epiglottis (Case 3) was half solid and half cystic, while the growth on the vocal cord (Case 1) was entirely cystic. With regard to treatment, Mr. Hett proposed to remove the growth from the vocal cord with Paterson's forceps by the direct method. He did not propose removal in the other two cases, as they were not causing symptoms. The fourth case of cyst of the left arytænoid had been removed by the indirect method with arytænoid punch forceps, as it was interfering with the movements of the larynx. It had healed well.

Mr. PARKER said he thought that Case 1 was a soft fibroma, not a cyst.

Dr. FITZGERALD POWELL thought it was a mucous cyst of the cord, and that it should be touched with the cautery. That seemed to be the safest way of dealing with the condition, and it would leave no ill-effects. The cautery, he thought, was a much safer way of dealing with these cysts of the larynx than any other.

The PRESIDENT said he had a similar growth not long ago which he seized with Mackenzie forceps and removed, but on looking at the forceps afterwards there was very little in them; but that morning the patient turned up with a decided recurrence. He would now apply the galvano-cautery.

Mr. TILLEY said he first thought the swelling under discussion was cystic and coming from the ventricle of Morgagni on to the cord. The patient was then gagged, and on looking again the tumour was in the arytænoid region.

Case of Tonsillar Neoplasm in a Tuberculous Subject—J. Dundas Grant, F.R.C.S.—The patient, a young girl suffering from tuberculous infiltration of the left vocal cord and interarytænoid space, along with pulmonary tuberculosis, was found to have an elongated outgrowth from the lower part of the left tonsil, pale and perfectly smooth, presenting the appearance of a fibroma. The structure of these growths, of which a number have been brought before the Society from time to time, has varied, and the result of the microscopical examination of the present one will be reported at a later meeting.

Mr. HERBERT TILLEY said it was very like the cases which were shown five or six years ago by Mr. Arthur Cheatle and others, including himself. Mr. Cheatle's grew from the intra-tonsillar fossa. Apparently a little tonsillar tissue grew out of a crypt. He did not think the growth had any connection with tubercle.

The PRESIDENT said he also had shown a similar case. It was simply tonsillar tissue, pedunculated.

AUSTRIAN OTOLOGICAL SOCIETY.

November 27, 1911.

PROF. V. URBANTSCHITSCH *in the Chair.*

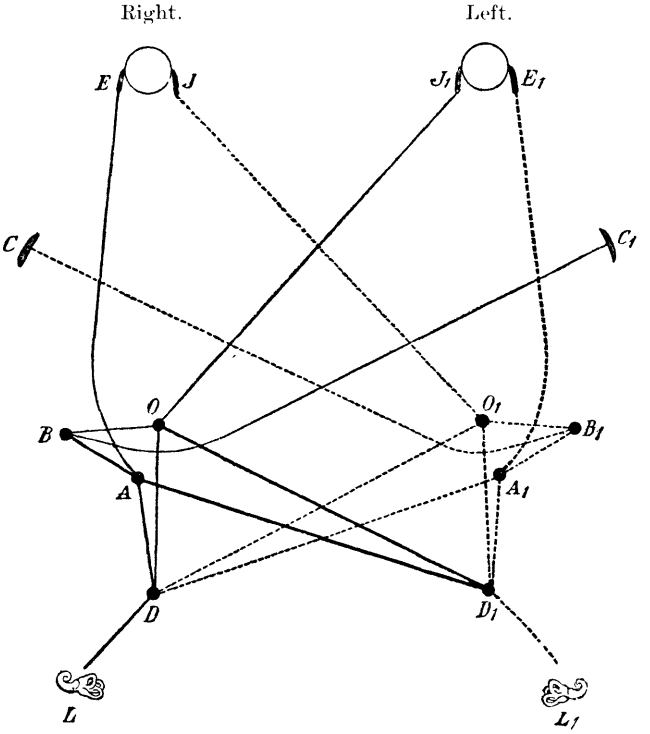
(Abstract of proceedings from advanced proofs by courtesy of Dr. HUGO FREY.)

Conjugate Deviation to the Right (? Traumatic) with Paresis of Movements of Eyes to the Left.—E. Ruttin.—The probable diagnosis of this case was a supra-nuclear lesion on the left side. A child,

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aged two who till then had always been quite healthy, was three weeks ago pushed by another child and fell with its head against the edge of a table, since when the mother had noticed that the eyes continually were turned to the right and movement of them to the left appeared impossible. The solution could be made clear by the help of Bárány's diagram.

