associated with low vascular tension, caffeine, either alone or in combination, gives excellent results. The following formula he has fonnd particularly useful:—

℞ Caffeine citrate, 5 grains.
Sodium bromide, 10 grains.
Sodium bicarbonate, 10 grains.
Pulv. tartaric acid, 10 grains.
M. Make into one powder.
Sig.: Take in water while effervescing. (Experience.)

Monthly Cyclopœdia.

ADENOID VEGETATIONS AND DIPHTHERIA.

Diphtheria nearly always begins on the faucial tonsils. Post-nasal vegetations, from their histological resemblance to the faucial tonsils and from their liability to inflammatory attacks, may be regarded as likely to be good soil for the development of the Löffler bacillus. In a series of thirty-eight children who died of diphtheritic angina or its direct consequences, more than 50 per cent. were found to have adenoids more or less developed. From these cadavers the adenoids were removed. In three cases adherent false membrane came away with the adenoid tissue; in one of these there was no faucial membrane.

In doubtful cases the naso-pharynx should be examined. The author suggests that the occurrence of Löffler's bacillus together with an apparently simple sore throat (so-called latent diphtheria) should lead to an examination of Luschka's tonsil, when in the majority of cases a point of infection would be found. Certain cases of sudden croup might be explained by the previous presence of false membrane in the naso-pharynx, and the invasion of the middle ear through the Eustachian tube might be explained in the same way.

Except in cases favourable for posterior rhinoscopy, palpation will be the only possible method for examining Luschka's tonsil, and should be practised gently and rapidly, as hæmorrhage might aid the entrance of toxines into the blood.

The author believes that the special gravity attending diphtheria where there are adenoids furnishes a new argument in favour of the removal of adenoids.—*R. M. Fenn in "The Laryngoscope," August, 1899*

HAMMER-TOE.

The *Australian Medical Gazette* for September 20th, 1899, contains a very good article on this subject by Charles McLaurin, M.B. Edin.

This trivial but painful ailment usually attacks the second toe, frequently of both feet. It begins in childhood, but rarely becomes marked before puberty, when the corns which form upon the toe draw attention to the condition. Of the numerous causes assigned for hammer-toe, McLaurin takes the following as the most likely:—

(1) Ill-fitting boots.

(2) Contraction of the flexor tendons, or weaking of the extensors.

(3) Contraction of the digital prolongations of the plantar fascia resembling Dupuytren's contraction in the hand.

(4) Wasting of the interossei.

Practically speaking, the real cause is somewhat uncertain.

Treatment is divided into four heads:—

(1) Orthopædic apparatus (such as iron soles, pads, splints, etc.).

(2) Division of the plantar fascia or flexor tendons. This results in the divided structure cicatrising and contracting on its own account. thus usually making matters worse. The method is untrustworthy, and now seldom performed.

(3) Amputation of the toe.

(4) Excision of the flexed joint. This is the best treatment if the patient can afford the time and trouble. It leads, if carefully performed to a nearly normal toe, without any tendency to recurrence. It acts (*a*) by removing the bony obstacles to straightness; and (*b*) by shortening the bones, since we cannot lengthen the fascia and tendons. The operation is troublesome, but is the best to do, although it is not invariably successful, and is more likely to fail in adults.

BICYCLES AND HERNIA.

In *Le Progrés Med.* for February 4th, 1899, Championniére reported to the French Academy of Medicine that he considered bicycling to be an excellent exercise for patients suffering from hernia. It permitted of an improvement in the strength of the muscle walls of the abdomen and a gain in general health, due to the advantage of exercise in the open air, without the inconvenience attending muscular exercise in the vertical position, which is often difficult for the subjects of hernia. Championniére makes all his patients who undergo an operation for the radical cure of hernia resort early to the bicycle.

TRINITY MEDICAL ALUMNI ASSOCIATION

The eighth annual re-union of the members of the Trinity Medical Alumni Association will be held in this city on the evening of the eighteenth of May. The Executive Committee having decided that the gathering shall partake of a social function alone, there will in consequence be no reading of scientific papers and discussions thereon this year. The attention of all interested herin is directed to the following excerpts from the Constitution of the Association.

The Alumni Association includes active, associate and honorary members.

Graduates in medicines of Trinity university, Fellows by examination of Trinity Medical College, Teachers past or present of Trinity Medical College and the Undergraduates' representative on the Executive Committee are eligible for active membership. Undergraduates of Trinity Medical College are eligible to become associate members. Honorary members are those elected as such at any general meeting.

The objects of the association are: The furtherance of medical science, and to foster an "*esprit de corps*" and fraternal feeling among the Graduates and Undergraduates.

The general meetings are held annually in Toronto, on the day appointed for the conferring of medical degrees. Yearly dues fifty cents.

All Alumni are requested to send their present address, or other items of interest to the general Secretary.

The Association offers annually a gold medal, under the following conditions:

Only graduates and members of the graduating class in medicine of Trinity University or of Trinity Medical College, or Fellows of Trinity

Medical College who are members of the Association in good standing, can compete for this medal.

The medal may be awarded annually for the best Thesis on any subject pertaining to modern medical science.

All these must be sent to the General Secretary of the Association on or before the first day of May 1900, signed only by pseudonym, the name of the writer to accompany his thesis in separate cover.

The awarding of the medal shall be determined by a Committee of three, to be appointed annually by the Executive Committee of the Association.

The thesis standing first and second respectively in merit shall be read by the writers and the medal presented at the annual re-union.

If in the opinion of the judges no thesis of distinguished merit has been submitted, the medal shall not be awarded.

It is certainly interesting and gratifying to know that the competition for the Trinity Medical Alumni gold medal is each year becoming more keen, the participants last year doubling that of the previous year. It is also worthy of note that the competition is not confined to the younger and more recent graduates. Amongst others who sent in thesis last year, were men who had been in practice all the way from ten to thirty-five years, evidencing the fact that the efforts of the Association in this respect are thoroughly appreciated. It is to be hoped this year that more of the men who have recently been doing post graduate work will enter the competition. Announcements in regard to the annnal banquet will be mailed to the members at an early date.

The Difficulties of Administering Intravenous Infusions.

