

XLVIII.

A CASE OF PARACOUS TIC VERTIGO AND
NYSTAGMUS.*

(PRELIMINARY REPORT.)

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Without reference to the literature on the subject, I wish at this time to report the history and examinations of this unusual case in order to hear the opinions of the gentlemen present tonight concerning it.

The patient is a well nourished man 44 years of age, of powerful build, six feet four inches tall, and weighs 235 pounds. He has led an outdoor life of great physical activity, and except for disturbance due to nose and throat trouble has been practically free from illness.

There is no hereditary history of deafness, or disease. He states that as a child he slept with his mouth open, and he had frequent earaches until he was twenty-two years of age, but he never remembers having had a discharge from either ear. He was subject to attacks of tonsillitis, and when a boy had a swelling in the right side of his neck which persisted for several months. At present his neck is tender but there is no enlargement of the glands.

Deafness and hissing sounds have been present in right ear since boyhood, with more or less feeling of stuffiness, and the deafness has increased of late. Until a year ago he could relieve both the deafness and the stuffiness by dropping and twisting his jaw, and although this no longer affords him the relief it formerly did, he continues to do it in conversation from habit.

For the past seven years any exertion that increases the action of his heart, such as lifting, running, or even laughing

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heartily, makes him dizzy and causes him to stagger, and at the same time the objects seen seem to move up and down with the pulsations of his heart. He first noticed this after running up a mountain side to get a shot at some wild turkeys. When he reached the place he wished to shoot from, he found he had to wait several minutes before the object, or rather his heart, steadied itself sufficiently for him to take aim.

Since November, 1910, certain sounds seem to almost blind him, and cause him to lose his balance to such a degree that he will fall if he does not catch hold of something for support. He can determine no definite direction in his tendency to fall. When the disturbance is sufficient to cause a loss of equilibrium, he is confused and "blinded" by the movement of the objects in front of him (the "shattering," he expresses it), and he feels like sinking to the ground. These sensations are relieved when the pitch is either raised or lowered beyond a certain point. Hammering on boilers and riveting machines, as well as whistles, produce the same disturbance. He had the pitch of the steam whistle on his plant lowered so that it does not now disturb him to the extent it did before.

AURAL EXAMINATION AND FUNCTIONAL TEST.

October 6, 1911. Right drum membrane: Dull gray in color, markedly retracted and lusterless.

Left drum membrane: Dull gray in color, considerably retracted and lusterless. Weber: Lateralizes to right ear most positively when fork is placed on vertex, and still refers the sound to that ear when the fork is placed on the left mastoid. Rinne: Positive for both ears. Acoumeter: Right ear, 2 inches; left ear, 6 inches. Whisper: Right ear, 18 inches; left ear, 15 feet. Lower tone limit: Both ears practically normal; right ear, hears 16 fork indistinctly; left ear, hears 16 fork distinctly. Upper tone limit: Right ear, 6.00 Galton whistle; left ear, 2.00 Galton whistle.

EXAMINATION OF NOSE AND THROAT.

Patient is suffering from cold in head. Turbinates are swollen, and there is a large spur on the right side of the septum. Tonsils are not enlarged, but they are inflamed, and the whole mucous membrane of the nose and throat is swollen.

Eustachian tubes: Right admitted no air on catheterization; left admitted air fairly well.

October 7, 1911. Right ear: Pipe sounds below a^3 (1740 vibrations) produce little or no effect on the vision, or the eyes themselves. At this pitch, however, the disturbance begins and continues throughout the whole octave, until a^4 (3480 vibrations) is reached, above which the disturbance ceases, the maximum disturbance being caused by sounds in the middle of the octave.

He states that at the beginning of the sound the object he is looking at moves downward and to the left, and remains in that position with a wavering movement until the sound ceases, it then moves back to its original position. The eyes rise and fall when the sound is produced and stopped, and when the most effective sound is prolonged, equilibrium is disturbed.

The nystagmus following rotation forward with the anterior vertical canal (and necessarily the posterior of the opposite side) placed horizontally, first on one side and then on the other, is equal (about sixteen seconds). Rotation backward, the same, nystagmus lasting about twenty seconds. When lying down the effect of sound is the same as it is when standing, that is, the eyes move in the same direction, namely, in the plane of the right anterior vertical semicircular canal.

After the above examination was made the patient returned home until the 11th of November, when he was admitted to the Manhattan Eye, Ear and Throat Hospital for observation.

For the relief of his vertigo a lumbar puncture was performed and twenty cubic centimeters of normal cerebrospinal fluid were withdrawn, and at the same time, because of the marked retraction of the right membrana tympani and the closed condition of the right eustachian tube, a free myringotomy was done. Intense headache, dizziness and nausea followed, and persisted for the next forty-eight hours, and for two weeks the slightest exertion in the upright position caused severe headache and dizziness.

Despite the immediate discomfort from the lumbar puncture, he declared that for the first few days after the myringotomy the hearing in the right ear was much improved, and that there was a grateful feeling of clearness in it. The incision in the drum soon healed, however, and the good effect was lost. Two more myringotomies were performed, and relief followed only

until the incision closed, so a crucial incision was then made in the membrane, and the edges of it were folded in with the hope that more permanent benefit would be obtained, but in this we were disappointed, for although the incision remained open the inflammation which followed in the middle ear offset the good that might have been obtained from the ventilation of it. After three weeks the patient left the hospital with a slight discharge from the right ear. His vertigo was much improved, and a marked change in the effect produced by sounds was noticed. Sounds that before would have made him fall had no effect on him.

The following is a report of the examination on the 9th of February, three months after the lumbar puncture was performed:

The staggering tendency has entirely gone. No dizziness at all. Right ear and side of head is very sensitive to the sound of his own voice, and the friction of his hand on his ear. This was immediately relieved by the removal of a crust which had formed over the opening, now healed, in the drum membrane.

Tinnitus remains the same. Sounds of lower pitch than before cause objects to move in front of him, and now his own voice produces the same effect if he speaks loudly, or laughs in a high key.

High tones (whistles), which formerly were troublesome, are no longer so, but lower pitched ones are. He has had to raise the pitch of the steam whistles on his plant back to what they were formerly.

In speaking, the pronunciation by him of certain letters and words produce marked effect. The eyes can be seen to move upward and to the right, and he says the object he is looking at moves downward and to the left, when he pronounces the letters E, P, T, Z, etc., or such a sentence as "Ease it off." The same effect is more markedly produced when he whistles certain notes, and if these sounds are prolonged his equilibrium is upset.

It was also found at this examination that when the note d^8 was sounded on a pipe the eyes moved straight upward, and he said the object in front of him moved straight downward. Notes of higher pitch caused the eyes to move upward and to the right, and those of lower pitch caused them to move downward and to the left.

In addition to the sensitiveness of the right vestibular apparatus to certain sounds, it is interesting to note that this is a case of deafness in which marked temporary improvement in hearing was obtained by ventilation of the middle ear, first, by habitual movement of the jaw to open the tube, and later by myringotomy, and in which the early history points to middle ear deafness, yet according to the classical tests it is one of nerve deafness, the low tone limits being normal, Rinne positive, and the upper tone limit on the right side lowered to 6.00 Galton whistle. Despite the positive Rinne, however, in the Weber test the sound is positively referred to the poorer ear.