

long-drawn aisles and beneath the fretted vaults, my oppression soon passed away, and I felt myself ceasing to be impressed by the vast proportions of the gorgeous temple, till sweeping along the corridors of memory came up the lines of the master:—

“Enter—its grandeur overwhelms thee not ;
And why ? It is not lessened ; but thy mind,
Expanded by the genius of the spot,
Has grown colossal.”

ART. V.—*Exostosis in the Auditory Meatus.* By JOHN B. STORY, M.B., F.R.C.S.I. ; Surgeon to St. Mark’s Ophthalmic Hospital.

A BRIEF mention was made of the following case in the discussion upon Mr. Arthur Benson’s interesting communication to the Academy of Medicine on Aural Exostosis,^a but the interest attaching to the subject, and the remarkable success that attended the treatment, in spite of the untoward complication of a perforation of the membrana tympani, induce me to publish a more detailed account of the case in this Journal.

CASE.—In September, 1881, I was consulted by a gentleman, aged thirty-two, on account of a singing and deafness which had existed in his right ear for the space of a fortnight.

He stated that he had always been a healthy but exceedingly nervous man. Had had “debility,” in which I found he included spermatorrhœa, five years previously, and had been much “dosed” in consequence.

I found his hearing on the right side to be $\frac{3 \text{ m}}{\text{c.v.}}$, or $\frac{0.5 \text{ m}}{\text{wh.}}$ (*i.e.*, my ordinary conversation voice was heard at 3 metres, and a low whisper at half a metre’s distance, and on the left side $H > \frac{4 \text{ m}}{\text{c.v.}}$, or $> \frac{4 \text{ m}}{\text{wh.}}$ (my consulting-room does not allow me to register higher powers of hearing). Right ear detected Politzer’s hörmesser at a distance of from one-third to 2 metres, and the left heard it at more than 4 metres. Tuning-fork on vertex heard best in right ear.

The external ears were normal on both sides, but the meatus were closed by large exostoses growing from the posterior wall, that in the right ear being larger than that in the left. The growths were covered with a red skin, and were quite painless on pressure produced by tapping with a probe. On the right side I could not pass the very finest of lachrymal probes between the wall of the meatus and the exostosis, but on the left side I could do so easily enough. The growth in the right

^a Trans. Acad. of Med. in Ireland. 1885. P. 129.

meatus sprang rather from the junction of the posterior and lower walls, while that in the left sprang directly from the posterior wall. Both were so deeply situated that their inner surfaces must have been almost in contact with the membranæ tympanorum.

This proximity to the tympanic cavities rendered all operative procedures so difficult and so dangerous that I was very loath to attempt surgical interference with either of the growths, but the hearing of the right ear had become so much deteriorated by the enlargement of the exostosis in the corresponding meatus, and the patient was in a condition of so much misery, caused not alone by the loss of the hearing on the right side, but by the confident expectation of a similar loss of that on the left, that I could not conscientiously refrain from giving him the chance of recovery which an operation afforded.

The bony growth was extremely hard and covered with an exceedingly thin skin. It was not tender in the least to the touch, and I expected to find but little sensibility in the tumour proper if I could but get rid of the cutaneous nerves, so I directed my first efforts to this object.

Oct. 10th.—I began to touch the surface of the exostosis with strong carbolic acid, with the object of destroying the skin over the bone, and after some few days of this treatment I bored a small hole in its substance with a dentist's drill. About a week later I used the dentist's drill again, under ether, and proceeded immediately afterwards to use electrolysis by inserting a gold needle attached to the negative pole in the opening made by the drill, and placing the positive electrode over the temple. This was done under ether, and continued for about two minutes. I did not venture to bore quite through the exostosis with the drill from the great danger there was of perforating the membrana tympani, which lay quite close behind the exostosis, and possibly was actually in contact with its posterior surface.

Four or five days after using electrolysis I noticed some suppuration in the opening, at the bottom of which bare bone could be detected by a probe.

After some days' interval I used electrolysis again, in the way previously described, employing eight cells for about the space of two minutes.

Dec. 3rd.—Electrolysis was used for the third time, during five minutes, 6 cells being employed, and no anæsthetic being used.

7th.—I burnt the growth with potassium cum calce, and on the 12th I repeated the proceeding.

20th.—Electrolysis was again undertaken—this time with 6 cells. I found the meatus much deeper, the exostosis having receded to a considerable extent, but still no signs of the membrana tympani were visible.

Jan. 3rd, 1882.—Attempted electrolysis with both electrodes inserted in the exostosis, but after two minutes it could not be borne any longer,

Fig. 1.



Fig. 2.



Fig. 3.



Fig. 1.—Right Meatus before Operation.

Fig. 2.—Right Meatus shortly after final cauterisation.

Fig. 3.—Right Meatus one year later. The two smaller projections had not been previously visible.

so I then used carbohc acid to dull sensibility, and on the 5th, after touching with the acid, I inserted Vienna paste, which was borne very well for about three minutes, after which the pain became intolerable.

17th.—My patient informed me that when he attempted to blow his nose matter poured from his ear. I found, on testing, that this was the case. A perforation of the drumhead had evidently occurred, in consequence of the use of the Vienna paste on the 5th. The exostosis was much less, and also the swelling of the skin lining the meatus. Some days after this, but before the perforation had healed, I made the second sketch of this meatus. The exostosis is markedly less, but the membrane cannot be seen at its back.

March 1st.—I found his hearing much improved, conversation voice and whisper and Politzer's hörmesser being easily perceived at the full length of my room, 4 metres; and a year later another examination enabled me to convince myself that the improvement had remained permanent.

I have seen him on more than one occasion during the past year—more than two years after the operations, and have had the satisfaction of proving that no relapse has taken place.

The last occasion on which I had the pleasure of seeing him was Feb. 19th, 1885.

It is unnecessary to dilate upon the numerous methods that have been recommended for dealing with aural exostoses—full descriptions are to be found in otological textbooks. An account of the preceding case, however, seemed to me worth publishing, as, although I have had under my observation during the past ten years a considerable number of such cases, this is the first and only one with which I have found it necessary to interfere surgically. Indeed, so long as the patient's hearing remains intact I do not consider any operation should be performed. Even the loss of the hearing of one ear does not, in my opinion, render such a dangerous proceeding—as any one of the known operations must be considered—unavoidable, and I should not have operated upon this case had the second ear been sound, or could I have assured the patient that the tumour in it was so unimportant that there was no rational probability of its increase destroying his hearing within any reasonable period of time. As it was I was fully under the belief that the hearing of the good ear was doomed to follow that of the other one in a very short time, and it has been a matter of agreeable surprise to me that in the last three years, during which I have had the patient constantly under observation, no increase whatever has taken place in the exostosis which was left untouched.