destructive process, and thus to deprive it of every nutrient property. Fermentation is thus perpetually renewed, fresh gases are evolved, the cavity of the organ is kept distended, and thus dilatation continually increases; whilst the body is starved, the disease is augmented in an increasing ratio. Now, you will easily perceive that the circumstances which bring into operation the principle, which I have stated to lie at the foundation of all forms of gastric dilatation, are not limited to instances of mechanical obstruction. Given any set of circumstances in which food remains in the stomach imperfectly acted upon by the digestive ferments, and you have present the conditions for producing dilatation of the organ. Thus, many instances of so-called indigestion, or of recurring "bilious attacks", really involve the elements of this disease, though, happily, not often passing beyond the initiatory period. Deficiency in the production of the gastric juices, on the one hand; habitual overloading of the stomach, or the ingestion of masses of food which the fluids of the stomach cannot penetrate, on the other; or, again, the use of food already decomposing, or so saturated with fatty matter as not to mix with the digestive juices, will point to a large group of cases involving the principle to which I have referred. Various forms of impaired health, constitutional, or the remnants of acute disease, in which secreting force is lessened, or the materials are wanting; erroneous dietetics as to quantity as well as quality; imperfect mastication from habit or misfortune—cover a variety of causes connected with daily life. Once the condition of putrefaction or fermentation is set up, other circumstances follow and hasten the process of dilatation; above all, a state of low inflammation is established in the walls of the stomach, in consequence of the abnormal matters which are produced by the abnormal chemical action; the fatty and other acids; the gases, etc., whose presence is so clearly attested by the chief symptom of which the patient will complain, the gastric pains, the heartburn, the fulness, the eructation, etc.; by this inflammation the muscular fibres of the stomach are weakened, and offer diminished resistance to distension, and mucus is secreted which acts as a fresh ferment for putrefaction. Thus, you will see that every consideration points to the one indication, which, in one of its forms, is well illustrated by the case I now narrate. You will, of course, understand that the mechanical method of emptying the stomach, which was employed in the present instance, applies only to the more serious forms of the disease. For the milder forms, and for the early stages, when dilatation has not been established, a very different class of remedies is required. I do not now consider these, as it is with the principle only I have to do. Only let me say that, among the remedies to be proposed, preventive measures to remove the cause are of the first importance, and can only be directed by a knowledge of the abnormal conditions in which the malady originates.

A man, aged 50, of highly respectable character, began to suffer from pain in the right hypochondrium twenty years ago; it was chiefly produced by the presence of food, so that he avoided eating. He then vomited, or rather eructated, clear fluid; and in process of time began to throw up his food about three hours after a meal. He lost flesh considerably, and had to leave work. These symptoms persisted, with varying severity, through six years; when one night, without any further change having occurred of which he was sensible, he was awakened by something giving way within him in the hepatic region, at the inner border of the costal arch; and a quarter of an hour afterwards, he rejected, without effort, about three pints of "thick, sticky, greenish" pus. Regularly for the next month, on awaking in the morning, he rejected about half a pint of the same matter, "of the colour of yolk of egg", and remained free during the rest of the day. My friend Dr. Underhill, who attended him, has been good enough to confirm the patient's description of the serious nature of the attack.

At the end of a month, the discharge began to lessen; but it continued for nine weeks longer in smaller quantity.

Two years later, the patient had a temporary return of the pain.

During the last two or three years, the same symptoms have returned, with still greater severity; one paroxysm of pain, eighteen months ago, Dr. Arthur Underhill tells me, had all the severity of hepatic colic. The stomach dilated, and, Dr. Underhill tells me, was often visible through the abdominal wall. After one of these attacks, the man threw up a large quantity of blood.

The patient entered the Birmingham General Hospital on June 16th, 1879. The stomach then reached half-way between the navel and pubes; sarcinous matter was vomited. The man was thin, but not cachectic; and there was no other physical sign of disease in the chest or abdomen.

