The PRESIDENT suggested the specimen be referred to the Morbid Growths Committee, as it was an intensely interesting one. The clinical aspects of the case made one think it unlikely that it was epithelioma.

Dr. ST. CLAIR THOMSON, in reply, said he had the patient's medical sheet sent from Netley Hospital, and it made no reference to typhoid. The man denied syphilis, and the Wassermann test was negative. There was no trace of tubercle in the lungs, and the von Pirquet reaction was negative. A low tracheotomy was done before the original laryngo-fissure was carried out. But a month after the latter he got stenosis, and a hurried tracheotomy was done, and the tube was left in three or four months. The man did not come under his care until four months later, and then he regarded it as septic perichondritis, and as such the man was treated in King's College Hospital from October to Christmas. On doing laryngo-fissure he found nothing in what had been his larynx. He had him rubbed with mercury and gave him iodide of potassium, and while he (Dr. Thomson) was away at Christmas an abscess developed on the left side, and Sir Watson Cheyne opened it; it led up to the thyroid. He showed him at the Medical Society, when several pathologists and surgeons said they could not disbelieve the section. He would be glad to submit the section to the Morbid Growths Committee.

AUSTRIAN OTOLOGICAL SOCIETY.

Meeting January 30, 1911; *Monats. f. Ohren., year* 45, *No.* 2.

PROF. URBANTSCHITSCH *in the Chair.*

Abstract of Report on Proceedings.

A CASE IN WHICH A LABYRINTH FISTULA OCCURRED AFTER AN OPERATION FOR ACUTE MASTOIDITIS, AND IN WHICH COMPRESSION AND ASPIRATION AFFORDED VERTICAL NYSTAGMUS.

BY R. BÁRÁNY.

A man, aged thirty-six; operation on the nose followed by bilateral mastoiditis. Left side healed spontaneously, but an antrotomy was required on the right. No fistula was detected at the operation; wound healed uneventfully; perforation soon closed, membrane became normal in appearance and the swelling in the meatus subsided. In four weeks' time, when the retro-auricular wound was almost healed, a sudden attack of giddiness took place. The range for whispers was five metres. Compression of the air in the meatus afforded a strong vertical nystagmus downwards and aspiration a very slight nystagmus upwards. Pressure on the scar over the site of the antrum evoked on the contrary a very slight nystagmus upwards, whilst on relaxing this pressure a strong vertical nystagmus downwards occurred.

The explanation of this peculiar reaction seemed possibly to lie in the assumption that the fistula was situated in the anterior vertical canal in the neighbourhood of its conjoint opening. Now pressure on the fistula itself, that is by pressing on the retro-auricular scar, produced a vertical

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nystagmus upwards, which phenomenon must have been the result of a movement of the endolymph in the anterior vertical canal towards its ampulla and in the posterior vertical canal towards its non-ampullary end. With a fistula in the position suggested this movement of the endolymph would be the result of direct pressure on it. But why should the nystagmus be so weak? The direction of the current in the anterior canal under these circumstances would produce its weaker physiological influence, whilst the movement of the endolymph in the posterior canal would be only secondary to the primary movement in the anterior canal, and thus less strong. On the other hand, the effect of aspiration as induced by relaxing the pressure on the fistula would set up currents in the anterior canal which would produce its greatest physiological effect, and hence the more marked nystagmus.

The contradictory reactions of the fistula symptom by pressure on the scar and in the meatus appeared of especial importance, and on this phenomenon some light was thrown by the theory propounded by Herzog to the effect that movements communicated to the labyrinthine fluid by pressure on a fistula forced the fluid towards the windows. Thus, that pressure on the intact tympanic membrane produced a vertical nystagmus downwards, whilst the same reaction occurred on relaxing the pressure over the retro-auricular scar, could be explained by assuming that under these conditions the membranes of both the round and oval windows were driven inwards, and that then a movement of the endolymph in the anterior canal directed away from its ampulla took place. The significance of this reaction was that probably in the case of every fistula, either into or behind the antrum, the tympanic membrane and meatus being intact and the antrum excluded from the tympanic cavity, these conflicting conditions must arise if the air in the meatus be compressed—that is, the membranes of the round and oval windows will be driven in and the endolymph directed thence out of the fistula; or, if pressure be exerted over the fistula, the window membranes will bulge outwards. Bárány's attention had first been directed to these phenomena by Bondy.

As regards treatment in this particular case no further operation had been undertaken as the wound looked so well, and completely healed in some two months after the antrotomy. The patient remained under immediate observation, and further labyrinth symptoms could be dealt with should they arise.

A Case, already shown whilst Convalescing, of a now Completely Healed, Right-sided Cerebellar Abscess.

By R. Bárány.

