Munson, (G. S.)

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G. S. Munson

A CASE OF

CHRONIC SUPPURATIVE OTITIS

WITH

Exostosis of the Auditory Canal, Abscess of the Brain, Death, Autopsy.

BY

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LATE ASSISTANT SURGEON TO THE NEW YORK OPHTHALMIC AND AURAL INSTITUTE.

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A CASE OF CHRONIC SUPPURATIVE OTITIS, WITH EXOSTOSIS OF THE AUDITORY CANAL, ABSCESS OF THE BRAIN, DEATH, AUTOPSY.

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That a fatal result may ensue from chronic suppurative inflammation of the ear has long been known to aural surgeons, yet it constantly becomes necessary for the specialist to call the attention of physicians to preventive treatment, by which the dangers of a life-endangering disease already in progress may be in early years obviated. The following history furnishes an instructive illustration:

I was called November 8, 1881, in consultation with Dr. Van Derveer, to see Miss K. W. H., 39 years of age, good constitution, but much reduced by anxiety and constant watching with a sick parent. Dr. Van Derveer, having first seen her on the 5th, found her suffering from what was then considered an attack of nervous prostration and neuralgia resulting from a recent cold. She complained some of pain in her left ear. The doctor ordered Brown-Sequard pills, with quinine. Nothing further was heard from the patient till the evening of the 8th. Her symptoms remaining unchanged, I was asked to see her for the ear trouble, and to take charge of the case.

November 8, 9 P. M. Inquiry elicited the following facts: At the age of 5 years, during an attack of scarlet fever, a discharge had commenced from the left ear, which had continued almost uninterruptedly, and had been accompanied by occasional attacks of earache. Otherwise her health has been good. When about 20 she saw her family physician, Dr. Cogswell, who advised her simply to syringe the ear frequently, and thus to keep it perfectly clean. As the result of an extension of the tympanitic inflammation to the Fallopian canal, the facial nerve on the affected side had been partially paralyzed. She was treated with electricity with considerable benefit.

Status præsens: Left ear alone affected. Had vomited during the day, which she thought was caused by indigestion. There was a slight sanious discharge from her ear, but no more in quantity than had existed for thirty years. Examination with the speculum and reflected light was rendered difficult owing to the swelling of the tissues, occluding the canal, while the auricle was blistered from the constant application of camphor. There was little pain within the ear, but the patient complained mostly of a very annoying tinnitus, for which she sought relief. No mastoid symptoms, convulsions or paralysis. Complained of considerable headache, but it was confined to the right side. Thirst great, but relieved with lumps of ice. Respiration normal; pulse 80; the tongue slightly coated. Auditory condition: Loudest voice not heard at all; watch pressed against the auricle and over the mastoid process not heard. Says she has been completely deaf in that ear for thirty years. Eustachian tube leading to the affected ear closed.

The treatment adopted was first an endeavor to open the eustachian tube, but this resisted all efforts with Politzer's bag; the patient refused to allow the passage of the ordinary catheter. At no time during the few subsequent days of treatment was I able to force air into the middle ear, although faithfully tried at my visits. She was also given locally Magendie's solution, to allay if necessary the pain within the ear, and a mild anodyne for nights. The patient suffered so little pain in the ear that at no time was she obliged to use the Magendie's solution. As the tinnitus was in both ears, I thought it probably due to the quinine she had been taking, and so advised a change of tonics. The diet was made as nourishing as possible, and the patient was not allowed to sit up or see friends, for rest and quiet are to be considered as among the most essential factors in the treatment of ear diseases.

9th, 6 P. M. Passed a comfortable day; pain in the head slight; very little tinnitus; appetite poor, but stimulants agreeing; has taken milk and gruel. Through the night slept fairly well without morphine.

10th, 6 P. M. During the afternoon has had an increase of neuralgic symptoms and a decided chill. Shortly before my visit the discharge from her ear became more abundant, giving relief to her head symptoms.

11th 6 P. M. Patient passed the most comfortable night for weeks; was quite bright, talking cheerfully and reading the evening papers. There was no œdema or swelling anywhere except in the auditory canal and no tenderness. Mastoid region appears normal; complains no longer of tinnitus.

12th, 6th P. M. Had unbroken sleep of six hours during the the night. The otorrhœa slight. Walls of the canal less swollen, so that I was able to diagnose a polypus. Suspecting that the polypus might be confining the pus and producing the neuralgic symptoms, I informed the patient of my suspicions, and that an immediate operation was necessary, also that delay might be serious. She refused such treatment then; thought her ear was in every way much better, and would delay the operation until she had regained her strength.