On June 20th, washing out the stomach by means of the syphon-tube was commenced, and was continued daily, the patient falling into the use of the tube with great facility. The food was at first milk; but solids soon became necessary, in order to avoid keeping up the dis-

tension of the stomach, as well as for other obvious reasons. Solid food was given in the morning, immediately after cleansing, to gain the whole day for digestion; and with it was administered pepsine, with nitric acid and liquor strychnic. From this day, amendment began. At admission, the patient weighed 114 pounds (his original weight had exceeded 168 pounds); on leaving the hospital, on September 4th, he weighed 150½ pounds, and had returned to ordinary diet.

It is noteworthy that, through his residence in hospital, his bowels acted quite regularly, and that the stools were of perfectly natural quality. A considerable deposit of fat upon the omentum, which took place with renewed nutrition, prevented our ascertaining the exact dimensions of the stomach.

When at home, however, he presumed too much on his improved condition, and neglected to wash out his stomach. He returned on November 24th, with renewal of all his former symptoms, and with his weight reduced again to 116 pounds; the distension of the stomach had somewhat increased. The same treatment was again employed, and was attended with the same fortunate results. He left the hospital on December 20th, with restored health.

On February 22nd of last year, he made his appearance, apparently quite well, and not having used the syphon for a month. He weighed 154 pounds. Since this date, however, fresh symptoms have set in, which do not fall within the purpose of my present remarks, but, I fear, are of evil augury.

THE CROTON-OIL TREATMENT OF TINEA TONSURANS.

By J. MAGEE FINNY, M.D. Dub., L.K.Q.C.P.,

Visiting Clinical Physician and Dermatologist to the City of Dublin Hospital.

THE intractable nature of chronic general ringworm of the hairy scalp, and its resistance to all ordinary medication, is a subject not sufficiently recognised by the profession. Dr. Alder Smith, in his admirable papers on the subject published last year, did good work in giving prominence to the frequency of the disease and its tendency to escape detection when diffused and chronic; but I am convinced that the difficulties in treating these cases can never be fully realised except after some practical experience.

I have been frequently consulted by parents and guardians about children with chronic ringworm of eighteen months' or two years' standing. The story told is nearly always the same: that the child was either sent home from or refused admission into school because of ringworm; that medical advice was sought, and, after three months or so, the disease was pronounced cured, and the child returned to school; but that within a short time the disease seemed to break out again, and necessitated the child's removal, etc. The amount of personal inconvenience and disappointment, as well as of pecuniary expense and domestic disarrangements, to which such cases give rise, can hardly be estimated.

Now such cases are by no means uncommon, and they cast upon the profession an opprobrium not altogether undeserved. Any attempt, therefore, to remove this blot, and to establish sound principles of treatment for so troublesome a disease, deserves all attention.

For the last four years, since my attention was directed to the croton-oil treatment by an article which caught my eye in the *Jahresbericht* for 1876, I have employed it in some very aggravated cases, which had resisted all other means, and with great success. The cases for its application must be selected, as an indiscriminate use of so powerful a remedy will not only injure the scalp permanently, but bring unmerited discredit on a most useful means of rapid cure.

Dis to the practical and sound suggestions as to its use made by Dr. Liveing in the *JOURNAL* of February 12th I can add nothing, as I fully endorse all that he says on the subject; and, as my practice has been almost identical with his in this respect, if I make any exception to this note of general approval, it would be to extend the rule as to the age of the child in whom it may be used with safety; for I have treated successfully cases between the ages of five and eight; and a French writer, to whom I will shortly more fully refer, has employed it in children between two and five years of age.

The method of application which I have practised is that of which Dr. Liveing speaks; namely, rubbing in the croton-oil by means of a stiff brush to the spot or spots of greatest severity; taking care not to use too much, so that neither may baldness be produced by destruction of the hair-follicles, nor any of the oil run down and irritate neighbouring parts.

