16th November radical operation was completed and a skin graft placed which did not take well. Recovery from this point was uneventful. The child did not complain of headache after the end of October. Her tonsils and adenoids were removed on 21st December.

There have since been troublesome granulations from the anterior part of the radical cavity.

I think that the cerebellar abscess was leaking into the meninges at intervals.

Dr DAN MCKENZIE (President) said that last year he had shown specimens of brain and meninges from a similar case. Meningitic symptoms appeared and disappeared three or four times, the child being ill three months. The reason of the death was that there was a double abscess; a deeper satellite abscess had escaped notice. These cases showed that the meninges had great power of resistance against infection. In his case the arachnoid space was occupied by tough fibrous tissue as a result of the sepsis.

Dr J. S. FRASER said Mr Barnes was to be congratulated on his results. What would be of value would be for some members of the Section to give the results of *all* their cases of meningitis. These two cases and their results gave a wholly erroneous impression of the usual percentage of cures in such conditions.

Mr J. A. GIBB said he had a case of the kind in a man aged 25 who had chronic otorrhœa with a fulminant mastoiditis, thrombosis of the lateral sinus and abscess of the temporo-sphenoidal lobe. He was treated and made a complete recovery, the wound healed, and he (the speaker) went away for a holiday. Three days before his return the man had a fit and died. A *post-mortem* examination was not made.

Mr BROUGHTON BARNES (in reply) promised to write and send in a list of his cases, procedure and results.

The two cases shown were actually consecutive, but he did not claim anything like a hundred per cent. successes. His cases were too few at present for statistical purposes.

## AUSTRIAN OTOLOGICAL SOCIETY.

### MEETING OF FEBRUARY 1927.

(*Monatschrift für Ohrenheilkunde*, April 1927.)

Abstract of Proceedings by ALEX. R. TWEEDIE, F.R.C.S.

**Fracture of the Left Temporal Bone and External Acoustic Meatus without Injury to the 8th Nerve: Laceration of the Skin of the Bony Meatus**—S. GATSCHER.—As the result of a fainting fit, 19th February 1927, the patient fell on the back of her head at 7 P.M.; she was brought to hospital unconscious,



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and with bleeding from the left ear. She remained unconscious till 2 o'clock the next morning. She was first seen by the Exhibitor on the 24th February.

Right ear—previous chronic suppurative otitis media.

Left ear—raised whisper heard across the room (noise apparatus in right ear). Facial nerve unaffected; no vestibular symptoms; pulse 96. Remnant of blood-clot seen in the meatus; opaque tympanic membrane, possibly due to intratympanic hæmorrhage; small laceration of the skin of the posterior wall of the bony meatus, immediately adjacent to the tympanic membrane, through which a slit-like fracture could be seen.

X-ray picture revealed a vertical fracture through the left temporal bone, running down through the meatus to the middle ear.

The case was shown to demonstrate the unusual coincidence of such an injury and no impairment of function.

**Two Cases of Influenzal Otitis Media with Labyrinthitis terminating in Deafness** — H. NEUMANN. — *Case* 1. Woman, aged 58, developed a cold on 17th December 1926, with pain in the right ear. She was seen as an out-patient on the following day. She complained of headache, giddiness and vomiting.

Admitted 19th December. Temperature 33.3° C.; pulse 102.

Right ear—tympanic membrane distended; hæmorrhagic bullæ in the meatus; muco-purulent secretion; complete deafness. Spontaneous nystagmus to the left side, unaltered by irrigation [of right ear] with hot water.

Diagnosis: Acute hæmorrhagic otitis media right, with labyrinthitis due to influenza.

On 13th January 1927, paracentesis.

On 6th February, post-aural mastoid operation. Cortex consisted of dense, markedly hyperæmic bone, cellular only towards the apex where considerable pus was found; retro-facial cells unhealthy; zygomatic cells exposed, as were also the cells round the antrum and the lateral sinus.

On 18th February, normal convalescence; complete deafness; no nystagmus; no otorrhœa. Wound granulating normally.

Bacteriological examination gave streptococci.

*Case* 2. Woman, aged 26, was admitted on the 14th December 1926. On 2nd December she had a sore throat. On the 7th, pain in the right ear. On the 12th, otorrhœa, headache and tinnitus. On the 13th, giddiness and vomiting. Temperature 40° C.

Examination revealed nystagmus to the left; tenderness over the antrum; external otitis; blood-stained serous discharge; hæmorrhagic bullæ on the meatus and tympanic membrane.



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By-pointing to the right after five minutes irrigation with cold water at 17° C., but no increase of the spontaneous nystagmus. After irrigation with water at 46° C. nystagmus to the right inhibited. She was completely deaf.

Puncture of the posterior cistern revealed normal pressure, but blood-stained fluid.

The patient lay on her right side, in which position rotatory nystagmus to the left appeared for half a minute and then ceased.

In the supine position, nystagmus again occurred and ceased in a short time.

Retained in hospital under daily observation, apparently at first improving; but, as her condition became worse, the mastoid operation was performed on the 13th January 1927. After removal of a dense bony cortex, a cellular condition was found filled with pus and granulations. Free exposure of the antrum and adjacent cells was made. Convalescence was normal.