H. E. Kane, in the *Cleveland Medical Gazette* for November, 1899, says all who have tried to administer an intravenous infusion are aware how difficult the procedure is under adverse circumstances. With suitable aseptic surroundings and moderately well filled vessels, it involves little difficulty. In the circumstances which surround emergency cases with an uncleaned skin and veins collapsed from hemmorrhage, the difficulties are considerable. In this class of cases hypodermic transfusion commends itself. The principal objection to it is the time required. To obviate this difficulty, he has devised a simple apparatus which consists of an ordinary container to hold the fluid to be transfused; passing from this is a tube which divides into four branches, each terminating in a a needle. With such an apparatus it is easy to introduce from two to four quarts of fluid into the tissues in half an hour. The amount will dépend upon the size of the needles and the thickness of the intercellular tissues. Four needles are quite sufficient, though more could be provided if necessarry. In subcutaneous injections we cannot act upon the heart instantaneously, the same as though the veins and arteries were filled directly, but the simplicity of the operation and its safety outweigh the slight difference in time in most cases.—*Medicine.*

TORONTO CLINICAL SOCIETY.

Stated Meeting, Feb. 7th, 1900.

Fellows present.

Dr. Aikins, the vice-president, in the chair; Pepler, King, Silverthorn, Barrick, Lehmann, Boyd, Trow, C. Temple, Ross, Fenton, Thistle, McIlwraith, Rudolf, Chambers and Elliott.

Visitors.

Dr. Dunsmore, Oakville; Dr. Wrinch, St. Michael's Hospital and Dr. Goldie.

Radical, Cure of Hernia. (Inguinal) in a Patient 75 years old.

Dr. W. H. Pepler presented this patent, an old man of 75 years. He first presented himself to the doctor in the summer of 1898. Suddenly, while walking on the street, the man noticed a lump; felt something give way, and noticed a swelling in the right groin. On examination, a right inguinal hernia was found; and a truss was ordered and applied. Several of these were tried for a time but all proved failures as the patient was miserable all the time on account of the continual coming down of the hernia. As he was anxious for a permanent cure, Dr. Pepler decided to do a radical operation, which he performed in May 1899, assisted by Dr. Bingham. The canal was opened and the sac tied off and let back into the abdomen. The ring and canal were then closed up with mattress sutures. During the night of the operation, the patient got out of bed to go to the water closet. In the morning it was found that the stitches had broken away and the case really developed into an open operation. The wound was packed with gauze down to the ring and it healed by granulation. The case went on without any further interest and the patient is at the present time sound, and does not wear any truss and has never had any discomfort. The points of interest are the age and the wound healing in this open manner.

Dr. King stated that a truss should not be worn after an operation of this character; and that in a large number of cases where there is a considerable amount of fat in the abdomen you get better results by the open method. He spoke of a patient 73 years of age in which he had done the double operation without any complications.

Fracture of the Anatomical Neck of Humerus.

Dr. King presented this patient, a man aged about fifty years Three weeks ago on the 5th inst., the man was in the upper part of a house, somewhat the worse for alcohol, although he states he was not intoxicated.

He got up to open the door, stretched out his hand to take hold of the latch, but touched something unawares instead, which he took to be a man, missed his footing on the first step, fell backwards and struck his arm about three or four inches before the shoulder joint; there were no other bruises on the body whatever. He got up and went back again into the room and remained there all that evening and night. The next day—he had used the arm all that time—he consulted a surgeon, who

thought there was a severe sprain of the shoulder joint. On the 5th inst. he came to Dr. King's service in St. Michæl's hospital. He found the condition around the shoulder joint like nothing he could recognize, and asked the Fellows for assistance in diagnosis and treatment. There is loss of motion to a considerable extent, atrophy, and the nerves in the axilla are injured.

Dr. King then presented a skiagraph of the shoulder and described the conditions present. There were two fractures present, one a fracture of the shaft of the bone with displacement inward of the upper end of the lower fragment which could be felt in the axilla and which accounts for the shortening. Then from the skiagraph there appears to exist a fracture about the anatomical neck with what seemed to be a rotation of the head of the bone. The first fracture was more or less of a greenstick variety.

Dr. Ross, who examined the subject very carefully, stated that there may have been fracture through the neck and head of the humerus, but there is another piece of bone quite distinctly to be felt high up in the axilla in the neighborhood of the coracoid process which he considered fractured as well.

Dr. Fenton stated also that he could find this bony process quite firm to the touch high up in the axilla ; it was about as thick as the end of the finger.

Dr. Barrick though that the case appeared very obscure, and that the skiagraph appeared more obscure still. He thought there was no doubt of there being a fracture in the neck of the humerus.

Dr. King did not think that the coracoid was fractured ; the body felt would be a gland or probably a portion of bone from the humerus.

The Treatment of Inebriety.

By special invitation of the president, Dr. Bingham, Dr. Dunsmore, assistant physician Lakehurst Sanitarium, Oakville, read a paper on this topic. He stated : By the courtesy of your president I was invited to read a paper at this meeting of your society and have taken for my subject the treatment of inebriety, but as it will not be right to occupy much of your time, I will confine myself to the treatment of alcoholism and not touch on that of morphine and other narcotics. As resident physician at Lakehurst Sanitarium, Oakville, I will try briefly to outline the course of treatment we adopt in alcoholic cases In the first place let me make it clear, that we do not depend on any so-called specifics or nostrums of any kind, as we all know that secret remedies and formulæ are simply impositions and appeals to ignorance.

The continued use of alcohol to excess, sets up certain changes in the system, and according to Payne, the poisonous effects, in alcoholism of the chronic variety are manifested :

1. As an acute narcotic poison.

2. As a poison acting on the parenchymatous elements, particularly epithelium and nerve, causing slow degeneration and ultimately fibroid changes in the blood vessels.

3. It retards oxidation thus leading to fatty changes.

The effects on the nervous system are best seen in the tremor of the hands and tongue. No characteristic changes are seen in the nervous system. Hæmorrhagic pachymeningitis is not uncommon. Opacity and thickening of the pia-arachnoid membranes with more or less wasting of the convolutions generally occur. The most striking effect on the nervous system is the production of alcoholic neuritis. Osler says that alcoholism at first sight may bear a striking resemblance to general paresis especially in those cases when the pathological findings consist of opacities in the pia mater and congestion of the cerebral substance.

The effects on the digestive system are shown in the catarrh of the stomach and definite changes in the liver leading to various forms of cirrhosis. The effect is probably due to primary degeneration of the liver cells. The typical granular kidney seems to result indirectly from alcohol through arterial changes.

Having outlined some of the most common effects of Chronic Alcoholism I will try to give a sketch of our method of treatment, and would say that it is a condition very difficult to treat when the habit is once fully established; most obstinate cases are those with marked hereditary tendency.