Since the wound had healed certain changes had taken place as regards the response of the vestibular centre to stimulation. Whereas previously rotation had afforded a very marked nystagmus lasting one minute, only a moderate reaction could now be elicited with a duration of only forty-five seconds. Also the caloric response on either side was now not so intense as before. Of still greater interest was the fact that the reaction movements of the upper extremities were now hardly detectable after rotation. Only after long-continued irrigation with quite cold water on the left side did deviation of the left upper extremity towards the left occur, whilst the right side was reactionless. With such alterations in response to stimulation it was almost impossible to obtain

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information as to the past disease, and therefore one must be prepared to allow that, as the result of such adaptations to central lesions, localisation of past disease may become difficult in many cases. Bárány had been unable also in two other cases of cerebellar abscess, in both of which a labyrinth operation had been performed on one side, to obtain any reaction in the hand movements after the wound was healed. One of these cases was to be shown that day by Ruttin.

From a physiological point of view these alterations in reaction were most interesting, as they represented evidence of compensation. The very active response to stimulation of the vestibular system in cases where disease in the posterior fossa is in progress forms a very marked contrast to the weak reaction which can be obtained after such disease is healed.

A Case in which there was a Probable Traumatic Lesion of the Left Cerebellar Hemisphere.

By R. Bárány.

The patient was a man, aged forty, who some three months before had had a severe blow on the head followed by loss of consciousness, since when he had suffered with giddiness, headache, and loss of hearing on the left side. Examination on November 10 showed: Tympanic membrane normal, deafness of internal ear type, loud whisper, left at three metres, and right at five metres, varying spontaneous nystagmus to right and left, slightly increased by head-movements. Further—and this was most important—the left arm stretched out deviated gradually to the left, whilst the right was held steady, the eyes being closed, and the left wrist-joint also showed a spontaneous deviation to the left. After ten rotations to the left both the left and right arm, as well together with the wrist-joint, gave a strong typical reaction. After ten rotations to the right a typical deviation of the right arm and hand to the right took place, whilst no deviation at all occurred in the left upper extremity. After some days the reaction movement to the right recurred in the left arm, but the similar movement of the left wrist had till then not been obtainable in spite of the fact that with complete rest the subjective condition of the patient had very much improved, the headache, giddiness, and spontaneous nystagmus almost disappeared, and the range for whisper on the left increased to five metres. Bárány had seen already six or seven similar cases, in which the reaction movements in the upper extremities were lost subsequent to a severe injury to the head, and in which a constant correspondence existed between the more affected ear and the ipsolateral arm. Although the result of all these observations undoubtedly must be admitted to point to some lesion of the cerebellar hemisphere on the affected side, what exactly such lesion was he could not with any certainty state, but he submitted that such investigations should help considerably towards determining an accurate prognosis.

Suppurative Labyrinthitis, Meningitis, Cerebellar Abscess; Operation; Cure.

By E. Ruttin.

Labourer, aged twenty-one; discharge from the right ear ten years; frequent attacks of giddiness the last eight years. Headache for eight

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days, giddiness and vomiting for three days. Examination: Right ear, chronic middle-ear suppuration, large perforation with granulations, mastoid tender to pressure. Total deafness, no caloric reaction, no fistula symptom. Slight facial paresis and slight nystagmus towards the healthy side. Meningitis, temperature 38·5° F., pulse 76. Ocular fundi normal.

At the operation on the same day a putrefying cholesteatoma was found which had destroyed in part the mastoid process and posterior wall of the meatus. There was a pin-hole fistula into the horizontal canal filled with greyish-red granulations. The facial nerve lay exposed both in its descending and in horizontal portions. Oval window open. Labyrinth operation after Neumann with exposure of the posterior fossa. No fluid in the labyrinth. Fluid from all three portions of the spinal canal, purulent. The dura was freely incised.

The following day marked nystagmus to the sound side, which, after some nine days, slowly disappeared. On the tenth day severe occipital headache and marked nystagmus to each side, but especially towards the sound side. Patient apathetic, pulse 60, no giddiness. The latter nystagmus was attributed to some cerebellar stimulus, a condition which was corroborated by other symptoms.

The earlier incision into the cerebellum was explored and a definite abscess containing fœtid pus evacuated. Up till September 1 the course was normal when Ruttin was away for a month, but about the beginning of October, whilst the wound was being dressed, spontaneous nystagmus to either side was noticed and the patient complained of headache. Temperature normal. Pulse 68. On further exploration another deeper lying collection of pus was found in the cerebellum and drained, after which convalescence was uneventful and the patient was discharged cured December 21, 1910.

The pus contained numerous masses of bacteria with streptococci and anaërobic bacilli; the spinal fluid was unfortunately not examined owing to an oversight.

A Case of Otitic Meningitis running a Remarkable Course.

By E. Ruttin.

A man, aged twenty-nine, had suffered four years ago from a left aural discharge for one month. All healed. For the last month the discharge had recurred, preceded by headache. Examination on December 24, 1910, revealed swelling, redness and bulging of the tympanic membrane sagging of the posterior meatal wall: labyrinth normal reaction.

No operation was performed till February 5, when the mastoid process was found filled with granulations but no fluid pus was present. All necrotic tissue removed down to healthy bone but neither the dura nor sinus thereby exposed.

