small doses of ipecacuanha, and the constipation and distension associated with the vomiting also subsided. On April 27th I examined the patient. I found that the left kidney was tender to touch, and all of it, except the upper pole, lay below the level of the last rib. There was no tumour nor hardening in the left loin, abdomen, or pelvic cavity. The enteroptosis had rather increased. Dr. Davidson saw the patient at the end of May, in very good health.]

TWO CASES OF LATERAL SINUS THROMBOSIS.

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CASES of lateral sinus thrombosis are not yet so common but that instruction may be obtained by the narration of isolated cases. The two following have recently been under treatment, and show the need for early operation. The first case, which was the most eventful, recovered, while the second, no less instructive from the surgical point of view, died.

CASE I.

E. F., aged 12, was admitted into the Hull Royal Infirmary on September 14th, 1906.

History.

For three weeks before admission he had suffered from an aural discharge and earache, and for a week had been vomiting. Some glycerine had been instilled into the ear, and the discharge had ceased. This history was, however, only obtained some days after admission, and was of no use in forming an early diagnosis.

Condition on Admission.

The boy was obviously ill; he complained of headache and pain in the right knee, which was slightly swollen. He only vomited once after admission, and this consisted of food he had just taken. His temperature was only 99°, but on the evening of the day of his admission it rose to 103°, and on the following day to 104°. Some tenderness over the mastoid was then elicited, his intellect was quite clear, but he had a grey opaque complexion, and was evidently very ill.

First Operation.

On the third day after admission the mastoid was opened, and a little sanious fluid evacuated, and on the following morning he appeared to be relieved, but the same evening his temperature again went up to 102°, and the discharge from the mastoid became purulent. The fluid in the right knee-joint was absorbed.

Second Operation.

His temperature gradually fell till, on September 22nd, it was normal; but his condition was far from satisfactory, so a complete mastoidectomy was performed. The temperature fell for a day or two, but only to rise again, and he became slightly jaundiced and complained of pain over the sterno-mastoid, which made one suspicious of sinus thrombosis.

Third Operation.

This suspicion was intensified during the next few days, as, with a slightly raised temperature he had sudden exacerbations to 104°, and, on September 26th, to nearly 105°. These were, however, unaccompanied by rigors, so that I was reluctant to open what might prove to be a normal sinus in the close proximity to the discharging mastoid. The mastoid was accordingly again scraped and a quantity of foul grey pus removed.

Fourth Operation.

On the following day he had a rise of temperature to 104°, this time accompanied by a rigor. There was now no doubt that the sinus was affected, so this was opened and found to contain foul pus. This was temporarily plugged and the jugular vein cut down on, and as this contained fluid blood it was divided between two ligatures, and the wound in the neck closed and sealed to prevent infection from the wound above. The opening in the sinus was then enlarged and the cavity scraped out till blood flowed freely. A plug of gauze was inserted, which easily stopped the bleeding.

Operation on Knee.

The next day his condition was much improved, but this was not maintained, and in a few days his temperature rose again as before. It was then found that he had effusion in the left knee, so on October 2nd this was opened and drained. The fluid was opaque but scarcely purulent, and a culture from it showed streptococcic infection.

After-history.

He now rapidly improved in his general condition, he took his food well and gained flesh, though his temperature still remained above the normal.

On October 22nd the drain was removed from the knee and he was put on the balcony for open-air treatment. On October 25th Dr. Eve was good enough to give him an injection of streptococci, after which his temperature fell somewhat, but no marvellous effect was produced.

His condition now gradually improved, so that on November 15th he had a normal temperature, and the wounds in the knee and mastoid were healed. The ligaments of the joint were very lax, and I anticipated that he would require some further surgical treatment for the knee, but he was sent to the convalescent home and then discharged. He was shown at a meeting of the East York Branch of the Association in January, 1908, when the movements of the joint were quite perfect, and he walked without any limp.

CASE II.

P. M. N., a male aged 34, was admitted on November 23rd, 1907, with a diagnosis of mastoid disease. I saw him shortly after his admission; he had a temperature of 100.4°, no pain, tenderness, or swelling over the mastoid, and no aural discharge. He was very deaf.

History.

The history was very indefinite; he seemed, however, to have had a chronic aural discharge which had recently ceased. On the following evening his temperature rose to 103.4°, and was about the same the next morning. He now developed decided tenderness along the course of the internal jugular vein, and there was some swelling. The mastoid region was not tender even on deep pressure, and he had no rigor. Lateral sinus thrombosis was diagnosed, and he was taken to the theatre.

Operation.