Withdrawal of the alcohol is the first essential and the most trying period is the first week or ten days of abstention. The absence of temptation in institution life is of special advantage. For sleeplessness, bromides or hyoscine are useful; quinine and strychnine may be used in tonic doses. Great care must be taken not to reduce the daily quantity of alcohol too quickly, especially if the patient shows symptoms of delirium tremens. It is often very beneficial to wash out the stomach. If collapse symptoms occur, the limbs should be rubbed and hot applications made to the body. Tincture Capsicum in about five minim doses given occasionally at this period has a good effect. The average case of chronic alcholism can be in this way removed from his liquor in about a week.

Some cases require longer periods of treatment than others, but a course of five or six weeks is usually found long enough. I would like to emphasize especially the importance of moral tonics in treatment of alcoholism. We put all our patients on their honour and do not place any restrictions on them. They are at perfect freedom to come and go as they please. Under these circumstances a man taking alcohol clandestinely would find himself regarded as a traitor to his trust. The natural beauty of the situation of the institution, with the lawns sloping to the banks of Lake Ontario, lends a soothing influence and gives a most delightful and healthful situation. The tone of cheerfulness is kept up by healthful amusements. In summer, there are lawn-bowling, cricket, tennis, boating and bathing; in winter curling is the out-door amusement chiefly indulged in. The institution itself is large, well lighted and heated; ventilation and sanitary appliances excellent. These cheerful home-like surroundings all have their own influence for good. I submit

this paper, gentlemen, not trying to convey the impression that this is the only or best plan for treatment of alcoholism, but simply as a method which has proved very successful in my own limited experience.

I will conclude by stating that intemperance in all its stages may be not only checked and mitigated, but in many cases permanently cured, and the subject fully restored to his former condition of health and sobriety. Such results may not be reached by the final and utter extinction of the morbid desire for alcohol so much as by a development and cultivation of opposing and ennobling qualities, which by their vital action hold the deprived mental tendences of the subject in constant and absolute subjection, so that they may become as inoperative as though they did not exist.

Placental Inspection—Its Uncertainties and its Dangers.

Dr. J. F. W. Ross read a very interesting if somewhat radical paper with this title. The main theme of the paper was to establish digital examination as routine practice after placental delivery. He first instanced a number of cases where he had been called in in consultation, cases the subjects of a profound septicæmia, in which digital examination had determined the existence of portions of the placenta in the uterine cavity setting up the infection. He mentioned four factors as the cause of this septicaemia, viz., traumatism, inflammation and rupture of some pre-existing abnormality, the presence of a virus in the genital canal, and the retention of portions of placenta or membranes; it was with the latter that the paper more especially dealt. In his opinion the proper treatment of these cases was to make a thorough examination of the uterus, not when the appearance of fever and other symptoms compelled this procedure, but immediately after the delivery of the placenta. In support of this, he spoke of the recognised methods of dealing with miscarriages, and the employment of digital methods under anesthesia in these cases, and as the treatment in such cases was considered proper, that at full term would be equally so. Why wait until elevation of temperature occurs before making an examination of the uterus? He further cited several cases where the rise of temperature did not occur until 10 or 12 days after confinement, which had been caused by portions of retained placenta: and thought that if this method were commonly adopted in practice that we would not see so many cases of puerperal fever. The introduction of aseptic and antiseptic methods had not materially reduced the incidence of septicaemia following delivery.

Dr. McIlwraith thought the condition was generally due to an infective germ introduced from without, and that no doubt the retained placenta formed a good growing ground for the micro-organism, but then there was the fact that cases of septicæmia occurred without any retained placenta at all.

GEORGE ELLIOTT,
Recording Secretary.

The Canada Lancet

A MONTHLY JOURNAL OF MEDICAL AND SURGICAL SCIENCE, CRITICISM AND NEWS.

The Oldest Medical Journal in the Dominion: Established 1867.

Published on the 15th of each Month.

Editor:—H. B. ANDERSON, M.D.

All Communications in reference to the Literary part of the Journal, articles for publication, etc., address The Editor, 241 Wellesley Street, Toronto. Correspondence in reference to Advertising, Subscriptions, Publishers Department, etc., address Dr. G. P. Sylvester, Business Manager.

Make Cheques and Drafts payable to the Business Manager.

EDITORIAL.

TREATMENT OF BRONCHO-PNEUMONIA IN CHILDREN.

The general practitioner meets with few diseases which give him the same amount of concern that broncho-pneumonia in children does. It is insidious and deadly. The mortality is so high—from one-half to two-thirds of all cases—that the family physician who has even a mild case of it to deal with knows no rest or peace day or night till convalescence is well established.

This is not the place to discuss its various causes; but we confine ourselves to the treatment of what may be styled idiopathic broncho-pneumonia—that is the form which appears without any antecedent gross irritation of the respiratory tract, such as the inhalation of particles of food, blood, or the products of diseases of the larynx or pharynx; or irritating gases. Nor do we deal with that form which apparently depends upon the inhalation of such infective bacteria as those of measles, whooping-cough or diphtheria. In the majority of cases pneumococci are found; and it is the treatment of this form, not induced by antecedent pathological condition, such as tuberculosis; or other prostrating disease, as typhoid, dysentery or traumatic affections of which we now speak.

It may seem that we have eliminated a large proportion of the cases, but experience will show that a very large number occur which to the general practitioner may be styled idiopathic, in that he can find no adequate cause for the inset of the disease.

Doubtless the exciting cause is the pneumococcus as Neumann says, but where one doctor discovers this germ the other nine hundred and ninety-nine will have to take it for granted.

The routine treatment of the disease is well known by every one, the poultices, mustard plasters, and oil and turpentine; the cough-mixtures, with ipecac, antimony, ammonia, opiates *et al*; the bronchitis kettle, the ventilation, diet, stimulants, nursing, etc., have been told again and again and require no repetition here.

But we wish to call the attention of the profession to what we believe to be the specific action of quinine in these cases. Our experience has abundantly shown that the drug is as much a specific in broncho-pneumonia in children as it is in malarial affections. That is saying a good deal, but some years' trial has not shaken our faith in it.

The one thing needful is heroic doses. Many practitioners use quinine but not in sufficient quantity. To be harmful to the pneumococcus it must be exhibited in large frequently repeated doses.

Did any one ever hear of a case of poisioning by quinine? Then why, when giving it for specific reasons, either for the plasmodium malariæ, or the diplococus pneumoniæ, should we be content with half grain or small doses every four or six hours?