Fever, which had not been present before the operation, was noted for three days, when it subsided without any other effect to the patient, but fourteen days later it recurred, accompanied by aphasia, headache and vomiting. All pointed, of course, to a temporo-sphenoidal abscess. Operation, however, discovered no collection of pus. Three days later the patient died, and at the autopsy a purulent meningitis of the convexity and base of the brain on the left side was found. With the exception of the two transitory rises the temperature had been subnormal

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throughout, and was thus quite unusual for a case of purulent meningitis, being much more in accordance with a cerebral abscess.

On the Question of Traumatic Otosclerosis.

By E. Ruttin.

A patient was shown, the subject of otosclerosis, in whom a history of injury seemed to bear a definite relation to the onset of the disease, and in addition a section from a case presenting all the symptoms of otosclerosis during life which had been attributed to injury some years before. Bony tissue was to be seen in the neighbourhood of the oval window, but more like callus than that usually regarded as typically otosclerotic.

Alexander considered that the specimen did not show any callus, but was a typical section of otosclerosis. From his investigations he had seen cases of fracture of the petrous bone healed with fibrous tissue or with typical compact bone forming a callus.

Froschels's experience had led him to regard injury as at times an ætiological factor in the production of the disease.

Politzer did not consider the specimen one of otosclerosis.

Two Cases of Transitory Inflammation of the Vestibular Nerve following Intra-muscular and Intra-venous Injection of Salvarsan.

By O. Beck.

A young girl, fourteen days after an intra-muscular injection, was sent to him complaining of giddiness. There was a weak but obvious left-directed vestibular nystagmus. Romberg's test afforded no typical reaction. The hearing and middle ear and the response to the caloric tests and rotation were normal on both sides. Two weeks later she had some so severe attacks of giddiness that she could not stand. The vestibule was now found quite unresponsive on the right side, whilst the hearing was normal and a marked left-directed spontaneous nystagmus existed. Gradually all the symptoms abated, and within fourteen days the right labyrinth responded normally.

A girl, aged ten, had an intra-venous injection, and six hours later complained of intolerable giddiness and vomiting. A typical paralysis of the vestibular nerve on the right side was found. On the next day the child was free from giddiness and felt quite well, the spontaneous nystagmus had ceased, and the labyrinth now reacted typically to all tests.

A Case of Extreme Deafness due to Hereditary Syphilis Considerably Improved by Salvarsan.

By O. Beck.

A girl, aged eleven, "always deaf." Wassermann positive. Right ear totally deaf. Range for very loud conversation in the left ear 20 cm. Labyrinth on either side quite unresponsive to rotation or caloric tests. Five days after an intra-venous injection the hearing was much improved. Fourteen days later range of hearing at 1 metre, which condition was maintained up to the present time; one month after the injection right ear remained completely deaf and no vestibular reaction obtainable.

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Bilateral Destruction of the Vestibular Apparatus; Right-sided Deafness and Severe Depreciation of the Hearing on the Left after Salvarsan.

By O. Beck.

On September 7, 1910, a man was injected with salvarsan for secondary syphilis. Five weeks later he noticed he heard badly in the right ear and on the day following dizziness and giddiness set in. On examination only sound-perception was found on the right side with total lack of response in the vestibule, whilst the vestibular symptoms had already almost subsided. Gradually the patient felt better with the exception of a diffuse headache which no drug would alleviate. On January 1, 1911, he had a most severe attack of giddiness accompanied by excessive vomiting, making rest in bed imperative. It seemed to him also that he heard worse in the left ear. Both vestibules were now found quite unresponsive. Spontaneous nystagmus of a vestibular character to the right. He walked with uncertainty and with the legs spread apart. The right ear was quite deaf, but the range for conversation and whisper was normal on the left. Since January 18 the hearing in the left ear also depreciated so that he could now only hear the loudest conversation at 20 cm. Wassermann always negative, nor did examination of the eyes or the rest of the nervous system afford any help.

All these symptoms certainly appeared after the exhibition of salvarsan, but whether they were really caused by it was not certain.

Frey, Alexander, Neumann and Beck discussed the various points arising out of these cases at length. Sufficient evidence was forthcoming that such varying symptoms could undoubtedly be due to syphilis alone, especially in its earlier stages, and that this had not been more generally noted hitherto was owing to the fact that they were often transitory and that they had not been looked for. Allusion was also made to their probable dependence on changes in the consistency of the endolymph and perilymph.

Alex. R. Tweedie (*trans.*).

AMERICAN LARYNGOLOGICAL ASSOCIATION.

Thirty-second Annual Congress, held at Washington, D.C., May 3, 4, and 5, 1910.

James E. Logan, M.D., *of Kansas City, Mo., President.*

(By courtesy of the *New York Medical Record.*)

Second Day—Wednesday, May 4.

(*Continued from p.* 274.)

Lympho-sarcoma of the Naso-pharynx and Tonsils with Results of Operative and Medicinal Treatment.

By Dr. Clement F. Theisen (Albany, N.Y.).

Case 1 was a boy, aged fourteen, operated on under general anæsthesia, and then placed on arsenic carried to the point of tolerance. Coley's

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