Conjugate deviation to the right combined with paresis of the eye-movements to the left might be due to a lesion of the nuclei O_1 and A_1 with degeneration of the paths J and E_1. Since, however, cold irrigation of the left ear induced a slow movement of the eyes to the left, the paths L_1 D_1 A_1 E_1 and L_1 D_1 O_1 J must be functional, and thus a nuclear lesion on



The continuous line denotes the paths by which impulses travel and movements are effected on the right side and their connections with the labyrinth on the left side, and the dotted lines are similar routes and connections on the left side. E and E_1 = right and left musculus rectus externus. J and J_1 = right and left musculus rectus internus. O and O_1 = right and left oculo-motor nucleus. A and A_1 = right and left abducens nucleus. B and B_1 = right and left centre for eye-movements. C and C_1 = right and left cortex. D and D_1 = right and left Deiter's nucleus. L and L_1 = right and left labyrinth.

the left side could be excluded. Further, since a right-directed nystagmus immediately followed this slow movement to the left, and since the quick component of nystagmus, according to Bárány, had its origin in the contra-lateral centre for the eye-movements (in this case on the right side), the routes L_1 D_1 A E and L_1 D_1 O J_1 together with their continuations B A and B O must also be intact, the more so because the nuclei A and O

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when stimulated *viâ* L (that is, by cold irrigation of the right labyrinth), accentuated the spontaneous deviation of the eyes to the right; thus the vestibular stimulus *viâ* the paths L D A E and L D O J_1 remained unimpeded. On the other hand, the quick left-directed component was entirely absent after cold irrigation of the right ear. Lastly, since the quick left-directed component, as already mentioned, according to Bárány was dependent on the integrity of the routes L D A_1 E_1 and L D O_1 J and their connection with the contra-lateral eye-movement centre B_1 the lesion could only be situated between B_1 A_1 and B_1 O_1, that is, it was a supranuclear lesion between the oculo-motor nucleus and the centre for eye-movements. That the lesion could be situated still higher, that is between B_1 and C_1—a subcortical lesion—could therefore be excluded because under such conditions only the intentional movement of the eyes to the left would have been prevented and the quick component resulting from cold irrigation of the right ear would have remained unaltered.

It was interesting that the paresis of the eye-movements to the left recovered slowly and unequally in the two eyes—a fact that apparently till now had not been observed—so that after some two weeks attempt to turn the eyes to the left resulted in a greater movement in the right eye than in the left. At the present time a fairly good movement had reappeared on both sides, but that on the right was the better. Possibly one might conclude from these phenomena that the nerve bundles uniting the centre for eye-movements with the oculo-motor nucleus were rather widely disposed, as otherwise the lesion would have been less limited in its effect. As to the spontaneous deviation to the right the author was unable to offer an exact explanation, but possibly the reason lay in the preponderating influence of the centre for eye-movements on the right side.

On the Observation of Spontaneous Deviation in Pointing and the Vestibular Pointing Reaction.—Zdzislaw Reich.—The author of this communication stated that the methods which he adopted to test these phenomena in connection with the vestibules and in cases of cerebellar disease depended essentially on that diversion of the patient's attention as practised by neurologists in testing reflexes, and was particularly useful in those instances where the usual methods failed to elicit these reactions. It had occurred to him that if Bárány's contention were correct, viz. that in many cases no spontaneous deviation of either the hand or the arm could be observed—although a lesion actually did exist in the ipsolateral hemisphere of the small brain—because the large brain had already noted and compensated this innervation defect in the cerebellum, then the removal of such compensation by diverting the attention should allow the latent pointing-deviation once more to become apparent.

With this end in view he determined to instruct the patient to perform some complicated action with the opposite hand whilst testing the diseased side, thinking the psychomotor area would thus be so occupied therewith as to eliminate its influence over the less complicated action on the side under observation. Reich therefore made the patient, in whom the usual tests had proved negative, follow one of his (Reich's) fingers with a finger of the healthy side, at the same time carrying out the pointing test on the diseased side, with the result that he obtained a constant deviation on the diseased side. This method was also enhanced by making the action on the opposite side take place from the shoulder-joint whilst the diseased side was tested only by a movement from the

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wrist-joint. With continued application of this device, however, the large brain might become educated, as it were, to control both the complicated action on the sound side and also the deviation on the diseased side, so that it was necessary to change the complicated movement from time to time. The efficacy of these methods he had confirmed by experiment on normal people, and they could also be similarly utilised in testing the vestibular pointing reactions.

Fistula Symptom and Head Nystagmus.—Ruttin.—The patient was a man, aged forty-two, in whom a left otorrhœa had existed since childhood. Treatment six years ago at the hands of an aural surgeon had resulted in cessation of the discharge, which, however, in the last two weeks had recurred together with giddiness and subjective apparent rotation of objects. The giddiness had subsided during the last week.

