

From the observations he has made, Gradenigo concludes that the bands and membranes found in the tympanic cavity in otitis sclerotica must not be regarded as neoplasms, but simply as remnants of the embryonal gelatinous tissue. Because it is in the partial persistence of just such a tissue that we should look for an important pathogenetic factor. It is also necessary to establish a sharp distinction between the different forms of adhesive processes in the ear, viz., between those secondary to otitis media purulenta and perhaps some forms of acute catarrh, and the adhesive processes secondary to otitis sclerotica and chronic aural catarrh in general. This, however, is not easy to do.

Synechiae and adhesions occur only in the first form named above. In the various forms, however, of so-called dry catarrhal otitis, such formations cannot be due to inflammatory processes, as the latter cannot be found to have occurred at any time in their course.

Gradenigo does not admit the statement so widely made in the literature of this subject, that the tympanic cavity of the human fetus is entirely filled with a mass of gelatinous tissue, since he has found a true tympanic cavity in the human embryo when only 4-4.5 centimetres long. Further researches confirmed the opinion that absorption of this gelatinous tissue is not directly connected with respiration. It is generally rapidly completed near the time of birth. Such absorption is due to some determining power of embryonal development. In guinea-pigs the gelatinous tissue is absorbed before birth; in cats, after birth, as a rule. The microscopic structure of the bands and membranes found in sclerosis of the middle ear shows it to be formed from remnants of this gelatinous tissue of embryonal life. "Since observations upon guinea-pigs and cats demonstrate that the absorption of this gelatinous tissue is an autogenetic process—that is, it is intimately connected with peculiarities of development of the animal—it is easy to perceive how heredity represents one of the most important factors in the etiology of *otitis sclerotica*." "It must be admitted that in a family all the children can have a persistence of this gelatinous tissue in the drum-cavity at birth, and hence there can be established in them a grave predisposition to sclerosis." The morphological element must not be disregarded in the pathogenesis of *otitis sclerotica*.

This paper is of the greatest interest and importance to all otologists, and deserves a careful reading.

TREATMENT IN CASES WHERE SYMPTOMS POINT TO INFLAMMATION IN THE MASTOID ANTRUM AND MASTOID CELLS, BUT WHICH DO NOT CALL FOR AN ARTIFICIAL OPENING IN THE MASTOID PROCESS.

Under this title DR. HENRY L. MORSE has presented a most valuable paper on an important subject before the Boston Society for Medical Improvement (*Boston Med. and Surg. Journal*, Dec. 20, 1888). The method may be thus recapitulated:

In acute inflammation of the intra-mastoid region with imperforate membrana tympani the order of procedure is paracentesis, inflation by Politzer's method or by the Eustachian catheter, and hot or cold applications *behind* the ear. Heat may thus be applied by means of a kidney-shaped salt-bag seven inches long, and cold may be applied by means of ice wrapped in

rubber cloth or by means of a Leiter's apparatus, which consists of a series of closely coiled leaden pipes, through which hot or cold water may be made to circulate. When acute inflammations occur with purulent or muco-purulent discharge, but with inadequate opening in the membrana tympanica, a larger incision should be made in the membrane; then inflation, syringing through the Eustachian tube with weak solutions of bicarbonate of soda, and hot or cold applications over the mastoid.

When inflammation with purulent discharge occurs, and the posterior wall of the auditory canal bulges into the latter and nearly closes the passage, we should employ frequent and prolonged douching with warm water; free incision into the bulging wall of the canal and enlargement of the perforation in the membrana as soon as the swelling in the canal subsides sufficiently to permit getting at it; leeching behind the auricle, and, in the severer cases, a Wilde's incision, especially if fluctuation is felt. In chronic inflammation, when polypi are present, use the snare; and after removal of polypi employ the tympanicsyringe for softening and removing cholesteomatous masses in the attic. Many of these forms of treatment, as Dr. Morse states, require the specially trained hand of an aurist, "but, on the other hand, some of them can be performed perfectly well by the general practitioner, and, if it so happen that he cannot call an aurist in consultation, it is far better, in my opinion, for him to try some of the methods I have mentioned rather than feel that if the patient has pain, tenderness, and swelling behind the ear, there is but one thing to be done, namely, to make an opening into the mastoid cells."

THIRTY CASES OF RESECTION OF THE MASTOID APOPHYSIS.

Schmiegelow's article on this subject is reviewed in the *Nordiskt Medicinskt Arkiv*, 1888. The ages were as follows:

Under 1 year	.	.	.	.	.	.	.	.	.	3
From 1 to 10 years	.	.	.	.	.	.	.	.	.	5
" 11 to 20 "	.	.	.	.	.	.	.	.	.	6
" 21 to 30 "	.	.	.	.	.	.	.	.	.	12
" 31 to 40 "	.	.	.	.	.	.	.	.	.	3
" 41 to 50 "	.	.	.	.	.	.	.	.	.	0
50 "	.	.	.	.	.	.	.	.	.	1
										<hr/> 30

In twelve cases there were acute symptoms; in eighteen cases the inflammatory diseases in the mastoid were of a chronic form. Seven cases were subperiosteal abscesses simply. In the acute cases five were superficial caries, in five others the disease was limited to the interior of the mastoid cavity, in two of which sinuses developed, leading to openings in the cortex. In ten cases the mastoid cells were filled with pus, without breaking down of the osseous tissue.

Operation in these twelve cases affected the suppuration in the middle ear as follows: In nine cases, entire cure; in one instance the patient died on the seventh day; in one case the suppuration had not produced softening of the bone-structure.