Give half a grain every two hours for every year of the child's life as a regular dose, which may be increased in quanity or given more frequently as the case demands. We could quote case on case to show the specific effect of such dosage. We can only affirm our belief in the wonderful efficacy of the drug when exhibited in heroic (?) doses.

J. L. D.

SOUTH AFRICAN HORSE SICKNESS.

Cavalry and mounted infantry form such an essential part of both the British and Boer forces in the present war in South Africa that military critics think that the success of the British operations, to a considerable extent, depends upon the prevention of sickness among our unacclimatized horses. Therefore frequent mention has recently been made in both the lay and medical press of an equine disease, enzootic and

at times epizootic, in various parts of South Africa and causing great mortality. For instance, Hayes states that in the epizootic of 1854-5 64,850 horses died in Cape Colony, and in 1892 13,979 deaths occurred. Very few animals that acquire the disease recover. A short description of this South African horse sickness may therefore be of interest.

Œdema mycosis, as it is technically called, is an infective disease due to a mould, which, according to Edington, the bacteriologist to the Cape Government, is related to, if not identical with, a species of penicillium. This organism has invariably been found present in the bodies of animals dead of the disease.

The malady is not directly transmissible from horse to horse, but is caused by eating infected forage, particularly when laden with dew. This is shown by the fact that the disease appears among horses allowed to graze while dew is on the grass, whereas those partaking of dry fodder escape. High and dry regions are usually free from the disease.

Season has an important influence on its occurrence. It rarely appears before February, is worst during March and April, disappearing with the first frost in May Fatigue, exposure and lack of proper food —conditions particularly attendant on military operations—are important predisposing causes.

The period of incubation is about eight days, and a fatal result generally ensues about four days after the onset of symptoms. Death which usually occurs suddenly, is due, according to Edington, to the growth of the fungus into the blood vessels, with resulting widespread thrombosis.

The few horses which recover are said to possess thereafter a life-long immunity, though this statement lacks actual proof. By means of inoculation Edington has succeeded in establishing a degree of artificial immunity so that subsequently only one animal in every three attacked succumbs to the disease.

There is no successful method of treating the malady known. Prophylaxis is all important. When possible during prevalence of the disease, horses should be sent to a high and dry region away from the affected districts. Where this cannot be done the animals should be kept in stables or enclosures and not allowed to feed on the dew-covered grass.

During military operations, where it is impossible to keep horses in stables or enclosures, the wearing of nose-bags during the time of the day the dew is on the grass is said to be an efficient preventive measure.

THE EIGHTH COMMANDMENT IN MEDICAL JOURNALISM.

Under the above heading THE LANCET, owing to the unfortunate oversight of not crediting the source of some selections made use of in its pages during the past year, comes in for caustic, though we regret we cannot say unmerited criticism from a number of contemporaries. A year ago the editorial staff of the journal resigned, and in the somewhat disorganized state of affairs that followed the matter complained of occurred. For this the present staff disclaims all responsibility. In justice to our contemporaries, however, we wish to express extreme regret at the occurrence and the strongest disapproval of such a breach of the ethics of medical journalism.

While in the present instance we believe from information received that it was the result of an oversight, we do not wish to claim this as a satisfactory defence.

THE LANCET with the March number will be under the control of an entirely new staff, with an editor in charge, responsible for the conduct of the journal, and associate editors, responsible for each department. This staff will endeavor to maintain the high reputation for integrity and journalistic honor, which has characterized the "CANADA LANCET" since its establishment in 1867, and will be assured that it will not again be necessary to appear in the rôle of apologists in a matter so thoroughly distasteful and indefensible.—H. B. A.

THE ABUSE OF PUBLIC LABORATORIES

Following the great advancement made in preventive medicine during the past few years from the discovery of the relationship of micro-organisms to various communicable diseases, state-supported laboratories have been established for the purpose of utilizing these discoveries to the fullest possible extent in the interests of public health. The wisdom of this action few will question.

Unfortunately, however, these laboratories have been, and are, used to a considerable extent by physicians for the benefit of individual patients who are able to pay for the services afforded. They have thus become, on a large scale another means of pauperizing the public, who are at all times only too ready to shirk their financial obligations to the profession. Why a wealthy patient should have the diagnosis of diphtheria, phthisis, or typhoid fever made at the public expense is difficult to explain.

The services of a bacteriologist are not less valuable than those of the clinician, and should be paid for by the patient. As well might

boards of health furnish *free* treatment as *free* diagnosis,—a contingency possibly not so remote as some might imagine. Free services to *pauper* patients would meet with no objection, but it is a gross misapplication of public funds in the case of those who are able to pay. Moreover, it defeats the prime object for which public laboratories were established—the investigation of disease and the application of the knowledge acquired to their prevention.

We have here the nucleus of an evil which may before many years become as great as the abuse of medical charities or the system of lodge practice. It is another encroachment on the interests of the medical profession, which should receive the most vigorous opposition. We are glad to see that other journals are calling attention to the matter and we quote with hearty approval the following editorial from the Maryland Medical Journal of Dec. 9th :

" The public laboratories which are springing up everywhere in connection with boards of health offer to the general public and to physicians, certain privileges and benefits which should never be obtainable at public cost. It must be clear that such laboratories are organized and equipped first and last for the protection of public health, and certainly not for the creation or maintenance of a new form of mendicancy, lay or medical.

An adjoining State maintains a general clinical laboratory. The State Board of Health sends to physicians circulars of instruction concerning the collection of urine and feces, the administration and recovery of test meals, the preservation of tumors and other pathological tissues and the methods of transmitting all these things to the laboratory. All this is paid for out of public funds. Spectacles and teeth might as well be provided at the expense of the State. Free chiropody would be more profitable and distinctly less pauperizing.

It is difficult to understand how any mind, even the legislative variety, could have sanctioned such bad public policy.

The benefits which physicians and private citizens derive from such laboratories are not gratuities, but a fair return for information which public officials can use in restriction and prevention of disease.

The public bacteriologist is not the servant of the private citizen or of the clinician any more than the public chemist is, nor can his services be demanded upon any other ground than that the community shall have a primary and paramount interest in every investigation which he makes at public cost."

A CONGRESS ON MEDICAL ETHICS.

In connection with the General International Medical Congress in Paris during the first week in August there will be held the first International Congress of Deontology or Medical Ethics. A perusal of the programme outlined for the meeting will show that the subjects to be dealt with are of much interest. The profession in Great Britain are taking an active part in promoting the success of the meeting, and Canada is represented on the Committee of Patronage by Professor J. G. Adami of Montreal. It is to be hoped that a goodly number of Canadian doctors who visit Paris this summer will take advantage of the opportunity of being present. The committee in Paris who have the matter in charge are making every effort to arrange for the comfort of those attending the Congress.

