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A CASE OF ACUTE MENINGITIS ASSOCIATED WITH
ACUTE SUPPURATIVE OTITIS MEDIA, BOTH
PRODUCED BY STREPTOCOCCUS MU-
COSUS CAPSULATUS.*

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Ralph Hausrath, age ten years, was admitted to the Manhattan Eye, Ear and Throat Hospital on the evening of December 24, 1914. On December 21st he came home from school at noon, complaining of pain in the right ear and discomfort in his stomach. He was given a dose of castor oil, and on the following day was feeling very much better. He slept all of the next night, and on December 24th he left boarding school in the early morning for his Christmas vacation, feeling bright and cheerful. Those in charge of him at the school state that the gastric disturbance had cleared up, and that he did not complain of his ear. To quote from their letter: "When he left here we felt perfectly contented and at ease, only we were so sorry he looked so 'drawn.' Of course, we attributed that to his stomach, as he said his ear was better." And again: "The morning he left here he was bright, ate heartily, and was talking and relating stories. He was in his usual cheerful and talkative mood, only he looked rather drawn. He did not complain of his ear. He said he did not have an earache. It merely went 'tic-a-tic.' It was relieved by a hot water bottle. We cannot understand why, if he had an abscess, it came on so quickly. He had no fever except about half an hour before the castor oil operated."

Upon his arrival in New York that afternoon he complained of a general headache and discomfort in his ear, which he described as a feeling like his heart after he had been run-

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ning. He was seen by his family physician and referred to the hospital. When seen in the evening he presented a drum membrane indicating the beginning of an acute exudative otitis media, congested and bulging, but not excessively so. The mastoid was negative. The drum was incised and a small amount of serosanguinous fluid evacuated. Temperature, 103° ; pulse, 112; respirations, 24. During the next day his temperature dropped to 101° , and rose to 103° in the evening. The ear was comfortable and the discharge serosanguinous and slight in amount. He complained of pronounced general headache. This was relieved to a certain extent by bromids. His neck was slightly rigid, but this was explained by his saying that it made his headache worse to move his head. On the 26th the temperature rose to 105° in the evening, and the discharge became purulent and profuse. There were no earache and no mastoid tenderness. Headache persisted. On the 27th his morning temperature was 103° ; at noon, 104.6° ; pulse, 117; respirations, 24. When seen by me at noon he presented an entirely new picture. His neck was rigid and retracted—this having come on during the morning. Further examination elicited the fact that he had a pronounced Babinski and Kernig symptoms. Physically there was no change; he still complained of his headache. There was no change in the ear condition, except that upon deep pressure over the antrum the boy said it felt a little sore. A blood count taken during the morning showed a leucocytosis of 22,000, with a polynuclear percentage of ninety-one. A lumbar puncture was immediately done, and a turbid fluid under moderate pressure withdrawn. This was immediately reported upon, and showed in "direct smear the streptococcus mucosus capsulatus in large numbers. Lactic acid present; sugar negative." This report from the laboratory was accompanied by another which should have been sent down the day previously—the advent of Christmas day having interfered with the regular schedule. It showed that a culture of the fluid evacuated at the time the drum was incised contained the streptococcus capsulatus.

Feeling that the otitis must have been the primary focus of the meningitis, an immediate mastoid operation was performed, which demonstrated the fact that the infection had not advanced through the mastoid cells. The mastoid was

negative except for a small amount of serosanguinous fluid in the antrum and some congestion of the surrounding cells. The tegmen antri was removed and the dura found to be normal at that point. The tegmen tympani was removed as far forward as possible and the dura found to be in the same normal condition.

There were no acute mastoiditis and no inflammatory condition of the dura in relation to the mastoid or middle ear as far as could be seen. Following the operation the patient went through the regular course of acute meningitis, with no spinal symptoms. He was perfectly conscious for three days and then passed into a gradually increasing delirium, and died on the fifth day. His temperature ranged around 104° , with two drops, one to 100.4° and another to 100° . An autopsy was not obtainable.

This case is reported as one primarily of acute meningitis in which the symptoms of acute otitis were the first to present themselves. It would have been reasonable to suppose that the meningitis following later was but an infection of meninges through the mastoid. The operation disproved this. We had, therefore, to deal with an acute meningitis followed by an acute otitis, both produced by the streptococcus capsulatus, and both independent of each other.

And the case is of especial value as a demonstration of the necessity of always keeping well in mind the infection producing an otitis media, and the seriousness of the possible complications when the mucosus capsulatus coccus is the agent at work.