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NEW YORK

[Reprinted from the ARCHIVES OF OTOLOGY, Vol. xii, No. 1, March, 1883]

TWO CASES OF SYPHILITIC DISEASE OF THE LABYRINTH, WITH REMARKS.*

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THESE two cases are selected from a number of cases of syphilitic disease of the ear, occurring in the practice of Dr. C. R. Agnew and myself, for presentation to this Society, because the records of them are reasonably complete, and because of the interest that has been manifested in this class of affections during the last few years.

The diagnosis of labyrinth disease was based in both cases upon the total, or almost total, deafness of the affected ear to external sounds, and to the tuning-fork. In the first case there may be room for question as to the diagnosis.

The autophony, the patient's voice "sounding to himself as though he were talking into a barrel," seems to be a symptom of middle-ear disease. But the absence of all abnormal appearances of the membrana tympani, and the inability of the patient to hear the tuning-fork in the deaf ear while he heard it well in the other, as also the suddenness with which the deafness was ushered in, seemed to render the existence of labyrinth disease extremely probable.

In the second case, I think the most sceptical will not question the diagnosis.

The cases are both remarkable, I think, on account of the recovery of hearing, which occurred after months of total deafness. What the specific lesion of the labyrinth was which produced the deafness I am unable to say. It may

* Read before the N. Y. State Medical Society, Feb. 6, 1883.

Reprinted from the Archives of Otology, Vol. xii, No. 1, March, 1883.

have been congestion, or it may have been inflammation, or it may have been a periosteal thickening similar to that affecting the orbital walls in the second case. Possibly, some one who has given more thought to this subject than I have may, on reading the cases, be able to arrive at a more positive conclusion as to the nature of the lesion.

In the first case only one ear was affected throughout the course of the disease. This ear either became suddenly deaf, or else its hearing was gradually lost without attracting the attention of the patient, until he accidentally made the discovery. It remained totally deaf, or nearly so, for several months, when, under antisyphilitic treatment, the hearing was gradually recovered, and there has been no relapse up to the present time.

In the second case, one ear became deaf and remained so for several months, when it gradually recovered its hearing, and retained it for nearly a year, when the patient awoke one morning with the same ear again totally deaf. After some months' treatment the hearing was partially recovered, but, soon after, the patient turned up "deaf as a post" in both ears. He is still totally deaf in the ear first affected, and probably will always remain so. The hearing of the other ear was so far recovered under treatment that he hears conversation readily.

In the second case a great deal of vertigo is complained of. In the first case there was none.

Case 1.—May 27, 1874. O. W., aged forty-one, physician, says that he had what some of the most prominent physicians in New York diagnosticated as pulmonary tuberculosis, at the age of twenty-five. The pulmonary disease was a sequel of measles, and was accompanied by copious and frequent hæmoptysis.

After physicians and friends had given him up, he gradually recovered under a very free use of whiskey, and an out-of-door life.

Four months ago, he had an attack of irregularity of heart-action, following extreme exhaustion from extraordinary loss of sleep in attending to his professional duties. The action of the heart was tumultuous, irregular; now rapid, now slow; at times fluttering, and again intermittent. The attack lasted thirty hours and did not recur.

For the last three months he has suffered from intermittent fever, with neuralgia. He has severe headaches every night, coming on at 9 or 10 o'clock, and continuing all night, keeping him awake for hours at a time. These neuralgic pains have frequently been felt in both his ears, and about three weeks ago he discovered, for the first time, that his left ear was totally deaf. He has since experienced a very annoying ringing in the affected ear, and a very little pain.

Hearing power: right, normal; left, click of nails at three inches.

Tuning-fork, on teeth or forehead, heard only in right ear.

Pharynx slimy.

Auditory canals and membranæ tympanorum, normal.

Eustachian tubes easily opened by Valsalva's method.

His voice, which to others seems normal, sounds to himself as though he were talking into a barrel.

As the history seemed to point to malarial poisoning as the cause of his troubles, it was suggested to the patient that he should put himself upon large doses of quinine. This he objected to, however, because the drug had always acted very unpleasantly upon his nervous system. He believed that five grains would set him crazy. He was, therefore, placed upon a mixture containing chinoidin, arsenic, and strychnia. He was advised to drink half a pint of milk four times daily, not to do any night work, and to rest for an hour or two, regularly, at noon.