An incision was made over the jugular, and the margin of the sterno-mastoid sought for. This was so inflamed that an incision was made through the muscle. An enlarged gland was removed, and a search made for the vein. This was found to be represented by a thick solid cord. The facial vein was seen running into this, and was greatly distended; it was ligatured and divided. The incision was then prolonged nearly to the clavicle and the jugular vein traced downwards, when the lower third of it was found to contain fluid blood. An aneurysm needle was passed carefully under it, and the vein divided between two ligatures. The descendens noni was seen, but not the vagus. The vein was then dissected up to the angle of the jaw, the superior thyroid, and other branches, which were greatly distended, being tied and divided.

The lower half of the wound was then sutured, the incision prolonged upwards behind the ear, and the mastoid region laid bare. An opening made with a burr in the lateral sinus showed this to contain clot of a friable character. The hole in the bone was enlarged so as freely to expose the sinus, the contents of which were scraped out until fluid blood flowed. A small plug was then placed to control the bleeding, and the jugular vein opened and scraped out up to the base of the skull, when I could wash out the sinus and vein thoroughly. The vein was cut off as near the opening of the jugular foramen as possible.

The mastoid antrum was then explored and found to contain grumous material, which was scraped and washed out. While doing this it was noticed that there was pulsation in the fluid in the antrum, which suggested a perforation into the cranial cavity. Gauze plugs were placed in the openings in the bone, and one at the upper part of the wound in the neck, which was then closed. Rather over 2 in. of the jugular vein was excised.

The operation, owing to the matting of the tissues around the vein making the dissection difficult, was tedious, lasting an hour and a half, and there was much trouble with the small congested veins. The bone, too, was very hard and thick.

Progress of the Case.

On November 30th the temperature had again risen, and pus was found in the neck; the wound was opened up and the sinus again scraped. Sutures were not again inserted, but the upper part of the incision left freely open; efficient drainage was thus assured.

For the next twelve days he had a temperature of pyaemic character, but no rigors, and his condition was otherwise good. He took food well, and was given quinine in full doses, purgatives, and rectal injections of saline.

On December 15th the temperature had become subnormal, and the wound looked clean and healthy, but there was still some pulsation in the mastoid antrum. The temperature remained subnormal for six days, when the pulsation in the mastoid had ceased, the wound was granulating, and his general condition seemed satisfactory. He was, however, rather apathetic, which might have been accounted for by his deafness, but I was disposed to suspect cerebral abscess. He, however, declined any further operation, and as the part looked now so well I did not feel inclined to press the matter.

During the next ten days the temperature regained the normal, and he was up and about the ward, and took an interest in his surroundings, so that I came to regard him as safely convalescent.

To my dismay, on January 2nd, 1908, he had a sudden rise of temperature accompanied by vomiting. This was repeated on the next day, and on January 4th he died suddenly.

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Post-mortem Examination.

The sudden tragic end led me to expect to find a cerebral abscess ruptured into the ventricle, but all that was revealed was meningitis.

REMARKS.

Ballance says that when the following group of symptoms are present together septic thrombosis is certainly present:

1. A history of purulent aural discharge for a year or more.
2. Sudden onset of the illness, with headache, vomiting, rigor, and pain in the affected ear.
3. An oscillating temperature.
4. Vomiting, repeated day by day.
5. A second, third, or more rigors.
6. Local tenderness and oedema over the mastoid or in the course of the jugular vein.
7. Stiffness of the muscles of the back or side of the neck.
8. Optic neuritis.

Schlatter further says that jaundice is a frequent symptom, and that the liver and spleen are always enlarged.

There can be little doubt that if all the above symptoms were present in one case, a surgeon who had never seen a patient suffering from sinus thrombosis would have no difficulty in diagnosing it, but what chance could he expect to have of a successful result on having recourse to operation? In order to save the life of the patient it is essential that the operation should be done as early as possible; if one waits day after day to observe repeated rigors and vomitings time is allowed for general pyaemia to be established. Practically, however, the diagnosis is not as easy as it would seem by the reading of textbooks, as the cases are commonly preceded and accompanied by mastoid disease, and may be complicated, too, by the coexistence of meningitis or cerebral abscess, so that the overlapping of symptoms makes diagnosis often a difficult matter.

In the second of the above-mentioned cases a diagnosis was easily made, although there had been no rigor or vomiting; the deafness and the history of an aural discharge, together with the sudden rise of temperature and development of tenderness and oedema in the neck, rendered it imperative that the sinus should be opened, especially, too, as the mastoid had not been operated on.

In the first case, I should have been better advised if I had explored the sinus first, as the boy on admission had fluid in one knee-joint, and although he had no great rise in temperature he looked very ill; and when the mastoid was first opened only a little sanious fluid was obtained. Later on I was disinclined to open his sinus, having an infected mastoid cavity so near to it, until I felt sure of the existence of the sinus thrombosis; so that by waiting until the child had a rigor valuable time was lost. Fortunately for the patient, the delay did not cost him his life, but there is no doubt that it greatly prolonged his illness.