Examination: Right side, dry perforation; left slight purulent antral discharge. Cv., right at 1 m., left *ad conch*. Tested with noise apparatus. Weber to the right, Rinne both sides negative with shortened bone-conduction. C_1 and C_4 much reduced both sides. No spontaneous nystagmus. Fistular symptom left, positive with typical nystagmus to the left on compression, simultaneously with which head-nystagmus to the right occurred. These phenomena were quite obvious and constantly demonstrated for a week, after which the patient was sent home at his own wish. Ten days later both fistular symptom and head-nystagmus could not be elicited. The caloric reaction—tested with an ether spray—had been typical both sides, and the after-rotation nystagmus was about twelve seconds on each side. This test, however, was peculiar in the fact that the right-directed rotatory nystagmus remained rotatory when the head was laid down on the left and did not become horizontal in character, whereas on the right side the usual conditions obtained. Therefore according to Hofer one had to diagnose the presence of a fistula into the left horizontal canal. Although the fistula symptom and head-nystagmus had disappeared the hearing and other reactions remained unaltered.

New Method of testing Spontaneous Head-movements and the reaction Head-movements under stimulus of the Vestibule —Bárány.—A case of permanent wry-neck in which the presence of a cerebellar tumour was suspected was the reason that prompted Bárány to insist on the importance of testing "head-movements." Examination of the spontaneous and reaction movements in this instance showed all to be normal, so that Bárány considered he could thus exclude the presence of a tumour in the centre of the cerebellum, which should have been situated in the anterior superior lobe according to Bolk. The test is carried out in the following way: An apparatus devised by the author is applied to the patient—this apparently consists essentially in the provision of a rod secured to the patient's head, on the distal end of which the eyes are fixed ("Blickfixator.") The patient is now instructed to touch the end of the finger of the observer with the tip of the rod, then to lower the head and raise it again so as to touch the finger with the rod again. If this is attempted whilst a horizontal nystagmus to the left is induced the head is seen to deviate to the right. Similarly in order to test the upward and downward deviation associated with a vertical nystagmus the head is moved to the right or left. Further, if the "Blickfixator" be arranged so as to point directly upward then deviation in the coronal plane can be noted in cases of rotatory nystagmus.

Bárány had not yet applied this test to pathological cases. If the

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patient be instructed to hold the head rigid and attempt to touch the end of the finger of the observer with the tip of the rod the movements of the muscles of the back can be tested in cases of horizontal or rotatory nystagmus—a point which should prove of value in those cases which are unable to stand. *Alex. R. Tweedie.*

PROCEEDINGS OF THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY.

Seventeenth Annual Meeting, Atlantic City, June 1, 2, and 3, 1911.

Report by Dr. L. M. Inghram.

Thursday, June 1, 1911.

(*Continued from p. 232.*)

Discussion on Atypical Mastoiditis.—Introduced by **Dr. Eugene A. Crockett** (Boston).—Atypical mastoid disease is not only far more common than is ordinarily supposed, but its early recognition is very important on account of the fact that the intra-cranial complications of acute mastoid infection are more common in this variety of mastoid diseases than in any other. The same may be said of thrombosis of the lateral sinus and of general septicæmia. Atypical disease of the mastoid process occurs by reason of an abnormal type of mastoid bone rather than from any other ætiological factor. It will be seen just as commonly after a simple influenza infection as it will be after a pneumococcus infection or scarlet fever, typhoid fever, etc. In all cases where mastoid disease is suspected and cannot be proved it is well to remember that a carefully taken X-ray picture of the mastoid furnishes an absolutely correct means of determining what process is present in the temporal bone. It should also be remembered that such a process may be quite devoid of local or general symptoms sufficiently severe for diagnostic purpose; that it may exist in cases in which there is only an indefinite history of discharge from the ear and which present a normal drum membrane and canal wall. These are the cases of so-called primary mastoiditis. The presence of swelling of the posterior-superior canal wall, when present, is of decided importance in making a definite diagnosis.

Dr. James A. Stucky said that certain anatomical conditions favour the development of atypical or symptomless mastoiditis. Heine described these as cases (*a*) in which a thickened tympanic membrane resists the suppurative process, and pus breaks through the annular ligament of the stapes, infecting the labyrinth, from which purulent meningitis results, ending in death. (*b*) In which there is a large aditus ad antrum and the mastoid cells are situated externally to the lateral sinus. (*c*) In which there is a diploic mastoid process with a medium-sized antrum and large cells extending into the root of the zygoma. (*d*) In which there is a very thick or sclerosed cortex. The author's experience accorded with that of Barnhill, Heine and others, (1) that suppuration may take place in the mastoid antrum, mastoid cells or both, and may even be

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