July 1st.—The patient now recollects that about three months ago he had an ulcer on the back of his neck. From six weeks to two months he has had tibial periostitis, and tender spots on each ulna. The neuralgic pains continue. The hearing of the left ear has slightly improved, the click of nails now being heard at three feet. The patient was now placed upon iodide of potassium, in increasing doses, with cod-liver oil.

July 15th.—No headache; no neuralgic pains. Has slept well for the last eight or ten nights. Some tibial tenderness remains. The left ear hears the watch in contact, and the voice as in ordinary conversation, at ten feet. There is less tinnitus aurium.

July 28th.—Has had ulcers on velum for the last ten days, but they are now nearly well from cauterizing with nitrate of silver. The left ear now hears the watch at a quarter of an inch.

Aug. 25th.—Mucous patches and ulcers on tongue, lips, and buccal mucous membrane. The left ear hears the watch at one and a half inches.

The patient was now advised to place himself under the care of Dr. F. J. Bumstead.

I complete the history of the case by the following extract from a letter from the patient, dated May 8, 1879, about five years after we first saw him :

"I am very happy to inform you that my general health is now first-rate. I can hear a watch tick at arm's length with my left ear, but not quite so clearly as with my right. It does not trouble me, however, in any way whatever, and my left ear is just as good as my right for purposes of auscultation. For ordinary conversation, practically the left ear is as perfectly good as the right, and I can hear ordinary conversation quite as well as before my left ear became deaf. You will doubtless recollect that the last time I saw you I had mucous patches in my mouth and throat in large numbers. Dr. Bumstead at once placed me upon blue mass and iron, which, together with potass. iodide, I continued to take for two years, taking from six to ten grains of blue mass with half that quantity of ferri sulph. daily ; at one time taking this for nearly a year without intermission. I had returns of the mucous patches, ulceration of fauces and soft palate, and had, two or three times, ulceration of the epiglottis, which was very nearly destroyed, the disease proving very obstinate and unyielding. During the last year that I took it, I took not less than six ounces of the blue mass. Since that time I have had no manifestation of the disease whatever, and have taken no medicine. During all the treatment I never became salivated, and no physiological effects whatever were shown. My health is now as perfectly good in every way as ever, and I may say my hearing is perfectly restored. I consider mine as a typically bad case with a typically good result. No doubt exists in my mind that had I neglected treatment, or followed it carelessly, the disease would have caused my death."

Case 2.—B. M., aged 43, druggist, came under observation in January, 1878. He stated that he had contracted syphilis while in the army in 1862. The chancre was followed by an eruption, and some loss of hair, but no sore throat or enlargement of glands. He had nocturnal pains in his left shoulder, disturbing his sleep, for a year, on returning from the war. His left shin was then tender and painful for over a year. An ulcer appeared on his sternum in 1863. There are now eight sores over his sternum, with evidences of necrosis. Six months ago the right eye began to pro-

trude, and there is now very marked exophthalmos. There is no diplopia, and the eye moves freely in every direction. Vision $\frac{20}{20}$ each eye, and no lesion to be seen with the ophthalmoscope. The exophthalmos seems to be the result of orbital periostitis.

The right ear became deaf gradually about four months ago. It now seems to be totally deaf to external sounds, not even hearing the tuning-fork when applied to the forehead or teeth, but hears a constant singing. The hearing of the left ear is normal. There is no visible lesion of the external or middle ear on either side, and the Eustachian tubes are pervious. The patient has much vertigo, feeling at times as though he were walking like a drunken man.

He was placed upon mercurial inunction.

Feb. 19*th.*—The gums were "touched," and the mercurial ointment was discontinued about a week ago. There is less tinnitus, and the ear is recovering its hearing.

The patient was now placed upon a saturated solution of iodide of potassium, commencing with five drops three times daily, and increasing the dose two drops daily.

March 1*st.*—The patient says he can hear with his right ear as well as ever, that the ringing has left it, and that he is no longer troubled with vertigo. He is taking seventeen drops of the saturated solution of iodide of potassium after each meal.

Nov. 2*d.*—The patient has been overworked, and has not slept well for two weeks. He complains of pain in his left elbow and left leg. In both ears the hearing remains normal. The vision of both eyes is normal, and the exophthalmos of the right is no more marked than when first seen. He has been taking iodide of potassium, gr. xx, *ter in die*, all summer. Advised to stop the iodide and resume mercurial inunction.

