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OF THE MIDDLE EAR, WITH DOUBLE OPTIC  
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SWELLING OF, OR SPONTANEOUS PAIN IN,  
THE MASTOID PROCESS, IN WHICH THE  
OPENING OF THE MASTOID CELLS WAS  
FOLLOWED BY A RAPID SUBSIDENCE OF THE  
OPTIC NEURITIS AND CURE OF THE EAR  
DISEASE.

BY

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A CASE OF ACUTE PURULENT INFLAMMATION OF THE MIDDLE EAR, WITH DOUBLE OPTIC NEURITIS, BUT WITHOUT TENDERNESS OR SWELLING OF, OR SPONTANEOUS PAIN IN, THE MASTOID PROCESS, IN WHICH THE OPENING OF THE MASTOID CELLS WAS FOLLOWED BY A RAPID SUBSIDENCE OF THE OPTIC NEURITIS AND CURE OF THE EAR DISEASE.

By CHARLES J. KIPP, M. D., *Newark, N. J.*

Mrs. A. P., æt. 35, consulted me for the first time, July 7, 1891. She complained of pain and throbbing in her right ear and stated that she had been suffering from the ear disease for about six weeks. Previous to this attack she had never had pain or a discharge from either ear. A month before the ear became affected she had an attack of epidemic influenza, which left her in a weak condition. The physician who attended her when she was attacked by the ear disease, punctured the drum-membrane, which gave her some relief. Since then, she has been syringing the ear with tepid water several times daily, and has instilled various kinds of ear drops. She is not suffering very much from earache now, but has a constant throbbing in the ear and the head, which prevents her from sleeping and makes her very nervous. The examination at this time showed that she could hear the tick of my watch (normal hearing distance 60 inches) only when pressed against auricle. She heard my voice only when close to ear. All tuning-forks were heard through air but better



through the bone, and when placed on vertex they were heard better in the diseased ear.

There was but little pus in the external canal, the walls of which were somewhat swollen and red. The drum-membrane was of a deep red color and much thickened, and in its upper anterior quadrant was a small perforation through which air, but no secretion, escaped on making the Valsalvian experiment. The parts behind and in front of auricle were neither red, swollen, nor tender on pressure. The examination of the eyes with the ophthalmoscope showed them to be entirely normal. To secure better drainage of the tympanic cavity, I enlarged the opening in the drum-membrane downwards to its lower margin, and at the same time made several long and deep incisions in the walls of the external canal in the hope of reducing the swelling of the same. I ordered frequent syringing of the ear with tepid  $\frac{3}{4}$  % solution of salt several times daily and inflation of the middle ear by Politzer's method once a day. After her first visit to me the patient felt somewhat better, and this improvement continued for two weeks. Then the opening in the drum-membrane had again nearly closed, but the walls of the external canal were but little swollen. The throbbing in the ear was now as bad as before. On the 22d of July I again enlarged the opening in the drum-membrane, as before, and washed out the tympanic cavity with warm salt water by means of the middle ear syringe. But little secretion came away. Inflation of the middle ear through the catheter caused loud perforation noise, but did not cause pus to escape through perforation. The soft parts over the mastoid process were perfectly normal in appearance, and deep pressure over same caused no pain. The ophthalmoscope showed no signs of disease of the fundus oculi. I advised her physician to continue the same treatment. I did not see the patient after this visit for a month, but was told that during this period she

did not suffer much from pain in her ear, but that the throbbing continued. The discharge from the ear had almost entirely ceased. On the 29th of August I made another examination of the ear, and found it in about the same condition as at her first visit to me. The mastoid process was neither œdematous nor red, and not at all tender on percussion. The ophthalmoscope revealed, however, a remarkable change in the eyes. *A well marked optic neuritis was found in both.* The swelling of the optic discs was greater than I had ever before observed in connection with ear disease. The vision was not at all impaired in either eye. Her general condition had also undergone a change for the worse since her last visit to me. The throbbing in the head and ear and the dull ache in the affected side of the head were more pronounced. She felt very weak in her lower limbs, her gait was somewhat staggering, and she had occasional attacks of dizziness. She was listless and at times quite drowsy. Her appetite was very poor and the bowels were somewhat constipated, but she had neither nausea nor vomiting. Her temperature was 99° and her pulse 72. She had no chills or fever at any time.

As in all similar cases previously under my observation, in which I had been permitted to open the mastoid process, I had found an abscess in the bone, I advised my patient to have this operation made at once. She consented, and on the 2d of September I opened the process in the usual place, according to Schwartze's method, with chisel and hammer. The soft parts over the process were entirely normal, and the surface of the bone showed no evidence of disease; no soft or discolored spots could be found. After the removal of the cortex, which was of about the average thickness, a cavity of about the size of a large hazel nut was reached. It was full of foul pus and unhealthy looking granular tissue. The cavity was

thoroughly cleaned out with a sharp spoon and then the antrum mastoideum was reached without difficulty. Water injected into the external canal escaped readily through the cavity in the mastoid. The wound was dressed in the usual way with iodoform gauze and absorbent cotton and the patient put to bed. No reaction followed the operation. For several days the temperature rose to  $99.5^{\circ}$ , but after that it remained normal. The vertigo, headache, and throbbing in the head and ear continued for several days and then ceased. For a month after the operation there was more or less discharge through the wound, but it was at no time profuse. After that it ceased entirely, but, wishing to be on the safe side, I kept a silver drainage tube in the opening for three weeks longer. Then I allowed the opening to close, which it did in about a week. The otorrhœa ceased four days after the operation, and soon afterwards the perforation in the drum-membrane was found closed.

The patient's appetite improved rapidly and her strength returned gradually but steadily after the operation. The optic neuritis remained stationary for a week after the opening of the mastoid, then it began to subside gradually, and at the date of her discharge from the hospital, September 26, the optic discs were almost normal in appearance. The only remedy administered during her stay in the hospital was hydrarg. c. creta with pulv. ipecac, comp.  $\text{ãã}$  gr. i. three times daily. During the following six months the patient returned from time to time for examination, and when she was last seen by me, three weeks ago, she was in perfect health. She could hear with the affected ear the tick of my watch at 24 inches. The drum-membrane was of a grayish color, and in its upper anterior quadrant was a large scar. The opening in the mastoid process was firmly closed. The ophthalmoscope showed the optic disc to be pale, but otherwise

the fundus oculi was in a perfectly healthy condition in both eyes. The vision was normal.

While this case presents no feature of unusual interest to the otologist, it demonstrates the value of repeated examinations of the eye with the ophthalmoscope in cases of purulent inflammation of the middle ear. In no other case have I seen the optic neuritis developed within four months from the commencement of the ear trouble. Some surgeons would probably have opened the mastoid process in this case even without knowing of the existence of the optic neuritis, but I doubt that the majority would have done so.









