Headache in the right frontal and temporal area persisted however, and, as this increased in severity, he was admitted to hospital on *January 2nd*, 1934.

Examination.—Condition apathetic. Tenderness of the right fronto-temporal region, where bone conduction was reduced. Slight opposition to passive head movements. Right pupil dilated. Tenderness over the right supra-orbital nerve. Buccal branch of the left facial nerve weak. Power of the left upper and lower extremities reduced. Retropulsion with tendency to turn to the right. Marked akinesia. Blood: 13,700 leucocytes. Eyes: bilateral papillitis, more marked on the right. Visual fields not contracted. Ears: tympanic membranes, cochlear, and vestibular nerves all normal in appearance and function. Nose: chronic rhinitis but no suggestion of sinusitis. Post-nasal space: nothing abnormal detected. Pharynx: right tonsillar fossa "empty". Small remnant of lower pole of left tonsil, or possibly only scar tissue. Scar over left anterior pillar of the fauces. Larynx: nothing abnormal detected. Neck: operation scar about 3 cm. long over the border of the left sterno-mastoid muscle. Lumbar puncture: fluid slightly turbid. Pandy and Nonne-Apelt, positive. 263 cells to c.cm., mostly leucocytes. Culture sterile.

Based on the above data, a right frontal lobe abscess was diagnosed and operation performed, and a collection of pus in the anterior pole of the right frontal lobe was found; apparently of long-standing origin.

After the operation, the patient was in good condition for a week but then became worse and, fifteen days after the operation, died with symptoms of meningitis. At the *post mortem* examination, in addition to the presence of an abscess in the right frontal lobe, a general meningitis was found.

AUSTRIAN OTOLOGICAL SOCIETY

Meeting March 19th, 1930

Abstract of Proceedings from the Monatsschrift für Ohrenheilkunde, June, 1934

By A. R. TWEEDIE

CASES

Improvement in Hearing following Conservative Radical Operation.—M. BUCHBAND.

A woman, aged 30, totally deaf in the left ear since birth, underwent a radical operation by Professor Neumann, on the right side on account of a chronic otitis media, in *November*, 1932.

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Examination before the operation.—Ears: right chronic otitis media with small attic perforation, typical fistula symptom and negative Rinne. Left, tympanic membrane normal. Hearing: Right, whisper at 20 cm. Left, no response even to conversation tube. Wassermann reaction negative. Caloric response normal.

A conservative radical operation on the right side was performed, when a cholesteatoma was found in the anterior part of the attic and a fistula in the horizontal canal. Convalescence had been normal and the hearing was now improved so that a whisper was heard at 60 cm.

Case of Temporary Nerve Deafness associated with Multiple Sclerosis.—J. SCHNIERER.

A woman, aged 30, a year and a half ago had commenced to suffer from giddiness and difficulty in eye movements, both of which conditions varied from time to time.

On *February 15th*, 1934, as these symptoms had lately become more marked, she was admitted to the hospital.

Examination.—Tympanic membranes slightly indrawn, otherwise normal. Cochlear condition normal. Paresis on looking to the right combined with a slight vertical nystagmus upwards.

Caloric Test.—The application of 5 c.cm. cold water to the right ear induced a nystagmus to the left, rather difficult to assess on account of the pre-existing spontaneous nystagmus.

With the application of cold water to the left ear, the pre-existing vertical nystagmus remained unchanged. Ocular fundi, normal. Wassermann reaction negative.

Neurological Report.—Pupils react promptly to light and accommodation. No disturbance of sensation. 3rd, 4th, 6th and 8th nerves affected as described above. No involvement of remaining cerebral nerves. Inco-ordination of finger-nose test on both sides. Movements slow. Abdominal reflex present only on the right side. Slight loss of power in the left lower limbs. Patella reflexes brisk on both sides. Achilles reflex, left stronger than right. Tendency to fall to the left, independent of head position. Tendency to walk to the left with eyes blindfolded.

As the result of the above data, a diagnosis of multiple sclerosis was made.

The patient was shown as especially demonstrating the lesion of the 8th nerve as described by O. Beck in this disease, whilst it was also important to note that in this particular case, the cochlear nerve was not in any way involved, which was unusual. The peculiar vestibular symptoms indicated that the causative lesion here was situated in the pons.

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Societies' Proceedings

Deafness due to Mumps.—F. FREMEL.

A boy, aged 8, was shown as an instance of the tragic result of a combination of circumstances. Two years previously, whilst playing with a relative who was throwing him up and catching him, he had hit his head on the floor, when he became immediately unconscious with bleeding from the left ear. He was taken to hospital as a case of concussion and fracture of the base of the skull. X-ray examination revealed a fissure in the petrous bone.

There was a discharge of cerebrospinal fluid from the ear which ceased during the next month, at the end of which time the child was discharged from hospital completely well and healthy, except that he was totally deaf in the left ear.

