thine deafness, besides which the injury set up acute mastoid disease.

Mr. YEARSLEY said that, as a rule, in rupture of membrane, unless it was done by direct traumatism, such as pushing a pin through it, there had been some previous disease of that structure. He had seen fifteen cases of injury of membrana tympani, and his experience was that the deafness depended on the force of the blow and the amount of the labyrinthine concussion caused thereby.

Dr. MACNAUGHTON-JONES, in reply, said the patient was a medical man, who had acute hearing up to the time of the blow. He had known the hearing most seriously interfered with in traumatic injury to the membrane, especially in those cases where there had been some effusion as the result of the blow, and where there was not so much a perforation as a rent in the membrane. In the case of a policeman who had a blow with the hand, the only thing perceptible was a rent in the membrane, and he became stone deaf. Hearing was perfectly restored after a time. In that case he thought the deafness was caused by the effusion, and possibly the labyrinth was involved at the time.

BRITISH MEDICAL ASSOCIATION.

Seventy-second Annual Meeting, held at Oxford, July 26, 27, 28, and 29, 1904.

PROCEEDINGS OF THE SECTION OF LARYNGOLOGY AND OTOLOGY.

President: CHARTERS SYMONDS, F.R.C.S.

PROCEEDINGS, *Thursday, July* 28.

(*Continued from page* 109.)

A CASE OF CONGENITAL WORD DEAFNESS.

By W. S. SYME.

The patient the subject of these remarks is a boy aged eight—one of four children of Gaelic parents. Born in Tiree, he came with his parents, when two years of age, to live in a small town on the Clyde, where his father has employment as a railway porter.

For the past year or two the boy has spent most of his time with his aunts in Glasgow, and it was one of these who brought him to the Glasgow Ear Hospital, where I first saw him in October

https://doi.org/10.1017/S1755146300175869 Published online by Cambridge University Press

of last year. Her reason for bringing him was that he had never spoken, and did not seem to understand when he was spoken to though otherwise he appeared to hear well.

This aunt is a particularly intelligent woman, and from her I have been able to obtain a detailed account of her nephew's family and personal history and of his present condition:

Family history.—As has been stated, there are four in the family, the patient being the third. The others are quite healthy, and hear and speak normally. The parents were not related, nor is there anything in the family history indicating a special tendency to imbecility, deaf-mutism, or to nervous or other disease; nor is there anything to suggest a syphilitic taint. The mother is markedly left handed, and is (I am quoting the aunt) a silent woman, speaking very little. This appears to me interesting, though I should not like to press it as having any direct bearing on the case under review. The parents, as a rule, speak Gaelic, but the boy's grandmother, who lives with them, speaks only English.

Personal history.—The mother had no fall nor other accident while she was pregnant with this boy, nor was there any special difficulty in connection with his birth. As an infant he cried and crowed, and so on, as healthy children do and anxiety was only aroused when he did not begin to talk, to make use of the usual expressions of his age—"mamma," dadda," "babba," etc.—as the other children had when eighteen months old. At the same time, it was observed that he did not take notice when called or otherwise spoken to, though he seemed to hear noises quite well. Though it is by no means unusual to have speech delayed to a much later age than this, I have inquired more closely in regard to this case as the boy, when two and a quarter years old, had a fall off a table. This resulted in unconsciousness for about a quarter of an hour, when he vomited, but otherwise appeared to suffer no ill effect. Than this he has had no other accident, nor has he had any serious illness. When the other children contracted whooping-cough he escaped.

Condition at the time of his first visit to the Glasgow Ear Hospital.—The patient is a bright, cheerful-looking lad of full size. There is no depression to be found in the skull. His aunt states that he is active, particularly cleanly in his habits, dresses and feeds himself, plays with and as other children, and sleeps well. She is of opinion that, except for the defect for which she has brought him, he is of more than average intelligence. Considering his age, he draws well, and copies the names of shops he visits with his aunt.

Hearing and speech.—It has been noticed that he is fond of music, and hears at once when there is a street organ or other such instrument being played in the neighbourhood, and he frequently hums parts of tunes. On the other hand, when spoken to, he does not seem to hear. He has never spoken in an intelligible manner, though he occasionally makes use of unintelligible sounds—"Ow, bow,' etc.—especially when he is angry. He imitates the sounds made by animals, and calls them, as younger children do, by the sounds they make.