13th, 2 P. M. Symptoms unchanged. The pain is confined to the right side of her head. I saw her to-day prepared to operate, but, while attempting to probe the ear, she refused further treatment, assuring me that she thought her ear was as well now as it had ever been; was free from pain, and that in her present weak and neuralgic condition she would delay the operation till she had regained her strength. I could only leave, with warning words to summon a physician at the least unfavorable turn in her symytoms. Dr. Van Derveer was informed of the patient's condition, and saw her on the evening of the 15th. Found skin hot, pulse 80, respiration normal, patient restless and complaining of pain on the right side of the head. Did not complain of her ear; no discharge noticed. There were at this time no specially threatening symptoms to arouse the apprehension of the physician, but her general condition seemed about as comfortable as it had been for some days. She was again urged to allow me to perform an operation on her ear to relieve the confined pus, and again refused for the present. At one o'clock that night the mother states that the patient complained of an increase of the pain within her head, and seemed a little delirious. At four o'clock the mother found the patient lying on the floor by the bed unconscious. Dr. Snow responding to the call, at 6 A. M., November 16th, found her with temperature 107°, pulse 110, foaming a little at the mouth, and lying in a comatose state from which it was impossible to arouse her; no voluntary motion. The remainder of her history is briefly told. 6 P. M. I saw the patient with Dr. Van Derveer. The left eye was rolled

in towards the nose; the irides did not respond to light; no discharge from the ear; gurgling of secretions in the bronchial tubes and throat. She died at 9 P. M.

Autopsy.—The autopsy, conducted eighteen hours after death, revealed the following, the head being alone examined: The external auditory meatus contained granulating polypoid tissue springing from the sides of an exostosis, which almost completely occluded the canal, the only opening being found with a needle in the superior and anterior portion of the meatus. The exostosis undoubtedly was a hyperplastic growth, the result of irritative processes dependent upon a chronic otorrhœa, and taking its origin from the floor and sides of the meatus close to the membrana tympani; whether single or multiple I was unable to determine. On removing the skull cap, evidences of a former meningitis were discovered on the convex portion of the cerebral lobes. At no point was pus found beneath the dura mater, but the meningeal vessels were large and exceedingly numerous. The removal of the dura showed slight caries of the superior wall of the petrous bone immediately over the semi-circular canals, but no distinct sinus leading to the internal ear could be found. There was then noticed a clearly-defined spot on the meninges at the under surface of the middle lobe, circular, about an inch in diameter, with a central perforation 4 m. m. in length and 1 m. m. in breadth. A probe passed through this opening into an abscess cavity in the middle lobe of the cerebrum. On opening the cavity, there was revealed an abscess the size of a hen's egg, and containing, as near as we could judge, an ounce ot dark greenish, fetid pus. In the nieghborhood of the abscess the brain was much softened, but otherwise normal. The position of the abscess corresponded with the perforation of the dura mater, being directly above the semi-circular canals. The lateral ventricles were normal.

That chronic purulent otitis may become the indirect cause of death by extension to the brain, producing meningitis or abscess within its substance, has for years been known to the profession, and yet some simple remedy, which, *early used*, would prevent such ill-timed results, is entirely forgotten or neglected. In no case is the axiom, "An ounce of prevention is worth a pound of cure," truer than in the history of ear diseases, as every otologist well knows. We cannot doubt that in the case under discussion the fatal result was but the climax of a disease for whose preparation a thirty years' purulent discharge was necessary.

We regret that the temporal bone could not have been obtained for minute anatomical dissection. If the tympanum could have been opened, it is probable all of the parts would have been found in a carious condition, as well as a sclerosed condition of the mastoid cells and antrum, for at no time were there symptoms of mastoid complications.

The indirect cause of death was an exostosis confining the tympanic secretions. The exostosis had been concealed by the swelling of the tissues of the auditory canal and by the polypoid granulations springing from its surface. Yet the bony growth could have been easily diagnosed had not the patient in her weak, hysterical condition positively refused probing. The pathology of this case probably consisted in an acute inflammation, followed by suppuration, which was allowed to become chronic. There then ensued a growth of polypi. Thus excessive granulating tissue became organized into the bony growth. These bony growths may go on increasing in size absolutely without symptoms till complete occlusion of the canal has resulted. Their removal is distinctly indicated when a suppurative otitis is present, and their steady increase threatens to occlude the meatus and cause retention of pus and caries of the bone. If an operation is allowed, it should be performed early. We now know had the exostosis been removed as early as the first day on which I saw the patient it would still have been too late, and impossible to have afforded permanent relief; for, judging from the greenish pus and its quantity found in the brain abscess, already fatal complication must have been in progress.

The otorrhæa, which had existed for thirty years, undoubtedly consisted of a purulent inflammation of the mucous membrane lining the tympanum, with a marked tendency to ulceration. We cannot believe otherwise than that the inflammation had destroyed the membrana tympani, the ossiculæ and the membranes of the fenestræ leading to the labyrinth, thus making of the meatus, tympanum and labyrinth one cavity. From the cavity of the labyrinth there are only two canals of considerable size leading to the brain,—the internal ear canal and and the aqueductus vestibuli. It is a noticeable feature in this case that the pus did not find a passage from the labyrinth by these channels, but worked its way through the roof of the bone immediately over the semi-circular canals where the petrous portion is especially thin, and there to produce pacymeningitis, with perforation and a direct abscess of the middle lobe.