Dr. Jules Glover, 37 Rue du Faubourg Poissonnière, Paris, the General Secretary, will furnish information as to lodgings, transport of baggage, afford interpreters, etc.

Full membership is accorded to all who approve of the object of the Congress, on payment of an entrance fee of 12 shillings. Members will receive gratuitously the reports of proceedings.

The following is an outline of the questions to be discussed :—

The Relations of Medical men and Collectivities.

Dr. CUYLITS, formerly Secretary of the Brussels Medical Union, will report on the Relations between Medical Men and Benefit Societies. It is also proposed that the following questions should be discussed in this Section :—

1. The Laws governing the Exercise of Medicine.
2. The Relations of Medical Men and the Organizations for the Relief of the Poor: workhouse, infirmaries, hospitals, dispensaries, etc
3. The Economical Position of Medical Officers of Health.
4. The Relations of Medical Men and the Judiciary Authorities expert evidence, professional secrecy, etc.
5. The Relations of Medical Men with other collectivities than State or Municipal collectivities, such as Railway, Insurance, and Industrial or Mining Companies, Provident or Benefit Societies, Private Charities, etc.

The Relations of Medical Men and Individuals.

Dr. DESCOUTS, Professor of Forensic Medicine, will report on the Illegal Exercise of Medicine. This section is invited to discuss the question of medical fees ; the privileges of the Medical Practitioner ; and

the relations of the Practitioner with nurses, midwives, dispensing chemists, manufacturers of surgical apparatus, etc., and with quacks.

The Relations of Medical Men with Fellow Medical Men (Medical Deontology.)

Reports will be read by Dr. GRASSET, Dean of the Medical Faculty of Montpellier, on the Fundamental Principles of Medical Deontology; by Dr. POLLAK, of Vienna, on the organization of Chambers of Medicine and the results attained in the countries where these exist; by Professor JENDRASSIK, on the organization of Medical Leagues in Hungary; and by Mr. ADOLPHE SMITH on the organization of Medical Unions in Great Britain.

Questions submitted for discussion:—Consultations, Cliniques and Medical Institutions, *Locom Tenens*, Sale of Medical Practices, Orders or Guilds, Chambers, Syndicates or Unions of medical men, and the Relations between medical men of different nationalities.

Professional Organization of Insurance, Mutual Assistance, and Defence.

Dr. LANDE, of Bordeaux, will report on Insurances for the help and relief of medical men. Dr. PORSON, of Nantes, will report on organizations for Professional Defence. The Section will be invited to discuss the question of Insurance for medical men against sickness or infirmities of the creation of a Pension Fund, a Fund for the succour of the widows and orphans of medical men, etc.

A New Medical Journal

The Stylus, a monthly record of hospital and clinical work, made its first appearance in February. It is edited by Dr. Wm. Porter, of St. Louis with Dr. Robert M. Ross as assistant. The initial number is a very creditable one and if our contemporary follows the course outlined in its introductory remarks it will prove a valuable acquisition to to medical journalism.

How John Bull pays for Medical services

According to the British Medical Journal, Sir Wm. MacCormack, Mr. Frederick Treves and Mr. G. Makin, the consulting surgeons with the British forces in South Africa, will each receive $25,000 a year for his services.

PERSONAL.

Dr. Ernest Hall who practised in Toronto for a short time, has returned to Victoria, B. C.

Dr. E. H. Stafford, for some years medical assistant in the Asylum for the Insane, Toronto, has gone to Bermuda for the winter to recuperate.

Dr. R. W. Bell, of Peterboro, officer commanding the 57th battallion, has been appointed to the position vacated by Dr. Stafford's retirement.

Dr. C. J. Copp, (Trinity '97), who recently returned from England, where he has spent the past three years in post graduate work, has opened an office on Wellesley St.

Dr. A. F. Oliver, one of the oldest and most prominent physicians in Kingston, did suddenly on Feb. 15th.

Dr. D. J. Gibb, Wishart, has been appointed Laryngologist to the Muskoka Cottage Sanitarium, Gravenhurst.

The British Medical Journal is authority for the statement that a movement is on foot to secure the appointment of Dr. Wm. Osler, of John Hopkin's University, to the Professorship of Medicine in the University of Edinburgh, rendered vacant by the death of Sir Grainger Stewart.

Dr. Harper, of Alliston, and Miss Amy Wright, of the same town, were recently married.

Dr. H. J. Hough (Trinity '98) has begun practice in Midland.

Dr. T. J. Norman, of King, sailed from New York for England, on March 7th, where he will spend some time doing post graduate work.

Dr. G. Sterling Ryerson is doing good service as the Canadian representative of the Red Cross Society in South Africa. The Illustrated London News, of Feb. 17th, contains a picture of Lt-Col. Ryerson and makes the following reference to him. "Lieutenant-Colonel G. Sterlinl. Ryerson, of the Canadian Army Medical Staff, is now acting as Speciag Service Officer and Canadian Red-Cross Commissioner at the seat of war. Colonel Sterling Ryerson is known already to some of our own troops, with whom he served at the time of the Fenian Raid in 1870, and during the North-West Rebellion of 1885. He was in London, attached to the Canadian contingent, during the Jubilee of 1897. When he is at home he is known for his good service as Executive Chairman of the Canadian Branch of the British Red-Cross Society, and as General Secretary of St. John's Ambulance Association in Canada. Already he wears the insignia of the Order of St. John of Jerusalem.

Dr. H. E. Livingstone, (Trinity '94,) who subsequent to graduation, spent some years as a medical missionary in Zululand and afterwards in private

practice in Natal, gave a lecture on the Boers in the theatre, Trinity Medical College, on the evening of Feb. 20th. On the outbreak of the present war, Dr. Livingstone was taken prisoner and was badly treated by the Boers. He made his escape and volunteered for the army medical service. Not getting a commission, he returned to Canada. Whatever redeeming qualities the Boers possess, were not revealed to Dr. Livingstone during his experience among them.

Dr. H. G. Barrie, (Trinity '98,) is the representative of the Y. M. C. A., with the Royal Canadian Regiment of Infantry in South Africa. Letters from our soldiers refer in the highest terms to the useful work being done by Dr. Barrie and of his personal popularity.

BOOK REVIEWS.

A MANUAL OF MODERN SURGERY.