Discharged on 18th February, with a healthy granulating wound; no labyrinthine symptoms, but still complete deafness.

Pus from the mastoid cells revealed *Staphylococcus pyogenes aureus.*

The cases were submitted as valuable both in demonstrating rather uncommon effects, and as they had been under continuous observation since the beginning of the illness. Attention was also directed to the early occurrence of the symptoms.

## Meeting of 28th March 1927.

(*Monatschrift für Ohrenheilkunde*, May/June 1927.)

Abstracted by Mr A. R. Tweedie, F.R.C.S.

**Acute Otitis Media with Inexplicable Complication: Recovery**—H. Frey.—Woman, aged 34, had acute otitis media two months previously. She was first seen by Exhibitor two days after onset of the illness, when a spontaneous perforation had already taken place. Normal progress continued for two weeks, when she had a sudden attack of severe headache, giddiness, and vomiting with slight stiffness of the neck, and temperature of 39° C., for which reason she was at once admitted.

Giddiness and vomiting subsided after twenty-four hours but the temperature rose to 40° C. with severe rigor; immediate operation was performed; the mastoid cells were full of pus. At the same time, both the middle and posterior fossæ were opened, but the exposed dura mater was unchanged in appearance. The jugular vein was ligatured on account of the rigor, but incision of the bulb revealed



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fluid contents. Temperature at once fell and no more rigors occurred, but five days later the temperature again rose, accompanied with tinnitus and nystagmus towards the healthy side, though the hearing and sound-conducting apparatus were unaffected. These symptoms, however, disappeared spontaneously in the course of a few days and since then there had been an undisturbed convalescence.

The patient remained well with normal hearing, but the Exhibitor raised the question as to whether there had really been a sinus thrombosis, since this alone would not explain the giddiness and vomiting. It was also difficult to suggest labyrinthitis, as the condition of the hearing was now so good; nor was there any reason to consider meningitis. It was difficult to regard the symptoms as due to a simple toxic cause.

RUTTIN suggested that this was a case of septic otitis, with diffuse septic labyrinthitis. The vestibular symptoms might indeed have been referable to the cerebellum: in this connection he had noted that on ligation of a jugular vein with fluid contents, it was not impossible to produce papillœdema on the same side, which might last for even thirty days.

BECK queried the necessity of ligaturing the jugular vein, since events had shown that its contents were freely fluid: but the Exhibitor in reply considered the symptoms had justified this treatment.

LEIDLER remarked, that in our specialty rigors only occurred in connection with sepsis and at the commencement of meningitis; therefore the cause was to be referred to one of these two complications. He would, however, in such a case have suspected meningitis and performed lumbar puncture.

FREY drew attention to the deep, indrawn scar on the mastoid process, which he suggested was characteristic of the healing in the operation of antrotomy conducted in such a radical method. He asked the opinion of those present on this point, by way of questioning the advisability of this procedure as a routine.

BECK replied, that in the absence of his chief, it was his duty to answer this question, and stated that very shortly Professor Neumann himself, who was making detailed investigations on this point, would communicate his views. Undoubtedly, the process of healing took longer, since the cavity was larger, but this point was of minor importance in view of the fact that the meatus was "dry" in forty-eight hours, and we had the certain knowledge that all septic foci had been removed.

**Fracture of Base of Skull, with Intracranial Hæmorrhage: At first Middle-Ear Deafness: later, Lesion of the 8th Nerve**—E. URBANTSCHITSCH.—Boy, aged 15, was found on 1st February 1927 in the street unconscious and taken to hospital. For twenty-four hours was drowsy with complete loss of memory, a slow pulse, and with bleeding from the left ear.



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Right ear was normal; left ear showed a bleeding wound on the superior meatal wall close to the membrane; the latter was markedly injected but did not appear to have been wounded.

Rinné: right ear positive; left ear, negative. Weber, to the left. Schwabach, not shortened; no nystagmus; no giddiness.

Hearing: left ear (with noise apparatus in right), forced whisper heard at ½ metre. Further examination on account of condition of patient was deferred.

On 2nd February, patient remembered having been knocked down by an electric tram. Bleeding from the ear had ceased; general condition good; no fever. Paresis of the left hypoglossal nerve was present.

On the 3rd there was marked left facial paresis; pupils showed moderate dilatation with reaction to light and accommodation. Hypoglossal paresis had almost recovered.

On the 11th, left tympanic membrane was covered with scab; no perforation; typical middle-ear deafness; no sign of nerve deafness.

On 25th March examination of the left ear showed in front of the short process of the malleus, a small linear scar: tympanic membrane cloudy and slightly indrawn: Rinné now definitely positive; Weber, to the left; spontaneous nystagmus on looking to right and left; caloric reaction, normal; no fistula symptom.

Conversation heard, right ear at 4 metres; left ear at 20 cm.

The Exhibitor considered that in spite of the fact of an obvious middle-ear deafness to commence with as the result of injury, the case was one of fracture of the base, with slight hæmatoma, in which later "inner ear" deafness developed.

