in lower lobe of right lung were several small, and one large, abscesses filled with similar material to that in the left lung abscess.

There was no sign of obstruction in the œsophagus, and its wall was intact, but the mucous membrane showed a patchy hyperplasia.

I am indebted to Mr Barnard (Curator) for the following report:—

"The œsophagus is greatly dilated, measuring up to 9.5 cm. in circumference, and the muscularis thickened (up to 0.4 cm. thick). The mucosa is profusely covered with scale-like pearly-white thickenings which, on microscopic section, prove to be patches of epithelial hyperplasia. Except in the region of the thickened patches, the mucosa is everywhere the seat of a chronic inflammation."

Dr J. S. FRASER asked whether it would not be worth while examining the cells of Auerbach's plexus in this case. Dr Cameron, of Glasgow, recently demonstrated beautiful preparations from cases of dilatation of the œsophagus showing small-celled infiltration round the cells of Auerbach's plexus and degeneration of the ganglion cells. It was recognised even by Mosher, of Boston, that the probable pathology of achalasia or dilatation of the œsophagus was this affection of Auerbach's plexus. Previously Mosher held entirely different views regarding the pathology of the condition.

Mr TILLEY (in reply) said he would try to secure such a section, and if successful would report on it.

## AUSTRIAN OTOLOGICAL SOCIETY.

**December 12, 1927.**

*Abstract from the Monatschrift für Ohrenheilkunde*, March 1928, by ALEXANDER R. TWEEDIE, F.R.C.S.

**Otitic Septic General Infection with Bilateral Optic Neuritis**—R. LEIDLER.—Woman, aged 36, otherwise healthy, had two months ago acute otitis media (R) with spontaneous perforation, following a sore throat. Since then there has been otorrhœa. For one week she had headache, and for some days high fever and transient giddiness.

20.9.27.—A long continued rigor. 21.9.27.—Temperature 39.6° C. and severe right-sided headache beginning posteriorly and extending over the head: general and neurological examination was negative. Left ear was normal.

On the right side the mastoid process was extremely tender, but otherwise unchanged. There was slight mucopurulent discharge. T.M. was much injected and infiltrated and had a small anterior inferior perforation. Deafness was of middle-ear type. Response to cold caloric test occurred only after using 250 c.cm. at 13 degrees.



https://doi.org/10.1017/S0022215100032539 Published online by Cambridge University Press

Operation performed on the same day. Cortex of mastoid was sclerotic; the process was small with large cells at apex, one of which contained pus. Mucous membrane was slightly swollen and the bone much softened especially in the neighbourhood of the sinus, which for some 4 cm. was exposed: its outer wall was thickened and covered with purulent granulations. Ligature of internal jugular vein below the common facial vein was conducted with some difficulty, as a large lobe of the thyroid gland lay over the sheath of the vessels. Sinus was opened with normal bleeding and no sign of thrombosis.

The temperature fell by lysis to normal on the 8th October in the usual way, except that on the 1st of October a rigor occurred. During this period attacks of right-sided neuralgic headache were a remarkable feature, so severe as to cause crying and necessitating the use of morphia; the condition suggested a meningeal or cerebral complication. This, however, was unsupported by examination, except that the oculist reported bilateral optic neuritis, which latter did not completely subside till the 9th November.

Local convalescence was normal; Wassermann reaction was negative.

The exhibitor suggested that the cause of the headache and optic neuritis was a purulent infection of the apical cells of the petrous pyramid.

RUTTIN considered that the papillitis was the result of ligature of the jugular vein, constituting one factor of a syndrome which he had described a long time ago and which consisted in papillitis (which, however, recovers with normal vision), severe headaches and paralysis of the 6th nerve. He did not think from the description given that there was any reason to regard this trouble as due to a purulent infection of the apex of the petrous bone. The only point which required explanation was the report of the oculist that there was an optic neuritis. This, without papillitis, he had never seen as the result of sinus thrombosis or ligature of the jugular vein, but often an optic neuritis alone was associated with otitic sepsis. Not uncommonly, however, a septic sinus thrombosis existed in association with otitic sepsis, necessitating ligature of the jugular vein. In such cases, papillitis occurred combined with an optic neuritis, and he considered this as one of those cases.

G. BONDY agreed with the views expressed by Ruttin and in support he quoted the following case of his own which was similar to that of Leidler with the exception that the jugular vein was not tied and therefore there was no papillitis.