An Exposition of the accepted doctrines and approved operative procedures of the present time; for the use of Students and Practitioners. By John B. Roberts, A.M., M.D., Professor of Anatomy and Surgery in the Philadelphia Palyclinic; Mutter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. Second edition revised and enlarged, 473 engravings and 8 plates. Lea Bros. & Co., Philadelphia and New York, 1899.

Dr. Roberts, to use his own words, has endeavored "to give the profession, in a condensed form, the accepted doctrines and approved procedures of Modern Surgery." The author has stuck well to his text, with the result that we have before us a work which we can highly recommend to students and practitioners looking for a book from which all the straw and chaff have been very rigidly excluded while the grain is served up in an acceptable form.

The book has already reached its second edition. The articles on appendicitis, joints, genito-urinary organs and amputations have been entirely re-written while the text throughout has been carefully revised and brought up to date. F. F.

SURGERY.

By Thomas Pickering Pick, London, Longmans Green & Co., 1899.

This is a new one vol. Surgery written by a surgeon and surgical lecturer of wide experience. On first glancing through the book one gets a favorable impression from the large number of illustrations given, as well as from the unusually large proportion of these which are original and now appear for the first time.

Based as it is upon the lectures delivered by the senior surgeon at St. George's Hospital one would naturally expect its pathology to be in accord with the best modern teaching. In this particular no disappointment is met with. All through the work runs the dominant idea of a sound, safe, judicious practice based upon a correct pathology.

Reflecting as it does the matured views of a surgeon of large experience subjects for commendation are easily found. Passing over these we note just a few points upon which the author's practice is open to critical comment.

And first of all we may question the propriety of omitting from a systematic work on surgery all reference to the great and practical subject of anæsthesia.

In the removal of the appendix it is advised to "wash out the cavity and insert a drainage tube for 24 or 48 hours." From our standpoint neither irrigation nor drainage are needed in "interval" or in early and non-perforated cases, and the above teaching is at least ten years behind the age.

Mr. Pick prefers tracheotomy to intubation in dealing with the laryngeal obstructions of diphtheria. His endorsation of an operation often performed here twenty years ago and now almost never done, might be mischevious, but for the fact that the early use of antitoxin and the early and persistent use of calomel fumigation with us has practically removed the necessity for either tracheotomy or intubation. We are beginning to forget that children used to die from membranous laryngitis and those of us who some years ago did intubation frequently, now find little use for the ingenious instruments perfected by Dr. O'Dwyer. Inguinal colotomy is described after the methods of Cripps and Allingham. Operators who are experts, doubtless secure excellent results by these procedures, but since we have in Greig Smith's modification of the Maydl-Reclus operation, a rapid, safe, simple and certain plan for the formation of an artificial anus it is a matter of surprise that it should not even be referred to.

In the treatment of Colles' fracture Carr's splint is spoken of as "certainly the best and the most frequently used." It would be easier to overlook this if the all-important subject of complete reduction under anæsthesia had received the consideration which it deserves.

In the treatment of hammer-toe, the excision of the joint between the first and second phalanges by a lateral incision is advised, and amputation of the toe (usually the second) is rejected as tending to cause hallux valgus. That excision is a judicious procedure may be granted but the ultimate results of a series of amputations for the relief of hammer-toe leads us to question if the objection on the score of a possible sub-luxation of the great toe is well taken.

Even when brought sharply into contrast with recent and notable additions to our list of up-to-date treatises, Mr. Peck's work does not suffer, and it can be safely endorsed as in the main worthily representing British surgery of the present day.

The publisher has done his part well, and eyes that are becoming critical regarding type will be contented with this work.

N. A. P.

PRACTICAL TREATISE ON MATERIA MEDICA AND THERAPEUTICS.

By Robert Bartholow, M.A., M D, L.L.D., Professor Emeritus of Materia Medica and General Therapeutics in the Jefferson Medical College, of Philadelphia, &c., &c. Tenth Edition, Revised and Enlarged. D. Appleton & Co., New York, 1899.

A treatise that has passed through ten editions, is so well known as to require no extended review. In the present edition the newer remedies are described, a special article on prescription writing has been added and various corrections have been made, so as to bring it well up to date. It is a very practical and thoroughly reliable guide and well deserves the popularity it has attained.

TRANSACTIONS OF THE AMERICAN CLINMITOLOGICAL ASSOCIATION FOR 1898.

VOLUME XIV.

This volume opens with the Presidential address by E. O. Otis, of Boston, on Anenbrugger and Lalennec, the discoverers of auscultation and percussion. It is an interesting and scholarly history of the lives of these two great masters in medicine.

Dr. F. I. Knight, in a short article deals with "Common Errors of General Practitioners in the management of cases of Pulmonary Tuberculosis." He especially mentions five :—1st, the failure to make an early diagnosis. 2nd, the failure to admit the gravity of the situation the moment it is discovered and to put the patient at once in the best possible condition for recovery. 3rd, temporizing in recommending treatment not only useless but positively injurious. He particularily deprecates the advice sometimes given to the patient to "drink whiskey" as a preventive. 4th, sending unsuitable cases away from home and not carefully selecting the climate suited to each case 5th, allowing cases to progress without proper medical supervision.

Vincent G. Bowditch, Boston, has a very practical paper on "Suggestions,—the result of recent experience with phithisical patients," and E. Fletcher Ingals, Chicago, deals with "The value of Systematic Physical Training in the prevention and cure of tuberculosis." A most valuable paper is contributed by Henry P. Loomis on the "Pretubercular stage of Phthisis, and its diagnosis." Dr. Beverley Robinson New York, has a suggestive paper on asthma and its treatment. He insists on the presence of some definite causative factor as malarial taint, gouty or rheumatic diathesis, morbid conditions in the nose and throat, gastric catarrah bronchitis, etc., being present in probably all cases.

The use of Ergot in chronic malaria is advocated in a paper by A. Jacobi.

The clinical uses of Röntgen light is fully discussed by Francis H. Williams of Boston, with many excellent illustrations.

James M. Anders, of Philadelphia, strongly advocates special hospitals for the treatment of consumptives, supporting his arguments by numerous statistics.

Papers are also contributed by Dr. G. R. Butler, Brooklyn; Judson Daland, Philadelphia; Roland G. Curtin, Philadelphia; Andrew H. Smith, New York; Guy Hindsdale, Philadelphia; Charles E. Quimby, New York; Theobald Smith, Boston; E. R. Baldwin, Saranac Lake; J. E. Stubbert, Liberty, N. Y.; and W. D. Robinson, Philadelphia.

Altogether this volume is an exceedingly interesting and valuable one.