Dr. Alder Smith, who, of English writers, first prominently advanced the benefits of croton-oil in ringworm, suggests it in the form of a liniment. This I have not used, and therefore cannot speak of its

merits; but I wish to refer those interested in the subject to another method of applying the oil, as it is one which, though I have not used it, theoretically commends itself to my mind, and which I have not seen alluded to by Dr. Alder Smith, or by any subsequent writers. At the same time, it will, I doubt not, interest the readers of the JOURNAL to know the name of the originator of this treatment and the date of its publication. This information is to be found in an article published in 1876, in *Le Bulletin Général de Thérapeutique* (p. 97), where the treatment of ringworm by croton-oil is most fully detailed. The writer, Dr. Ladreit de Lacharrière, recognising the difficulty of eradicating the *trichophyton* from the root-bulbs in chronic tinea tonsurans by the ordinary lotions, ointments, and applications, refers to the advantages of croton-oil in destroying the diseased hairs and stumps by a process of suppuration (or an artificial *kerion*), while leaving the follicles intact. He states that the treatment was successful in eighteen cases, the duration of treatment lasting from six weeks to two months; and the cases treated, as I have already stated, were of the tender age of from two to five years.

Instead of employing the pure oil, as I have done, Dr. Ladreit de Lacharrière thinks better results are to be obtained from using it mixed with cacao-butter and white wax, in the proportions of 100 parts of the oil to 50 parts each of the adjuncts; and he advises that it should be made in moulds, so as to resemble a stick of *cosmétique*, as thereby the croton-oil can be applied with great accuracy as to both extent and depth.

It would be interesting if further experience of this method were forthcoming, more particularly at the present time, when attention is being directed to the therapeutics of ringworm, and while the merits of a rival non-irritating application (in the shape of thymol, as recommended by Mr. M. Morris) are before the profession.

TRIPRIER'S AMPUTATION OF THE FOOT.

By P. J. HAYES, F.R.C.S. Ed.,
Surgeon to the Mater Misericordiae Hospital, etc.

THE description of a case, in which subastragalar amputation was performed, according to the method proposed by Dr. L. Tripiér of Lyons, may be deemed worthy of notice, particularly as I believe this to be the first occasion on which the operation was subjected to the test of practice.

A countrywoman, aged 65, suffering from an epithelioma of large size, affecting the anterior and outer parts of the left foot, was admitted into the hospital on April 6th, 1880. The patient, though pale, did not present a cachectic aspect, and the lymphatics seemed free from traces of secondary deposit. As regards the history of her disease: twelve or thirteen months previously she observed a small hard tumour in the sole of her left foot, near the base of the fourth toe. This tumour gradually increased in size. The skin covering it became of a dark-greenish hue, and pressure upon it caused the patient great suffering. At length ulceration occurred at two points, and the openings gave vent to a foetid blood-stained fluid. A "cancer-curer" was invited to treat the case; but the applications employed by him, though they caused pain, proved futile; and the woman, ultimately acting on the advice of a medical practitioner, became an inmate of the Mater Misericordiae Hospital.

In the number of the *London Medical Record* for April 15th, 1880, will be found a lucid description of Tripiér's amputation, written by Mr. Wagstaffe of St. Thomas's Hospital. Impressed by this article, and judging my patient to be just the kind of case for which the new operation would prove suitable, I resolved to practise it without delay. On April 20th, the patient having been brought under the influence of ether, and Esmarch's cord having been adjusted, I commenced an incision at the outer border of the tendo Achillis, on a plane one inch and a quarter below the point of the external malleolus. This incision was carried through the skin and subcutaneous tissue, in a direction at first forwards, then upwards, forwards, and inwards—so as to pass two finger-breadths above the projecting base of the fifth metatarsal bone, and to terminate on the inner side of the tendon of the extensor proprius pollicis, over the tarsal end of the corresponding metatarsal bone. The next incision was made from where the previous one terminated, in a direction downwards and forwards, so as to enter the inner part of the sole, one inch in front of the first tarso-metatarsal articulation. It was then carried outwards beneath the metatarsal bones; and, lastly, backwards, so as to join the first incision over the outer side of the os calcis. The deeper structures, corresponding to the dorsal wound, were next divided; then the knife was made to sever all the soft parts, from the plantar incision down to the bones; and, afterwards, a thick inferior flap was carefully raised until the under surface of the os calcis was exposed. At this