**Fracture of Base of Skull: Right Facial Paralysis four days later; Mastoiditis fifteen days later; Operation and Recovery**—G. BONDY.—Girl, aged 21, was run over by a motor car on 12th October 1926. She was admitted in an unconscious condition with bleeding from the nose and right ear.

On recovery of consciousness she complained of pain in the back, and dizziness; no sign of other injury.

Right ear showed hæmorrhagic discharge with peculiar but not offensive odour. After slight syringing, wax was found in the depth of the meatus, but was not removed.

Left ear, on removal of wax, was normal.

No spontaneous nystagmus and no giddiness.

On 16th October, right facial paralysis; discharge from the ear had ceased.

On the 20th, there was a slightly offensive secretion; wax was now removed, when a slightly distended infiltrated tympanic membrane was seen, the details of which were obscure except for a central perforation. Hearing was present; no nystagmus.



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X-ray examination revealed a fissure of the right temporal bone, extending to the external meatus and into the neighbourhood of the antrum.

On the 22nd, temperature 39.1° C.; sore throat and continuation of fever.

On the 25th, a diffuse otorrhœa from right ear.

On the 27th, œdema and tenderness over the mastoid with the posterior half of the tympanic membrane distended.

On 28th October, post-aural operation was performed, and a fissure as in the X-ray picture was found. Pus was present under pressure; bone pneumatic; fissure was traceable through the roof of the antrum.

On the 11th December, hearing on both sides was normal, the right facial paralysis had recovered, and the tympanic membrane was healed and freely movable.

Exhibitor drew attention to the importance of operating on cases of this description, as obviously demonstrated in this case.

**Cholesteatoma in a Case of Acute Mastoiditis**—E. RUTTIN.—A man, aged 44, had suffered since January 1927 with a marked right-sided headache, with the hearing on the right side considerably depreciated. He had no fever, no giddiness, no vomiting, and no otorrhœa.

On 25th January, a choleasteatomatous mass was found in the right external auditory meatus. The deep portion of the postero-superior meatal wall was destroyed and partially occupied with polypus. The choleasteatoma was absolutely dry. Conversation heard at ½ metre; Weber, to the right; Rinné, negative; Schwabach, increased; rotation reaction about normal. No spontaneous nystagmus; no fistula symptom and no fever. Daily cleansing of the meatus and removal of the cholesteatomatous mass, during which time the local condition remained unchanged, but the headache improved.

On 28th January sore throat and fever developed, and on the 30th right otorrhœa commenced. Œdema and tenderness developed over the mastoid process. An X-ray picture showed coarsely pneumatic bone, a large antrum, sinus and tegmen intact.

On 3rd February, the radical operation; the mastoid process contained pus and granulation.

The case was one of dry cholesteatoma, occupying the attic and antrum; the acute suppurative condition in connection with it followed the sore throat and an acute mastoiditis. Ruttin pointed out that the case demonstrated (as he had previously described) that the tubo-tympanic space can remain absolutely unaffected in cases of cholesteatoma.



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# Societies' Proceedings

**Acute Otitis Media with two Perforations of the Tympanic Membrane**—G. PICHLER.—Patient was first seen on the 12th February, giving the history that for two days she had had slight pain in the right ear and otorrhœa. Examination showed the typical appearance of acute otitis media with pulsating pus exuding from a scarcely visible perforation in the anterior inferior quadrant.

The condition persisted for six days, when a second perforation was observed in the postero-superior quadrant, close to the periphery; this gradually became enlarged and suggested a "specific" [presumably tuberculosis A. R. T.] otitis which, however, was not supported by the result of the examination of the chest.

Five days later the discharge ceased and the anterior perforation closed, and in three weeks from the commencement of the illness the posterior perforation had also healed, and the membrane appeared intact.

The Exhibitor suggested that perhaps the second perforation was the result of raised pressure in the antrum.

FREY remarked that during the epidemic of influenza he had observed extraordinary rapid destruction of the membrane; this did not occur in simple otitis media, an accurate opinion on which, however, was rather difficult to offer, since the condition of the membrane, at the time when such cases were generally seen, masked the signs of past injuries and past scars of the membrane, which were more vulnerable and would thus give the appearance of the rapid formation of a large defect.

RUTTIN pointed out that for many years he had been in the habit of teaching that the presence of two perforations in the membrane was not to be regarded as absolute evidence of tuberculosis if one of the perforations were situated in Shrapnell's membrane, or in the posterior-superior quadrant, leading into the antrum; the condition, however, was very suspicious of tubercle if the two perforations were situated in the pars tensa of the membrane, and especially if one were in the anterior and one in the posterior half, separated by a sound strip of membrane in the neighbourhood of the light reflex.

BONDY considered that this case might afford an explanation of a perforation occurring at the periphery in the posterior superior quadrant. He had never seen a case of acute otitis media with a perforation in such a situation. There must, however, be a special cause for such a lesion, since it is by no means rare in chronic cases.

BECK considered that multiple perforations must indicate a "specific" process, unless some mechanical agent was a factor in the condition; therefore only multiple perforations in the membrane itself could be regarded in this light.



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