A year later, during an epidemic of mumps, he returned from skating one evening perfectly well, but the next morning complained of noises in the head and ears and that he could hear nothing. In a few hours' time swelling in the parotid glands was noticed, with fever, but apart from this the child was perfectly well and happy. He remained, however, totally deaf.

At the present time, both tympanic membranes are normal in appearance but there is complete loss of both cochlear and vestibular function on each side.

Two points in connection with this case are to be noted: (1) That in spite of complete deafness, the speech is normal, and (2) that the ear became affected some hours before the swelling of the parotid gland was noticed.

Latent Cholesteatoma and Acute Otitis Media.
—E. RUTTIN.

The Exhibitor had performed a radical operation in 1917 on the right ear for a cholesteatoma associated with the fistula symptom in a man aged 34. Normal healing had occurred. In the left ear, however, there was an atrophic scar in the postero-superior quadrant, but without suppuration. Inflation with the catheter distended the scar and restored good hearing on this side. This treatment of the left ear was carried out for nine years.

October 14th, 1934.—He reported to the hospital complaining of bilateral otorrhœa and loss of hearing following a cold eight days previously. *Examination.*—Ears: right, healthy epidermized radical operation wound. Left, membrane injected diffusely. Details not visible. Perforation in postero-superior quadrant. Hearing: right, conversation at 1 metre. Left, conversation at 3 metres. Weber referred to the right. Rinne negative both sides. No spontaneous nystagmus. No fistula symptom. Bone conduction lengthened both sides.

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October 20th, 1933.—Complained of severe dizziness. *October 23rd*, 1933.—Fistula symptom. Left membrane intact, swollen and distended.

X-ray Report.—Right side: Defect of operation wound with sharply differentiated borders. Left side, inferior portion of mastoid process pneumatic. Intercellular septa intact. Small sharply bordered bright area in the region of the antrum. Tegmen intact. Sinus in normal position.

November 8th, 1933.—Left ear: defect of tympanic membrane filled with soft red hæmorrhagic polypus. Weber referred to the right. Conversation at $\frac{3}{4}$ metre. Bone conduction reduced. Fistula symptom positive. Spontaneous nystagmus to the right. No spontaneous by-pointing. Rotation to the right or left with head erect, or face downwards, resulted in typical corresponding nystagmus, but only of 5 seconds' duration. Rotation to the right, with the head on the right shoulder, vertical downward directed nystagmus, lasting 8 seconds. Rotation to the right, with the head on the left shoulder, vertical nystagmus upwards, lasting 6 seconds.

Caloric reaction normal on both sides.

December 4th, 1933.—As the above symptoms had remained unchanged, operation on the left ear was undertaken. The lateral sinus was found lying in almost immediate contact with the posterior meatal wall, but its condition was normal. Attic and antrum filled with a cholesteatoma. The posterior meatal wall was removed down to the aditus. The incus was partly carious, and a similar condition was found in the anterior part of the horizontal canal. The outer attic wall was removed, but the malleus and remnant of membrane were left *in situ*.

December 11th, 1933. Wound healed, except for slight secretion. Conversation at 3 metres. No fistula symptom. No spontaneous nystagmus.

The patient was shown since continuous observation of the left ear had been possible for nine years, and during this time no trace of suppuration had been detected, yet, at the operation, a cholesteatoma was found with the surrounding various lesions as given above. The Exhibitor therefore regarded the case as one of a latent cholesteatoma which an acute otitis media had made manifest.

Chronic Otitis Media, with Central Perforation and Vertical Fistula Symptom.—K. Löwy.

A man, aged 32, was first seen in *August*, 1933, with the following history: Quite healthy till 1923 when he suffered from typhus. For many years impairment of hearing and for the previous 14 days, slight otorrhœa, associated with dizziness.

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Examination.—Ears: right, chronic adhesive otitis. Left, central perforation of membrane with slight secretion. Cochlear nerve normal, right and left.

Compression in the left ear induced a fistula symptom which was indicated by a vertical nystagmus.

Normal reaction to rotation on both sides. Physician's report and Wassermann reaction negative.

X-ray Examination.—Almost complete absence of cells in the mastoid processes with the exception of the peri-antral cells, which were hazy. The case was shown in order to raise the question of the cause of the fistula symptom. In this instance the X-ray report indicated that a lesion of the vertical canal was improbable, and the results of rotation would also seem to dispose of the suggestion that it was associated with a lesion of the horizontal canal.

The varying effects of different positions of the head in different patients were then discussed, in relation to the production of nystagmus and the application of the caloric test, both in cases with and without cerebral lesions. It was agreed that these variations had to be taken into consideration before attempting to assess the accuracy of the inference to be drawn from such phenomena.

Two Cases of Otitic Sphenoidal Abscess in Children.
—L. HOFMANN.

A boy, aged 8, had an acute otitis media on the left side in *December*, 1933, which ran a usual course and appeared to be healed on *January 1st*, 1934, but ten days later he was brought to hospital with severe headache and frequent vomiting.