Boy, aged 19, was still under his treatment for an acute otitis media which commenced five weeks ago. Two weeks after its onset, the condition having run a completely normal course, there was a sudden rise of temperature to 40° C. which did not subside; when seen by him three days later, a profuse otorrhœa without any particular indication of mastoiditis was found.

The operation on the same day revealed a very pneumatic mastoid, all the cells of which were exposed, including the sinus, which appeared



https://doi.org/10.1017/S0022215100032539 Published online by Cambridge University Press

normal. The temperature next day rose to 40.8° C., only falling to 38° C. three days later, and remaining at this height for a week, quite unresponsive to any form of topical treatment. At this period headaches commenced and formed the main clinical feature. Ten days after the operation, as the temperature was still 38.8° C., the pulse only 70, and the headaches still severe, he suspected some intracranial complication and decided on a second operation. The lateral sinus was further exposed, but appeared quite normal, and the blood taken therefrom sterile. Exposure of the middle fossa disclosed a normal dura mater, and exploration of the temporal lobe was negative. The cerebrospinal fluid was clear, sterile, and under normal pressure. The ocular fundi were normal. The symptoms slowly abated, temperature fell almost to normal, and the patient was discharged from the hospital fourteen days later.

O. BECK considered that Leidler's explanation that the neuritis was the result of inflammatory conditions in the apex of the petrous bone was incorrect. On the other hand, if we accepted this view, it was difficult to understand why the optic neuritis was bilateral. Such certainly did occur after unilateral ligature of the jugular vein with fluid contents, but an inflammatory condition of the apex of the petrous bone on one side could not explain the bilateral neuritis. The ocular conditions he considered were the result of ligature of the jugular vein.

E. SCHLANDER asked if lumbar puncture had been performed (the reply was in the negative). He considered that the description of the headaches was not characteristic of a purulent infection of the apex of the petrous bone. He pointed out that whenever the apex was infected from the middle ear, a distinctly characteristic orbital and peri-orbital pain occurred, to which trigeminal symptoms and sometimes paralysis of the 6th nerve was added.

H. NEUMANN asked which particular symptoms the exhibitor regarded as indicating infection of the apex of the petrous bone—(Leidler replied that it was the headache). Neumann remarked that headaches, as the result of purulent infection of the apex were definitely characteristic. He considered that in this case there were no symptoms of headache pointing to such lesion, nor was the papillitis characteristic of such an affection. Indeed, in purulent affection of the apex of the bone there was no such sign, examination of the eyes revealing only some tortuosity of the vessels, and that only on the affected side. In this connection, he wished to describe a case at present under his treatment.

A patient on account of severe headaches had been sent to the neurologist, who referred him to the speaker. On examination he found a latent otitis media, due to streptococcus mucosus, and on paracentesis evacuated pus under pressure. (The otitis media he found on inquiry had existed for ten weeks.) A mastoid operation confirmed the diagnosis. In this patient the otitis media was accompanied by such severe headache as to cause him to consult a neurologist. The pain was located to all three branches of the trigeminal nerve, but especially centred to the periocular region. This was a characteristic headache for a purulent infection of the apex of the petrous bone. Later, the headache subsided, but was followed by a sudden paralysis of the 6th nerve, with a rise of



https://doi.org/10.1017/S0022215100032539 Published online by Cambridge University Press

temperature and by a tortuous condition of the veins of the ocular fundus on the same side, while the eye on the opposite side remained normal. The cerebrospinal fluid showed an increase of cells.

He (the speaker) had only mentioned this case as this point in diagnosis had been raised, but he did not consider that Leidler's case was an instance of this affection.

LEIDLER (in reply) stressed the difficulty there was in obtaining a uniformity of opinion on such cases.

**Lateral Sinus Thrombosis associated with Left Purulent Otitis Media with Phlegmon of the Right Orbit**—J. POPPER.—A boy, aged 18, had recurrent suppurative otitis media (L) since 1924. Eight days before admission he had pain behind the left ear and on the left side of the head; he vomited once. The temperature oscillated between 37° to 38° C. On 19th November a polypus was removed from the left ear by an aural surgeon, who then sent him to the hospital for admission.