HYDE ON THE SKIN.

A Practical Treatise on the Diseases of the Skin, for the use of Students and Practitioners, by James Nevins Hyde, A.M., M.D., Professor of Dermatology and Venereal Diseases in Rush Medical College, Chicago. New (5th) Edition. In one octavo volume of 866 pages, with 111 engravings and 24 full-page plates, 8 of which are colored. Cloth, $4.50, net; leather, $5.50, net. Lea Bros. & Co.

The fact that five editions of this work have been required in 16 years to supply the demand, in itself is the highest commendation it could have. The last edition was exhausted in two years. The present is fully revised and brought up to date. The book is gotten up in good form, the type is clear and the illustrations are numerous and excellent.

We know of no work on this subject which will give greater satisfaction.

DUDLEY'S GYNECOLOGY.

A Treatise on the Principles and Practice of Gynecology.—By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (2d) edition. In one very handsome octavo volume of 717 pages with 453 engravings of which 47 are in colors and 8 colored plates. Just ready. Cloth, $5.00, net. Leather, $6.00, net. Lea Bros. & Co.

The first edition of this work was exhausted in a year. The second edition has been carefully revised and 78 pages added. The subject is dealt with from a practical standpoint throughout though the scientific aspect is not lost sight of. The extensive experience of the author has enabled him to produce a book valuable to both practitioner and student. Pelvic massage after the Brandt method is fully set forth in the closing chapter, the various manipulations being shown by a series of illustrations.

The work is concise and definite in its teaching. The cuts are numerous and well chosen and the press work excellent.

G. P. S.

A TEXT BOOK OF PHYSIOLOGY.

By W. Foster, M.A., M.D., L.L.D., F.R.S., Professor of Physiology in University of Cambridge, Fellow of Trinity College, Cambridge. With an appendix on The Chemical Basis of the Animal Body, by A. Sheridan Lea, M.A., D.Sc. F.R.S, Unsversity Lecturer in Physiology in the University of Cambridge. (Macmillan & Co., New York and London), 1898.

The five volumes of Dr. Foster's original work now appear as one volume of 1160 pages. The bulk of matter is greatly reduced, but it has been so arranged that all the important points are retained and given their full prominence and with sufficient elaboration. The abridgement consists in the sacrifice of the historical sections, and the space formerly devoted to discussion of the more theoretical problems.

The volume is divided into four books and the subject is taken up under the same headings as in the former work, the argument being carried through in the same manner, necessarily more condensed, but none the less clear. The appendix on the chemical basis of the animal body is abridged but to a less extent than the main text. Some of the more elaborate details as to methods are omitted as also are some of the more vexed questions and references to literature.

The whole has been thoroughly revised and new points introduced where possible.

The volume should prove a very useful text to students and physicians alike.

H.C.P.

AMERICAN YEAR BOOK OF MEDICINE AND SURGERY.

Philadelphia, W. B. Saunders. Toronto, Carveth & Co. 1900. Price $3.00.

The volumes for the year are to hand.

We presume that our readers are aware of the general plan and scope of the work.

It is to give in a small space the gist of medical and surgical opinion on all matters of interest appearing in the medical literature of the year.

George M. Gould has the general editorial charge of the work, and he is assisted by numerous and able collaborators—the best men in the United States in their respective departments.

In my opinion the books are invaluable to every medical man. They are mines of scientific information, the latest, and fully digested. We have referred to both volumes—Medicine and Surgery—many times since we got them, and have always got light and information on the subject under consideration.

Their value consists mainly in keeping their readers abreast of the very latest scientific and practical medical and surgical ideas of the day.

J. L. D.

PUBLISHERS' DEPARTMENT.

INCONTINENCE OF URINE IN CHILDHOOD AND ITS TREATMENT.

BY WILLIAM C. WILE, A.M., M.D., DANBURY, CONN.

(Reprinted from the *Massachusetts Medical Journal*, Boston, Mass., February, 1900.)

Though enuresis is occasionally met with in adult life, yet, for all practical purposes, it may be considered an affection peculiar to childhood, rarely occurring after the age of puberty. Before the completion of dentition, incontinence is not looked upon as a disease, but is considered a normal condition. It is not surprising, therefore, that involuntary passages of urine should occur mostly among illy-nourished, ill-conditioned children whose muscular fibres still remain weak and undeveloped; or among others comparatively strong, but whose urine for certain reasons has become unusually acid and irritating in character. It is to the etiology and treatment of these latter cases that we wish to direct attention here, inasmuch as in this advanced age of civilization, when children are permitted to gorge upon sweets and meats, such patients are becoming more common every day.

It has already been demonstrated, that, in adult life, among those who "live high" and are addicted to luxurious habits, symptoms of uric-acidæmia manifest themselves in the genito-urinary system in the form of cystitis, gravel, sensitive urethra, etc., attended with urine strongly acid, loaded with urate salts. So among children who are fed to repletion and indulged inordinately upon "sweetmeats," the urine becomes charged with urate crystals which irritate, by their points, the partially developed, sensitive mucous membrane and sphincter muscles of the bladder, resulting in incontinence. In an article, entitled "Uric Acid Poisoning," published in *The American Therapist* for April and May, 1898, Dr. J. Lindsay Porteous writes that he is satisfied nocturnal urination in children is often the result of uric acid. He refers to the fact that one year, at the Leake and Watts Orphan Home, he treated fifty-four cases of this troublesome habit, fifty-one of which recovered entirely by the administration of alkalies and regulated diet.

In addition to alkaline remedies, however, which are effective only as diuretics or uric acid solvents, the writer has usually found it necessay to prescribe some cholagogue agent in order to excite free biliary flow and thus relieve the work of the genito-urinary system by removing much of the fluid waste of the body through the bowels. Hepatic stimulation of this character is essential, too, owing to the fact that, in these cases, where the ingestion of sweets is sometimes enormous, the liver cells soon become clogged with glycogen, which of course interferes with the special metabolic function of that organ in changing nitrogenous waste and the ammonium carbamates into urea—which, when imperfectly performed, results in the retention of uric acid in the system with all its attendant evils.

For antacid and antilithic effects the salt of lithia still holds first rank among the therapeutic agents in the treatment of the uric acid

diathesis. This probably owing to its ready combination with the uric acid of the blood, forming urate of lithia, the most soluble of the uratic salts. It has been found, however, that the natural lithia waters contain less of that agent than occasion calls for. Prof. Abraham Jacobi, who believes that "calculi are of great frequency in infancy and childhood," states in the Archives of Pediatrics, VII, 424, that artificial preparations of lithia, when carefully made, have the advantage over the natural waters owing to their greater strength and potency.

