the dura mater and inserts an iodoform gauze drain. The next step is the treatment of the meningitis as such in which the sheet-anchor is lumbar puncture every two days, remembering the extreme moderation in quantity required if there is suspicion of cerebral abscess. He has been led to dispense with chemico-therapy in view of the contradictory results. Four cases, of which three recovered, are narrated in illustration.

On Clinical Measurement of Brain-pressure—BRÜNINGS (Greifswald).—As the pressure of the fluid shown by lumbar puncture does not give a correct indication of the cerebral pressure, Brünings has devised a method of manometric measurement by means of a tambour placed on the exposed dura mater. This exposure may be effected by means of a trephine-opening of from 1 to 2 cm. in diameter or through the opening made in aural operations. The moment when the oscillations (taken with various precautions) are at their maximum gives the required datum. This occurs when a certain degree of pressure in the tambour is attained by means of a ball-bellows. A special form of manometer (to meet the requirements of Frank and Straub) is used. Vital physiological cerebral pressure is equivalent to about 24 cm. of water. It is raised by pressure on a lateral sinus or jugular vein or by a Bier's bandage on the neck, and may reach even 70 cm., and need not produce any symptoms. Lumbar puncture generally produces lowering of the cerebral pressure but not in regular proportion. Pressure excited through the lumbar puncture may raise the cerebral pressure considerably and even cause resorption of fluid in the cranium.

AUSTRIAN OTOLOGICAL SOCIETY.

25th January 1926.

(*Report from the Monatschrift für Ohrenheilkunde*, March 1926.)

By ALEX. R. TWEEDIE, F.R.C.S.

Discussion on the Value of X-ray Examination in Diagnosis and as an Indication for the Mastoid Operation.

Dr GATSCHER in his opening remarks stressed the extreme importance of the accurate consideration of the ordinary details of clinical examination, in assessing the radiographer's report.

In the discussion which followed, the general feeling was obviously to the effect that the X-ray report should be taken with extreme caution. This attitude was further emphasised by the President, Prof. Ruttin, who quoted two cases of his own, in which the diagnosis between otitis externa and otitis media, or the combination of both, was extremely difficult to determine; in both cases, the radiographer reported pathological involve-

https://doi.org/10.1017/S0022215100029273 Published online by Cambridge University Press

ment of the antrum and mastoid cells. In one, antrotomy revealed a normal healthy condition; the other case recovered completely with only expectant treatment.

Otitis Media complicated with Appendicitis, which latter gave the Clinical Picture of Sinus Infection—Dr FREMEL.—The patient was a girl aged 13 years, who had a central perforation in the left tympanic membrane, with a healthy middle ear in which a suppurative otitis media appeared after bathing. After a simple antrotomy and normal convalescence for three days, the temperature chart suggested infection of the lateral sinus. As this had been exposed at the operation exploration was made, revealing fluid blood. The clinical conditions, however, were such as to suggest the necessity for a sinus operation and ligature of the jugular vein, but as there was abdominal pain, a general surgeon was consulted; he diagnosed appendicitis, and after suitable treatment all the symptoms subsided.

Nystagmus as the Result of Alteration of Position—Dr POLLAK.—A man, aged 56, had suffered from lues 23 years previously; he was apparently well treated for the same during the following years. On the 5th December 1925 he was injured in a motor car accident, and was brought into hospital for treatment of a lesion of the right auricle and other general injuries; he was unconscious.

When he no longer required treatment and had regained consciousness, he was transferred to the special department. The patient then reported that he had noticed when his consciousness completely returned, that when lying on the left side, or on turning from the right to the left side he had severe giddiness; so much so, that he would call out, clutch the bedding, and make great efforts to prevent himself falling out of bed.

The objective examination gave the following result: Wassermann reaction, negative; cochlear apparatus normal on both sides; caloric, rotation and galvanic reactions gave normal response, with the exception of a remarkable condition which the exhibitor subsequently demonstrated as a clinical fact. The exhibitor was unable to offer an explanation of the same, as he could not decide whether it was dependent on the previous infection of lues, or the traumatic result of concussion; nor, in his opinion, could it be decided whether it was due to a lesion of the otolith apparatus, or of the semicircular canal system.