*Examination.*—Temperature was 38.4° C., the pulse 92. The patient was a thin, pale, fragile young man, with typical adenoid facies and speech. Chronic tonsillitis was present. The left mastoid process was tender and there was infiltration of the postero-superior meatal wall. The base of the polypus was seen in the attic, surrounded by pulsating secretion. The right ear was normal.

Hearing in the left ear was about $\frac{3}{4}$ of a metre for conversation and 1 metre for whisper, when tested with the noise apparatus. There was no spontaneous nystagmus and no fistula symptom.

On 20th November the radical operation was performed and a cholesteatoma was found; sinus thrombosis was dealt with in the usual way and the jugular vein ligatured. The dura mater of the middle fossa was also exposed and found to be normal. The following day the oculist reported an old-standing papillitis.

For 17 days a typical septic temperature persisted, and the general condition was not favourable; the jugular bulb was opened and omnadin injected. A blood transfusion was made. Hæmolytic streptococcus was found in the pus and blood of the sinus, but examination of the blood in the systemic veins was negative. The condition caused considerable anxiety until the 6th December, when the temperature slightly fell. On 7th December, associated with a temperature of 38.5° C. a swelling of the upper and lower lid of the right eye appeared, the ocular movements and conjunctiva being normal; but, two days later, a high grade chemosis with protrusion of the eyeball developed, and with this a swelling at the inner canthus, which on being incised was found to contain pure serum and no pus.

The exhibitor had brought this case forward as instancing a rare form of metastatic, unilateral, orbital cellulitis following a sinus



https://doi.org/10.1017/S0022215100032539 Published online by Cambridge University Press

thrombosis of the opposite side. The further course of the case ruled out cavernous sinus thrombosis, and rhinological examination excluded the possibility of an ethmoidal lesion.

**The Diagnosis of "Rheumatic" Facial Paralysis in Connection with Otitis Media**—H. NEUMANN.

NEUMANN, after drawing attention to the extreme importance of being able to differentiate paralysis of the facial nerve due to otitis media from that due to a "rheumatic" affection, reminded the members that the question had long puzzled the minds of otologists. He had studied the matter for many years. He had, however, only been able to find in the large amount of otological literature of the subject one suggestion of real worth, and that was by Urbantschitsch, who pointed out that the pain corresponding to the various branches of the nerve due to involvement of the nervi nervorum was characteristic of facial paralysis of otitic origin. One such symptom alone, however, was not reliable, and it was necessary therefore to look for others. Lately, Hoffmann, at his suggestion, had made a special study of the course of the facial nerve in the Fallopian canal, with a view to determine the relation between the location of the lesion and the particular loss of function thereby caused. From his investigations Hoffmann was able to state, for instance, that the particular portion of the nerve, supplying the muscles at the angle of the mouth, lay in the dorsal aspect of the nerve during the commencement of its course, whilst these particular fibres in the epitympanal portion of the nerve lay on its outer side. In a similar manner, all the branches change their position.

Neumann, as the result of protracted study of this differential diagnosis, was able to state that as a rule the "rheumatic" form of facial paralysis was complained of by the patient as having commenced suddenly, whilst in the otitic variety the various branches became involved in sequence.

If, however, in the "rheumatic" variety the three branches of the nerve were not all involved simultaneously, most commonly the buccal branch was the one to be attacked; in the course of recovery of a typical "rheumatic" affection of all three branches, it was the buccal branch which was the last to regain control.

Facial paralysis of otitic origin did not develop so suddenly, and usually attacked the branches of the nerve one after the other, and recovery was not associated with any definite rule, in contra-distinction to the recovery of "rheumatic" paralysis.

To demonstrate these points, Neumann showed two cases: The first case was that of a woman of 28, formerly otherwise healthy, who had in the previous summer for the first time slight pain in the ear, which responded to "drops." There was no otorrhœa, but recently there had been giddiness on stooping. The present aural disease began at the termination of a "cold" on the 17th November, associated with depreciation of hearing and a feeling of confusion in the right ear. Shortly after, discharge commenced and on the 25th November paracentesis was performed and purulent secretion found. On the 2nd December the patient noticed that while hanging out the washing she suddenly had the



https://doi.org/10.1017/S0022215100032539 Published online by Cambridge University Press

feeling as if she must fall backwards. In the evening of the same day she noticed that the mouth was twisted and that she could not speak well. Thinking this was due to the result of some bad teeth, she consulted her doctor who referred her to the exhibitor. On examination, there was a peripheral defect in the posterior half of the right tympanic membrane with pulsating secretion and injection. Paresis of the three branches of the facial nerve was present; the labyrinth was intact.