There have been many such preparations presented to the medical profession, some of which are effective as uric acid solvents, and others not, but none of which act effectively also upon the liver, stimulating cellular action, except the new laxative salt of lithia thialion. The thorough cleaning out of the hepatic cells produced by this remedy is in some cases very striking, as indicated in the character of the stools, which becomes not only "mushy" in consistence, but about the third day are so positively disgusting in odor (owing probably to the "cleaning out" process referred to), that the little patients' parents have sometimes refused to continue with the remedy, believing that it is producing some disease "inwardly."

While thialion, therefore, is an agent not particularly æsthetic in effect yet its therapeutic results in these cases are satisfactory and pronounced. Not only is this seen in the character of the passages from the bowels, but also that from the bladder, the urine becoming rapidly less acid and irritating, and finally alkaline. When this occurs the medicine is usually omitted for a day or two, or until the litmus indicates that the neutral point has again been passed, when it may be resumed and continued until recovery. As an illustration of the potency of this remedy and the practical results which may be obtained by its administration, and to evidence that incontinence is obtained by its administration, and to evidence that incontinence is often but the local manifestation of a general uric acid poisoning, the following cases are submitted here, in which an alkaline agent has been used with exceptionally gratifying results.

William D., æt. 12, was brought to the office for treatment March 10, 1899, his mother reporting that he had "wet the bed" regularly every night for the past five or six years. During a great portion of this time, the usual remedies had been prescribed by the family physician—belladonna, iron, ergot, etc.,—affording only temporary relief. The patient's general health had been good, until recently he had begun to grow irritable and complain of dizziness and headache. His skin and mucosæ were pale, and bowels inclined to costiveness. Upon further questioning it was learned that the patient had always been extremely fond of "sweetmeats," and, owing to the good nature of the father, had usually succeeded in getting his "fill" regardless of material restrictions. His mother had already suspected that this indulgence was a causative factor in the case, and was much pleased to learn that her opinion was shared by the new physician. Directions were at once given as to diet, and thialion administered in the usual way: *i. e.*, half a teaspoonful in a cup of hot water every morning upon rising. The treatment was continued in this way for the first month without much change in the

patient's condition, except that the bowels had become regular, while the headache and dizziness had practically disappeared. It was noticed, too, that the quantity of urine voided during the night was gradually diminishing. At the end of another month, a marked improvement was manifest, the normal color of the skin having been regained, while the bedding in the morning was found to be but slightly soiled. On June 15th, three months after the commencement of treatment, the mother reported her son cured, but was advised to continue with the medicine for another month, reducing the dosage to a third of a teaspoonful every other day. Nothing further was heard of the case until the 16th of December, on which date the mother called and stated that the boy had not relapsed into his former habit but once during the preceding six months, a mistake which she attributed to a hearty meal taken just before retiring.

A case even more troublesome than the above, was that of John D., a young man 18 years of age, who reported that he had "soaked the bed" nearly every night since he could remember, wetting through sheets and mattress (as well as blankets placed to absorb the urine). He was first seen two years ago, having, at that time, been treated unsuccessfully by several different physicians. I administered the usual remedies for two or three months, without benefit and the patient was soon lost sight of. Last September he again appeared for treatment, for another trouble, and, being asked regarding his old complaint, he stated that he was "just as bad as ever," and had given up all hopes of obtaining relief. An examination of his urine revealed a considerable quantity of urates and a high degree of acidity, He was finally persuaded to try a new course of treatment; and, having first been advised as to his diet, was at once put upon thialion—a teaspoonful three times a day. This heroic dosage was continued for a week, and then reduced to a teaspoonful every morning upon rising. The young man followed our directions carefully in regard to his diet, and took the medicine regularly for two months, at the end of which time he called at the office and reported himself cured. Three months have since elapsed, during which time he says he has retained his urine at night "as well as any one." He is of a nervous temperament, and his habits are of such a character, that, were there any doubt as to his being entirely cured, the fact would have offered itself long ago. The recovery of this case in so short a time is in many respects remarkable, and can be explained by the writer only on the ground that the patient had for a long time been a victim of the uric acid diathesis. His bladder, too, was doing much of the work of the bowels. His stools had always been hard and dry, until taking the thialion, when they immediately became soft and "mushy" in consistence.

Nepenthe—The Standard Anodyne and Opiate.

Pereira says: "Opium is the most valuable remedy of the Materia Medica. For other medicines we have one or more substitutes; for opium none—at least in the large majority of cases in which its peculiar and beneficial effects are required."

The dictum of the great pharmacologist made more than half a century ago, still holds good. At a recent annual meeting of the British Medical Association, one of the most eminent physicians of the present day, after reviewing the action and utility of the numerous hypnotics and analgesics lately introduced, said, "When sleeplessness is due to pain, there can be no doubt that no other hypnotic approaches opium in value, and in such cases it has always appeared to me that the possible evils consequent on the administration of opium are minimized.

"After opium, though at a long interval, comes chloral, which undoubtedly at times relieves pain, and below chloral in efficacy come the other hypnotics.

In cardiac affections, accompanied by sleeplessness, opium stands out prominently as the best soporific, especially when given in the form of subcutaneous injections."

The ordinary preparations of opium and its alkaloids produce many unpleasant symptoms—such as nausea, headache and constipation—which are a great restriction to the employment of the drug, and in numerous instances render its administration wholly inadmissible.

The originators of the preparation known as "Nepenthe" have, by a carefully elaborated pharmaceutical process, eliminated all constituents which give rise to these disagreeable after effects, whilst retaining in the fullest degree the unrivalled sleep-producing and pain-allaying properties of the drug.

That this result has been successfully achieved is proved by the fact that, although originally introduced to the medical profession in Great Britain many years ago, Nepenthe still holds the first position as the sedative and hypnotic *par excellence*, and is constantly and increasingly prescribed by physicians in all parts of the world.

The *Lancet* Analytical Report on Nepenthe: "Nepenthe, or Anodyne Tincture, prepared by Messrs. Ferris & Co., Bristol.—This preparation really consists, as stated, solely of opium, resembling somewhat the liquid extract of the British Pharmacopeia. It is claimed for it that it does not produce headache, stupor, giddiness, depression of spirits, diminution of nervous energy, prostration of strength, or constipation; it is doubtless less stimulating than those preparations of opium made with the solid and crude drug, and further commendation of Nepenthe is its uniformity of strength."