The phenomenon consisted in a most marked nystagmus to the left, which could almost always be induced, by turning the body and the head towards the left side. The nystagmus was chiefly horizontal, lasted from 10 to 20 seconds, gradually getting weaker, and disappeared if the position on the left side were maintained. Occasionally, by turning the body and the head to the right, a similar, though much weaker nystagmus could be induced. With the patient sitting in the

https://doi.org/10.1017/S0022215100029273 Published online by Cambridge University Press

erect position, no such nystagmus could be induced if the head were inclined either to the right or to the left, or by changing the position of the patient from the sitting to the horizontal position. Further, no similar nystagmus could be provoked by any other positions of the head or body. It was, however, difficult to decide whether the nystagmus was a result of movement or position.

The possible causes of this phenomenon were discussed, but although the general feeling was that it should be referred to some disturbance of the otolith apparatus, at the same time, it was considered that no definite statement could be made.

Atypical pointing reaction after the Radical Mastoid Operation—Dr URBANTSCHITSCH.—The case was shown (as a further demonstration of his communication at the December meeting in 1925) of a woman who had had a radical mastoid operation on the left side in February 1924. It was now completely healed, and rotation induced no disturbance of the pointing reaction.

Dr FREMEL asked if any control test had been made and if the exhibitor suggested any explanatory theory for this phenomenon. He (the speaker) had at one time considered this question with Bárány, and examined a series of patients with normal ears, to determine if some such defect in the vestibular function were not present in normal cases. They had found two patients with normal ears, in whom no by-pointing was induced with minimal after-rotation nystagmus, although the response to the caloric reaction was normal.

Dr EISINGER said that the absence of pointing reaction after the radical operation could certainly sometimes be demonstrated. There was, however, a certain associated inconstancy since, for instance, one patient on whom a radical operation had been performed on both sides, a year previously, had at first shown no trace of by-pointing after rotation, while a few hours later a typical by-pointing was induced by the same method.

Prof. RUTTIN said that although he had not especially tested the patients after radical operation, from this point of view, yet for some years he had systematically made use of the pointing-test. He had found the results varied under certain conditions; for instance, if one tested the pointing reaction with the arm stretched out to its full length in front, or slightly over-extended towards the middle line, one found even in normal people, a slight deviation outwards. If on the other hand one made the test with the arm stretched out to one side, or over-extended backwards, then even in normal people a deviation occurred towards the middle line. Further, if one rotated a normal person, for instance to the left, and tested the pointing reaction with the right arm (not in the "mid-position" but held more towards the middle line) then the deviation towards the middle line usually did not occur, because there was a spontaneous tendency to deviation outwards.

Again, if one rotated a normal person towards the right and tested

https://doi.org/10.1017/S0022215100029273 Published online by Cambridge University Press

the by-pointing with the right arm (not in the "mid-position" but extended towards the outer side), then there was no deviation outwards as would be expected, since there was a spontaneous tendency for deviation towards the middle line.

Dr GATSCHER remarked that according to his experience of the pointing test, it was important to make necessary pauses between rotation to the right or to the left, and that he had noted the phenomena became less pronounced after repeated rotations. He urged, therefore, that more care should be paid to the method of the examination.

Dr URBANSCHITSCH, in conclusion, said that he wished to emphasise the fact that after the radical operation, as also in cases of chronic suppurative otitis media, the pointing reaction was not typical. This possibly might be due to the mechanical factors in the treatment, or the disturbance produced by the suppuration which influenced this test, and it was this point to which he wished to draw attention.

A Case of Tumour of the Acoustic Nerve—Prof. RUTTIN.—The exhibitor showed a specimen taken from a railwayman, aged 58, who had been brought into the hospital unconscious, and died a month later.

Two days after his admission the patient was found to be drowsy, but it was possible to determine that the hearing on each side was fairly good and there was no trace of nystagmus although the tests pointed to a lesion of the cochlear nerve. The diagnosis of otitic meningitis was raised, which he could with certainty disprove. He did not, however, see the patient again till the post-mortem, when he was surprised to find a tumour of the acoustic nerve on the right side the size of a hazel-nut, lying over the internal auditory meatus, and involving both this nerve and the facial nerve. In addition, there was a marked hydrocephalus with great distension of both lateral ventricles.

The interesting point in the case was that a month previously there existed no great degree of damage to the cochlear nerve, no spontaneous nystagmus, and no facial paralysis. He would suggest that the explanation, as the specimen showed, was that the nerves at death were only displaced or stretched by the tumour and not destroyed; a month earlier, on admission, the disturbance would have been even less.

The histological report on the condition of the tumour was not yet available, but at any rate it did not appear to be one of the usual neurofibromata.

https://doi.org/10.1017/S0022215100029273 Published online by Cambridge University Press