Hearing: on right side, whisper on contact: conversation, 20 cm. Weber to the right; Rinné, negative; Schwabach, lengthened.

Mastoid process was not involved.

Under conservative treatment the secretion rapidly subsided and the ear was to-day almost dry. The facial paralysis slowly recovered, but one could even now see that the buccal branch had been the most severely affected. In this case he had diagnosed a "rheumatic" affection of the facial nerve—in spite of its coincidence with an acute exacerbation of otitis media—a diagnosis which had been confirmed by the manner of its recovery.

In contra-distinction he now turned to the second case. A woman of 53, who since childhood, following scarlet fever, had suffered from bilateral otorrhœa, and, as the result of repeated exacerbations with giddiness, had been subjected to considerable treatment, chiefly removal of granulations. Since 1925 till the 9th of November last, she had been free from any trouble, but on this date the attacks of giddiness recurred with vomiting, and an aural surgeon was said to have removed a cholesteatoma. Four days after the first of these attacks of giddiness, she noticed that the mouth was twisted and that she could not control food. On the fifth day she was unable to close the right eye, and on the seventh day the facial paralysis had involved all the branches. It was at this point that she came under the exhibitor's care, who diagnosed acute exacerbation of the otitis media with otogenous facial paralysis. The same day a large cholesteatomatous mass was removed, and the paralysis slowly and simultaneously recovered in all branches.

The exhibitor concluded with a summary of his observations on these cases, which he did not bring forward as the result of merely recent investigation, since he had been studying the matter some twenty years.

**Clinical Note on a Case of Tumour of the Base of the Brain**—E. RUTTIN.—Male, aged 47, previously healthy, had two years ago developed tinnitus in the right ear which had since continued uninterruptedly although its character varied. Since the beginning of 1926 he had also attacks of giddiness with vomiting. The attacks had a constant duration of about one hour.

In October, 1927, attacks of giddiness with tendency to fall forward occurred generally early in the day and some four or five times during the week. During the last week an attack had occurred almost every hour, but very slight and of short duration. During the past one and a half years he had been under treatment as an out-patient in the hospital, but examination was negative with the exception that the



https://doi.org/10.1017/S0022215100032539 Published online by Cambridge University Press

tympanic membrane was slightly indrawn and there was slight internal ear deafness on the right side. Wassermann reaction was negative. Treatment consisted in galvanisation (Anode) inflation, and iodine. General improvement resulted till November 1927, when the patient stated that he again felt worse.

24.11.27. Examination showed the right tympanic membrane opaque and indrawn.

*Right ear:* conversation, 1 metre. Whisper, contact. Weber, not lateralised. Romberg, negative. Schwabach, shortened.

Rotation to R. nystagmus to L. 15 secs.

Rotation to L. nystagmus to R. about 15 secs.

Face downwards, Rotation to R. rotary nystagmus to L. 10 secs. Giddiness and discomfort.

Face downwards, Rotation to L. rotary nystagmus to R. 10 secs. Giddiness and discomfort.

Head on R. shoulder. Rotation to R. Vertical downward nystagmus, 5 secs. Giddiness and tendency to fall backwards.

Head on L. shoulder. Rotation to R. Vertical upward nystagmus, 4 secs. Giddiness and tendency to fall forwards.

*Caloric reaction:* to R. ear, after a half minute at 18° C., nystagmus lasting 1½ minutes, with moderate giddiness and typical error of pointing with both arms.

Applied to L. ear, after half a minute at 18° C., nystagmus lasting 1½ minutes, with moderate giddiness and typical error of pointing with both arms. Wassermann reaction was negative. Vision and ocular fundi were normal.

The interesting point in this case was that an X-ray picture showed a large tumour of the base of the brain, in the neighbourhood of the hypophysis, which had destroyed a portion of the sella, but with the exception of the deafness on the right side, no other lesion of the cranial nerves could be detected, except that perhaps the vestibular nerve was also slightly affected.

(No note is given of the reaction to the Galvanic test—A. R. T.).



https://doi.org/10.1017/S0022215100032539 Published online by Cambridge University Press