stage, disarticulation of the scaphoid and cuboid from the astragalus and os calcis was effected, and separation of the plantar flap was continued until the point of the heel was turned; then the periosteum, covering the inferior aspect of the calcaneum, was incised in the antero-posterior direction, and detached from the bone up to the level of the sustentaculum tali. The exposed bone was divided, from within outwards, by means of Professor Spence's saw, so as to leave a broad flat surface level with the sustentaculum. All sharp angles were rounded off; whilst, to provide against the possible formation of neuroma, a high section of the posterior tibial nerve was effected from the deep surface of the plantar flap. The arteries were ligatured with carbolised catgut; the raw surface was everywhere bathed with a one-in-forty solution of carbolic acid; catgut sutures were used for the purpose of keeping the flaps in apposition; and a drainage-tube was inserted at the posterior angle of the wound, close to the outer edge of the tendo Achillis. Antiseptic dressings were employed for some days; and it only remains for me to add, that, within a month from the date of operation, the patient was able to walk about with the aid of crutches. The stump is now in a most satisfactory condition, being broad, even, and steady; whilst the movements of the ankle-joint are free and perfect as ever.

Surgeons who may desire full information respecting the arguments in favour of the new method, as contrasted with Chopart's and ordinary subastragalar amputation, will find an excellent *résumé* in Mr. Wagstaffe's paper. The experience derived from this first case induces me to form a high estimate of Dr. Tripiér's amputation. It seems to possess all the advantages which have been claimed for it by the author.

PATHOLOGICAL MEMORANDA.

WORM-LIKE BODIES FROM THE BLADDER.

WITH reference to the case of "worm-like bodies from the bladder", recently brought before the Glasgow Pathological Society by Dr. Foulis, and reported in the JOURNAL of the 12th instant, may I be permitted to suggest that, however closely these bodies may resemble "arteries" in their microscopical appearances, it is scarcely possible that they should in reality be such structures. Is not the explanation of their true nature to be found in the following passage from Boerhaave's *Institutes*? He says: "When blood extravasated into the pelvis of the kidney congeals into grumes, as they pass from thence into the ureter and bladder, an obstruction is by this means generally formed either in the ureter or urethra. I have myself seen blood concreted so as to put on the shape of a worm in the urethra, from whence we were obliged to extract it by a hook. Of this disorder died that considerable anatomist, Drelincourt."

I may add that, shortly before I met with the foregoing extract from Boerhaave, Dr. King of this town showed me some bodies, of a curiously vermiform appearance, which were passed from the bladder by a male patient of his. I had no opportunity of examining them closely at the time, but I have now little doubt that they were portions of decolorised clot, which had been moulded in the ureter.

Notwithstanding what I may call their histological mimicry of "arteries", it seems at least highly probable that the specimens which were exhibited at Glasgow also consisted of fibrin, and had assumed their peculiar conformation in the ureter.

GEORGE F. ELLIOTT, M.D., Hull.

CLINICAL MEMORANDA.

ON THE PERIOD OF INCUBATION IN TYPHUS FEVER.

THE following notes speak for themselves.

Mrs. B., aged 33, was admitted to the City of Glasgow Fever Hospital on January 22nd, 1879, with a severe attack of typhus fever. On January 29th, I had a communication from Dr. Russell, Medical Officer of Health for Glasgow, regarding this woman and her husband's brother, who was a patient in the hospital. It seems that a girl named K., a niece of Mrs. B., had typhus in Port Glasgow, and, when convalescent, she came up to Glasgow, and stayed a night with the B.'s. That visit was the means of communicating the disease to the B.'s; and Dr. Russell wished to ascertain the period of incubation in these cases. The facts are these. Agnes K., convalescent from typhus, stayed a night in the house of the B.'s (December 26th, 1878); Mrs. B. was admitted here on January 22nd, on the tenth day of illness. The period of incubation in this case was seventeen days. The lad B. was admitted at the same date, on the fifth (?) day of illness. The period of incubation was twenty-two days.

Jane S., nurse, was admitted on February 28th, 1879 (Friday). This