Special examination.—The patient has enlarged tonsils and adenoids (subsequently these were removed), otherwise there is no abnormality to be detected in the upper respiratory tract, mouth, or ears. It is impossible to obtain exact reliable results on examining his hearing power for the watch or tuning-forks, though it is evident from his facial expression that there is both air and bone conduction on both sides. A piano played in another room he evidently hears distinctly. When he is spoken to he takes no notice. If, however, he is made to watch the lips of

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the speaker he attempts to repeat the sound of the words. If, now, his eyes are covered, he still attempts to repeat what is said, getting usually the number of the syllable right, but not the words themselves. He has no idea of the meanings of words. A book is touched, and the word "book" is spoken to him and repeated in a manner by him several times. If, now, the book is pointed to and he is asked by speech and signs what it is, he never attempts to say "book." There appears to be differences in the ease with which he repeats certain letter sounds—for instance, the vowels seem easier than the consonants, and the vowels "oo" and "ee" easier than "ah." His condition a month after removal of the enlarged tonsils and adenoids did not show any appreciable alteration.

A month ago, and about eight months from his first visit to the Ear Hospital. I saw him again. He has been at school, an ordinary Board school, for three months. Except in so far as he is handicapped he has made good progress. He draws well, writes the alphabet, and is good at drilling. He is right-handed. There is also improvement in his speech and hearing. He makes use of a few expressions, giving them their proper application: for example, "go home," "go to bed"; a watch he calls "tick-tick." When asked to open his mouth he does so, but when told to open the door he again opens his mouth. He calls his aunt "mudder."

This, then, is an account of this boy's condition in detail, and though my chief intention in reading this paper is to put the case on record, I may, perhaps, be allowed shortly to make a few remarks thereon. It may be objected that the description "congenital" is not accurate, and that the defect arose from the fall he had at 2½ years old. Naturally, I have paid particular attention to that point, and from the information given as to his previous condition, and also from the fact that he quickly recovered from this accident, I can not look upon it as the cause. It seem to me that a laceration sufficient to bring about word-deafness must have produced other marked phenomena. If I inquire as to the actual lesion in this case, I am met by the difficulty that, as far as I have been able to find, no similar case has been described, and consequently no *post-mortem* examination.

There are many cases of acquired word-deafness recorded due to injury or disease, by, among others, Wernicke, Kussmaul, Freund, Bastian, Macewen, Wyllie, and Bramwell, and I think we may locate the centre for the perception of speech in the posterior two thirds of the left superior temporo-sphenoidal convolution. As Bastian remarks, here words are recalled, and this centre is in commissural connection with the motor centres for spoken and written speech, and also with the visual centre for words. Accepting this, I think we may postulate that in this case we have either a faulty development of the auditory word centre or an interference with the afferent pathway to this centre. My own opinion is that the former is the condition in view of the improvement that is

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taking place, while the boy remains right-handed. Voelcker has reported a case, and I have to thank him for a reprint of the paper he read before the London Medico-Chirurgical Society, in which, however, the defect, a congenital one, was evidently either in the motor speech centre or in the commissural tract joining this centre with the auditory. The patient understood speech, though she could not talk.

I should imagine the actual history of the condition in the present case is something of the following nature: The boy has been congenitally what we might call a weak auditive. His surroundings, as described in his family history, were such as to accentuate this state; and, furthermore, the pathway to his auditory word centre was obstructed by the defect of hearing that accompanies adenoids.

A case of acquired word-deafness, recorded by Bramwell in the *Lancet* for 1897, resembles in detail the present case so much that I should like briefly to refer to it. The patient was a woman aged twenty-six, who had an attack of cerebral hæmorrhage. Motor aphasia, word-blindness, and word-deafness followed. The two first, more or less, disappeared, but the last persisted. When asked a question she echoed the last part of it, but did not understand. However, if she frequently repeated the question to herself she at last understood, probably, Bramwell says, arriving at the meaning through the glossokinæsthetic sense. Naturally, being a congenital condition, this sense would be of no help to the subject of this paper.

Analogous to the present case are those cases of congenital word-blindness which have been reported, and they supply *a priori* ground for admitting the possibility of congenital word-deafness. The fact that the auditory word centre becomes active earlier than the visual makes such cases more difficult of recognition, and the effect of producing imbecility is more probable.

One is inclined to think that a careful examination of backward children would in many cases disclose a condition similar to this case, though not of such a marked degree, a point still further emphasising the advisability of having all such children examined as to their special senses with a view to directing their education.