Feb. 11*th*, 1879.—The patient awoke a few mornings ago with the right ear again deaf, and the tinnitus as bad as ever. The left arm and leg have not been painful for two months past. The sores on his sternum are gradually healing. The principal trouble now is with the right side of the head. The scalp about the vertex is tender on pressure, and there are shooting pains through the right side of the head. He complains of a dull, heavy feeling, and tires easily. Ordered mercury with iodide of potassium.

Sept. 18*th.*—The patient now hears the tuning-fork with his right ear, though less than with his left, and he hears click of nails at two inches. The tinnitus is less intense. The drum-membranes

appear normal. The sores on the sternum are nearly healed. The scalp at the vertex is still tender. Walking up stairs fatigues him and causes palpitation. The exophthalmos is no worse, and vision is $\frac{20}{20}$. Ordered blue mass with iron and quinine.

Nov. 26th, 1880.—The patient comes to the office so deaf that he has to be communicated with in writing, and with so much vertigo that he is unable to go about alone. He says that he heard very well with his left ear until he received a blow on the left temple with a car-brake, about two months ago. Some swelling followed. and he soon began to lose the hearing of the left ear. It grew gradually worse until about four days ago, when he became totally deaf and has so remained. He hears a great roaring continually in his left ear. His voice is elevated in pitch. The right ear is absolutely deaf to all tests; the left hears click of nails in contact. The tuning-fork placed againt the forehead or teeth is faintly heard in the left ear. He cannot perceive any improvement with audifan or hearing-tube. Right drumhead sunken, reddened at periphery, and light spot small; left in a similar condition. Eustachian tubes open on using Politzer's method. Advised to push mercurial inunction.

Dec. 3d.—Mouth touched. H D R o., L $\frac{1}{\text{nails}}$ Can now understand sentences shouted into left ear. To take iodide of potassium, gr. v, *ter in die*, and increase the dose two grains daily. Is less dizzy; came over from Jersey City alone to-day. The ulcers of his sternum are not yet healed.

Dec. 23d.—Now hears sentences, uttered distinctly, at ten feet. H D R o, L $\frac{\text{cont.}}{60}$. Has taken up to fifty drops, thrice daily, of a saturated solution of iodide of potassium. Yesterday an iodide eruption appeared. He has a catarrhal discharge from his nose, and is still greatly troubled with tinnitus. To stop the iodide, and to snuff up salt and water every morning. After thus cleansing the nares, he is to apply Smith's powder (arg. nit. gr. v., potas. sulph. ʒ ss., bismuth. subnitrat. ℥ i. ℳ.) by means of a powder-blower. To drink milk freely.

April 9th, 1881.—Patient thinks that he hears better than when last seen, but the usual tests show no change in his hearing.

On January 19, 1883, I asked Dr. J. Oscroft Tansley to make a careful examination of this patient's condition, and he gave me the following notes:

"H D Right=nails at five feet; watch, not at all. The left ear was closed with a towel, yet I cannot but think that the nails were heard in the left ear and not in the right.

"H. D. Left=watch at two and a half inches. Tuning-fork heard only in left ear when placed on middle or extreme right of teeth or forehead. Closing the left, it was heard *only* in the left ear. Closing the right, it was heard *only* in the left ear. Closing both, it was heard *only* in the left ear.

"Tuning-fork, left ear, by aërial conduction, forty-five seconds; by bone conduction, fifteen seconds. The right ear cannot be made to hear the tuning-fork either by aërial or by bone-conduction. The patient says he *feels the vibrations*, but does not hear the sound, with that ear.

"Appearances: Left membrana tympani slightly removed from normal appearance. Malleus drawn slightly backward and a little foreshortened. Light spot slightly cut off on base, but of normal brilliancy. Drumhead not thickened at all, but translucent. Right membrana tympani presents same appearances as left. Malleus not so much, *if any*, foreshortened. Light spot, bright and glistening. Base, perhaps, slightly indistinct; otherwise normal.

"Both membranæ act well under Siegle's tympanoscope.

"Diagnosis: Right, labyrinthine or nervous deafness. Left, otitis media catarrhalis, with labyrinthine complications. Patient has occasional vertigo, with inclination to fall laterally, and a feeling of heavy weight in head. During the time of his total deafness in both ears he experienced singing noises, but has had none since."