General and Neurological Examination.—Temperature and lumbar puncture, normal. The left tympanic membrane gave the appearance of a subsiding acute otitis media—the details all being visible. As, however, his general condition and the headaches and vomiting all became worse, accompanied by increasing somnolence, normal temperature but definite optic neuritis, an intracranial complication was diagnosed (probably an abscess) and an operation was performed on *January 16th*, 1934. This began with a mastiodectomy which revealed diploetic hyperæmic bone but no trace of purulent infection and only slight mucous secretion in the antrum. The sinus was then exposed and found to be markedly affected. Investigation of the dura of the middle cranial fossa showed that it was normal in appearance but much distended. An organized thrombus was found in the sinus, but, as the temperature had suggested no general infection therefrom, no further operative procedure in this direction was undertaken, and attention was concentrated on the temporo-sphenoidal lobe. Puncture in this situation released thick pus under pressure,

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40 c.cm. of which were allowed to flow off gradually, and a filiform drain was introduced into the abscess cavity. A most encouraging improvement followed the operation for two weeks until *January 30th*, 1934, when he rapidly became very much worse, complaining of headache and vomiting. A further exploration with a view to revealing another portion of the abscess proved negative, and the child died on *February 4th*, 1934.

The *post mortem* examination suggested that the cause of death was a recent purulent encephalitis.

CASE II.—A girl, aged 12, was admitted on *February 17th*, 1934, with the history that, although she had suffered for many years with a left chronic otitis media, it had caused no special symptoms until five days previously when, following a cold, the discharge had become much more profuse, associated with pain in the ear, headache, high temperature, and drowsiness.

Examination.—The child was conscious and appeared to be very ill. General examination negative. Temperature: 30° C. Pulse 92. Reflexes not exaggerated. Kernig positive. No meningismus. Pupils sluggish. Tongue coated. On lumbar puncture the fluid was clear with no increase of albumin and only three cells to the c.cm. Ears: Left, chronic otitis media. Postero-superior perforation of the membrane. Mastoid tenderness. Slight nystagmus on looking to the left. Ocular fundi normal. Wassermann, negative.

February 21st, 1934.—As her condition remained unaltered and an intracranial complication was suspected, the left ear was operated on, when the mastoid was found to be extremely hæmorrhagic, but the cells contained only a small amount of pus. Lateral sinus normal. On exposure of the middle fossa, the dura was found to be distended but otherwise appeared perfectly normal. Puncture of the temporo-sphenoidal lobe in three directions, negative. Hæmolytic streptococci were found in the pus from the mastoid.

February 22nd, 1934.—Sudden Jacksonian fit, commencing in the right arm and face and then passing over to the other side and to the lower extremities. Tongue bitten. Pupils reactionless. Unconscious. Cyanosis. Babinski positive.

By the following day the child gradually recovered consciousness and recognized various objects but was unable to name them, although she could repeat the names. Perseveration. *February 24th*, 1934—Cerebrospinal fluid under normal pressure. Pandy weakly positive. Seventeen cells to the c.cm. Temperature, 39° C.

Seen by a neurologist who, in view of the septic temperature, suspected sinus thrombosis and not a brain abscess.

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March 3rd, 1934.—As the septic temperature still continued, the internal jugular vein was ligatured. *March 6th*, 1934.—Temperature falling, but general condition still very serious. Cerebrospinal fluid slightly turbid. Pandy and Nonne-Apelt positive. One hundred and thirty cells to the c.cm. *March 7th*, 1934.—Cerebrospinal fluid, pressure normal, clear. Sixty cells to the c.cm. Pandy positive. Staphylococcus aureus on culture. *March 9th*, 1934.—As the condition became even worse, the temporo-sphenoidal lobe was again explored, when some 35 c.cm. of pus were evacuated. The pus contained hæmolytic streptococci which were also culturable.

No improvement followed these efforts and the child died on *March 14th*, 1934. The *post mortem* examination confirmed the presence of a temporo-sphenoidal abscess combined with generalized meningitis.

AUSTRIAN OTOLOGICAL SOCIETY

Meeting May 28th, 1934

Abstract of Proceedings from the Monatsschrift für Ohrenheilkunde, September, 1934

By A. R. TWEEDIE

CASES

Acute Mastoiditis. Thrombus of Sinus and Bulb. Secondary Abscess under the base of the Skull. Lung Abscess, recovery.—ERNST URBANTSCHITSCH.

A woman of 33 had been deaf in the left ear since 1924, as the result of influenza associated with a left-sided purulent otitis media of two weeks' duration.

At the end of *January*, 1934, continuous headache commenced, followed by left earache on *February 13th* and otorrhœa seven days later and, after yet another week, rigors with temperature of 41·2. She was admitted to the hospital on *February 27th*.

Examination.—Ears: Right, nothing abnormal detected. Left, muco-purulent otorrhœa, large central defect of the membrane, the remainder of which was injected and infiltrated. Post-aural condition normal. Rinne: right, positive; left, negative. Weber not lateralized. Bone conduction normal. Whisper: right, 6 metres; left, complete deafness. Spontaneous nystagmus. No fistula symptom.

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