Dr. Barr asked if the hearing of ordinary sounds had been tested—as bell-ringing, watch-ticking, etc.—as it is known that ordinary deaf-mutes often hear music and loud sounds, but they cannot acquire the more delicate and slighter sounds involved in speech.

Dr. Syme said that the child heard the watch, the tuning-fork, and the whistle.

https://doi.org/10.1017/S1755146300175869 Published online by Cambridge University Press

Notes of a Case of Mastoid Abscess five weeks after Measles: Operation: Recovery.

By Laurie Asher Lawrence.

On June 3, 1904, L. R—, a little girl, aged five, was brought to see me on account of a swelling behind the left ear. She was a well-nourished, healthy-looking child, and walked into the room. Examination showed some discharge from the left ear, and a fluctuating swelling about the size of a hazel-nut just behind the pinna and on a level with its upper border. The child did not complain of any pain, and her temperature was but slightly raised—99·6°. The ear, on being syringed out and cleansed, showed no trace of granulation, though the membrana tympani was not fully accessible to view on account of a natural projecting anterior wall to the meatus. There was no swelling or bulging of the posterior wall. As the swelling was clearly a mastoid abscess, it was decided to open it at once; and as the child would have to be treated at home until a bed could be found for it, if necessary, anything like a formal operation was deferred. The abscess was opened under the usual antiseptic precautions by incision over it, quite down to the bone. Some two drachms of healthy-looking pus followed the incision, and the abscess cavity was well washed out with some biniodide of mercury lotion. Examination with a probe showed an extensive cavity in the mastoid, and a passage leading towards the middle ear. No granulations, though looked for, were seen or felt. Both ear and mastoid cavity were packed with iodoform gauze, and an outside dressing placed over the incision and ear, and kept in place with a bandage. The wound and the ear were washed out daily and repacked. At the end of three days the discharge from the wound, which had been fairly profuse, had commenced to diminish. That from the ear was much less, and had changed into stringy mucus. A few days later the ear stopped discharging altogether, and the wound was rapidly healing, in spite of the endeavour to keep it open with gauze plugging.

An examination of the ear revealed a tiny, almost pin-point, perforation in the upper part of the drum; this was quite dry. The hearing, as far as it could be made out, was very good. In under a fortnight the mastoid wound was quite healed, the ear having been dry some days before. The temperature became normal the day after the operation, and has remained so ever since.

The history given was that on May 1 the child developed measles, having previously been a healthy child, both as regards her

https://doi.org/10.1017/S1755146300175869 Published online by Cambridge University Press

general condition and her ears. No discharge had ever been noticed from either ear, and she was not deaf, and had had no pain. During the attack the swelling at the back of the ear appeared; still there was no complaint of pain on the child's part, and the discharge escaped notice. I have brought the case forward (I think some of these cases ought to be recorded) because, to my mind, there are some interesting points about it.

1. The case developed in little more than a fortnight.

2. As far as it was possible to ascertain, no previous disease of the ear had existed. The child was only five years old, and the story is likely to be correct, as the child's people seemed fairly intelligent. There was never any complaint of pain, notwithstanding that this was the first time the child had had suppurative otitis media.

3. There was no pain complained of on palpation over the mastoid when the patient was examined on June 3.

4. There was only very slight raising of the temperature.

5. No granulations were present in the ear, and careful examination in the cavity of the mastoid did not reveal any.

6. The treatment adopted—Wildes's old method—was not proposed with any other idea than that of letting out pus, certainly not with any feeling that anything like cure would have resulted from such a simple proceeding; within a fortnight the case was well.

7. Lastly, what healing process can have produced this result? What can be going on inside the child's mastoid, where there is or was a large pus cavity fourteen days before complete return to health, as judged by cessation of aural and mastoid discharge, normal temperature, and good hearing?

Dr. Tilley asked if the membrane was now intact.

Dr. Lawrence said that there was a pinhole aperture but no suppuration.

(*To be continued.*)

The Garcia Centenary Celebration.—As at present arranged, the programme of events for the centenary day (Friday, March 17) is as follows. At mid-day, in the rooms of the Royal Medical and Chirurgical Society, at 20, Hanover Square, Señor Garcia will receive the congratulations of his friends and will be presented with addresses from various laryngological societies and musical bodies; he will also be presented with his portrait, which has been painted by Mr. John Sargent, R.A. In the afternoon, at three o'clock, a special meeting of the Laryngological Society of London will be held. In the evening, at 7.30, a dinner will be held at the Hotel Cecil, at which it is expected Señor Garcia will be present and will speak.

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