In the second case, I regretted cutting off the 2 in. of the jugular vein, as it would have been better to have left this hanging out of the upper part of the wound so that it could discharge into an isolated dressing; in this way infection of the long wound in the neck might have been prevented, and the reopening of it rendered unnecessary. Indeed, in another case I should feel disposed, even if the blood were fluid in the vein in the neck, to divide the jugular fairly low down, and then bring it out into the dressing, and in order to keep it patent to insert a rubber tube into it. In this way the jugular fossa would be more efficiently drained. Mr. Ballance (*Lancet*, 1904) says that removal of the vein is better than ligature, but, however high up it may be tied, there will be a little pocket left to hold pus, which will not be so easily drained through the sinus as it would if there were an open vein left through which the sinus could be irrigated.

Although this patient unfortunately died, the case must be regarded as successful so far as the treatment of the sinus infection was concerned. The death was due to meningitis.

THE Fifth Pan-American Medical Congress will take place in Guatemala, C.A., this year from August 5th to 8th.

UNDER the will of the late Mr. Edward Aston, of Wilmslow Park, Cheshire, the "Cancer Hospital Pavilion" at Manchester receives a bequest of £1,000, a similar sum going to the Northern Counties Hospital for Incurables at Mauldeth.

THE ETIOLOGY AND TREATMENT OF ECZEMA.

BY LEIGHTON KESTEVEN, M.R.C.S.ENG.,
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OBSERVATION goes to prove that eczema is a pure neuropathia, and that to regard it solely as a local affection is a grave misconception calculated to lead to serious error in treatment. The theory that eczema was the direct result of specific dyscrasia, or "blood humours," has long since been relegated to the limbo of obscurity, on the very self-evident fact that specific types of eczematous eruption do not accompany specific dyscrasia. The character of the eruption is unvaried by its supposed origin.

But that certain pathological states are frequently the indirect factors in the causation of eczematous attacks may be accepted without cavil on the evidence of the multiform eczemata we meet accompanying or following such states. The origin, however, of such eczemata is to be attributed to neurotic action.

The very nature of the affection itself—an exudative dermatitis due to capillary engorgement—indicates clearly vasomotor disturbance due to some morbific influence on the sympathetic centres of the nervous system.

The processes of secretion and nutrition being so largely controlled by the sympathetic, it is only rational to turn to it in the course of investigation into the source of this troublesome affection as the probable fountain head, when we are met with multifarious instances of reflex neuroses conditional on its inhibitory influence. The eruption of urticaria is generally consequent on disturbance of the digestive functions. Urticaria is practically the equivalent of the initial stage of eczema, and not infrequently develops into it. Herpes zoster appears only on the track of an angry nerve, and disappears synchronously with the concomitant neuralgia. Herpes is a frequent companion of certain catarrhal affections, and the intolerable pruritus which so often is associated with icterus, albuminuria, amenorrhoea, and other functional disturbances, can only be of sympathetic origin.

In the same way eczema is a common concurrent of many functional and nervous derangements. So often, indeed, is it associated with gout as to tempt one to formulate "gouty eczema" as a specific type; but that it certainly is not, but the indirect outcome of the intense disturbance of the nervous system, not of the direct toxic action of the gout. Sometimes it is the precursor, sometimes the follower, of the gouty attack.

Uterine disorders bring often with them in their train the added misery of eczematous eruptions, and there are many women who are never pregnant without this affliction. Indeed, there are some who (quoting Hebra) "during several pregnancies were attacked by eczema of the hands always at the same period, so that in the later ones they could be more certain of having conceived, from the appearance of this disease than from the cessation of the menses or the movement of the child." Disordered menstruation even will often bring on eczema of undoubtedly neurotic character.

In mental cases—especially imbecility—eczema is most prevalent.

It would be easy to enumerate instances in plenty in proof of the inhibitory influence of the sympathetic system of nerves. Hebra himself in a half-hearted sort of way ("to prevent misunderstanding," and treating the question as one "that must be left for the solution of professed physiologists"), after dealing with all sides of it, says:

> Every case of this disease is not the result of local irritation, but may be caused by affections of the rest of the body. Even in these instances, however, the disturbance of cutaneous circulation may be explained by the *consensus nervorum*, just as well as by the assumption hitherto current of the presence of some morbid product in the blood.

Even where local irritation is the exciting cause of the attack it still remains a neurosis. External toxic applications, friction, heat, and cold, and the turgescence of varicosity are only the irritants of the peripheral filaments of the sensory nerves which set the eczema going.

Eczema may thus be divided into two classes for purposes of treatment: (1) That from within, acting through the sympathetic chain of the functional system, may be denoted the ganglionic or idiopathic form, and

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