

In the pre-suppurative stage of mastoiditis, or in acute purulent otitis media some narrowing of the lumen of the canal can be sometimes seen near the drum, due, doubtless, to an inflammatory process in the canal wall. If the case goes on to suppuration in the bone, this inflammatory condition assumes the character of a prolapse; on the other hand, if resolution takes place, the narrowing disappears.

True sagging of the canal wall should be recognized as such, for it is an important link in the chain of evidence that points to mastoid abscess.

The condition of the drum membrane only indirectly aids in the diagnosis. The longer an inflamed and bulging membrane remains intact, the more likely are we to have pus in the mastoid. Insufficient drainage also tends to this condition. How often do we see, in children especially, cases of subperiosteal abscess where the tympanic membrane is intact. From time to time cases of mastoiditis are reported that exhibited no symptoms of tympanic involvement, but operation having been performed, showed the bone to be diseased. The writer has not seen in a series of many hundred a single case in which there were absolutely no signs in the canal, and it must be indeed a very rare condition.

If the canal be so occluded with furuncles as to shut off any view of the interior, diagnosis is rendered very difficult, and it may be impossible to tell if a mastoiditis coexists.

Should occlusion be not complete, the fork test aids somewhat in determining the coexistence of middle ear disease with otitis externa, as in the latter there is no change in the hearing, whereas in the former air conduction is lost, bone conduction prolonged and the fork is best heard in the diseased ear.

Some investigators claim that a leucocytosis points to mastoid suppuration; others that it is of no value, but that an increase of the polynuclear cells proclaims a purulent focus. From the writer's experience, gathered from an observation of some few hundred cases while resident surgeon at the New York Ear and Eye Infirmary, leucocytosis was of little or no value. Increase in the polynuclear cells occurred in many cases, more especially in those that had been running along for some time, or where there had been considerable destruction of bone as shown by operation.

A polynuclear increase is of service from a diagnostic point of view when it is marked, and when it is placed along with