

X.

RESULTS IN FOUR CASES OF A MODIFIED RADICAL OPERATION FOR CHRONIC PURULENT OTITIS MEDIA.

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The operative procedures performed in these four cases have been employed some nineteen times by me during the past three years. The purpose of the operations was to cause a cessation of the discharge, and at the same time to conserve or even improve the hearing.

The first patient, L. K., twenty-three years old, was admitted for operation to the Manhattan Eye, Ear and Throat Hospital six months ago, with a history of a discharging right ear for three years previous to admission. During all this time there was a more or less constant feeling of fullness or heaviness in the head. It was mainly to seek relief for this symptom that he came to the hospital.

Aural examination on admission revealed the presence of foul pus in the external auditory canal. Shrapnell's membrane was missing. By means of a large probe introduced through this opening, bare bone could be felt in the attic, and small portions of cholesteatoma were removed. The remainder of the drum membrane was intact. Weber was referred to the normal ear. With the Bárány noise apparatus in the normal ear, the patient was unable to hear the loudest shout in the affected ear. After injecting the affected ear with cold water for three minutes and forty seconds, a nystagmus reaction was produced. Rotation tests were normal.

Operation.—Modified radical. The cortex was very hard; there were practically no cells present in the mastoid, save in the antrum, which consisted of a single large cell or space filled with cholesteatoma and granulations. The posterior wall

was taken down to the epitympanic ring; it was found to be necrotic and partially broken down, and was entirely removed. The short processes of the incus were missing. Granulations and cholesteatoma were removed from the internal and external attic without disturbing the ossicles, and the remainder of the drum was left in situ. A meatal flap was cut and sutured to the temporal fascia, and the posterior wound was sutured throughout.

Since operation the feeling of heaviness and fullness has disappeared, the ear is dry and has been so for the past four months. The patient can now hear an acoumeter in the affected ear at one foot, and a moderately low whisper at the same distance.

The interesting features of this case are: First, the marked deafness, apparently absolute, in the affected ear before the operation, associated with a normal vestibular reaction, and Weber referred to the normal ear; second, the return of hearing to the affected ear since operation; third, the cessation of the discharge.

Case 2.—M. A., nine years old, was admitted for operation to the Manhattan Eye, Ear and Throat Hospital six months ago, with the following history:

Seven years previously a mastoid operation was performed upon the affected ear; three years ago a second operation was performed on the same ear. The ear had been discharging ever since the first operation. A few days prior to admission to the hospital a swelling was noticed in the old cicatrix.

Aural examination on admission showed the presence of large quantities of foul pus in the canal. Posterior to the auricle there was a swollen red cicatrix, mainly in its inferior angle. On gentle pressure over the cicatrix pus was easily forced from the canal.

Operation.—Modified radical. On opening the mastoid it was found to consist of one large cavity filled with pus. The antrum was located high up and well above this cavity, and appeared as though it had not been opened at either of the previous operations. Surrounding the antrum there was a good deal of sclerotic bone. This was removed, and the epitympanic ring of bone was broken down. Too vigorous sponging on the part of an assistant resulted in the dislocation of the

short process of the incus. The attic was curetted internal and external to the malleoincudal body; the ossicles were otherwise not disturbed. The drum was left in position, and the operation was concluded in the usual manner, except that the posterior wound was left open at the inferior angle.

The important features of this case are: First, the excellent hearing at present—acoumeter at fifteen feet—despite the previous dislocation of the incus; second, that the ear is dry and has been so for three months.

Case 3.—F. C., nine years old, was admitted to the New York Eye and Ear Infirmary for the modified radical operation fifteen months ago, with the following history: The affected ear had been discharging for five years. One year previously a simple mastoid had been performed on the same ear by myself, and the wound had never completely healed.

Operation.—On opening the mastoid the antrum was found to be filled with cholesteatoma, which was removed. The usual modified radical procedure was proceeded with.

The features of this case to which attention is especially directed were: First, that within one year after a simple mastoidectomy had been performed a large cholesteatomatous mass had formed in the antrum, which was removed at the second operation. Dr. Blackwell said that previous to this he had believed that this product of chronic bone inflammation required a much longer period for its formation; second, despite the presence of cholesteatoma in the mastoid, the ear was now dry, and had been so for the past nine months.

Case 4.—M. McB., a young adult, was admitted to the New York Eye and Ear Infirmary fourteen months ago with a history that the ear had been discharging for the past fifteen years, following an attack of measles. The patient said that for the past three weeks she had suffered with the most terrific headaches, which prevented her from sleeping. The pain radiated from the affected ear to the frontal and occipital regions.

Aural examination on admission showed a moderate amount of foul pus in canal, a slightly fluctuating discharge in the fundus, no mastoid tenderness. There was a large perforation in the drum, occupying the lower and anterior two-thirds of the membrane. Shrapnell's membrane was intact, together with the upper half of the handle of the malleus.

Operation revealed a very hard cortex, a small celled diploëic mastoid, no free pus in the cells, a large space in the antrum region filled with granulations and pus. These were removed, and the internal and the external attic were curetted. The ossicles were not disturbed.

The hearing before the operation was: Acoumeter at three feet, moderate whisper at six feet.

After operation the hearing was about the same.

The interesting features of this case are: First, the terrific headaches, which were relieved by the operation; second, there was no marked inflammation found in the mastoid or meninges to account for them; third, while the patient still has a wet ear, the discharge is much less and decidedly of a tubal character, and is not noticeable to the patient; fourth, with a healed antrum and mastoid cavity, the patient is insured against the development of serious intracranial complications, despite the presence of a wet ear; fifth, the patient's previous good hearing was not impaired by the operation.

SUMMARY.

In the first two cases the superior portion of the epitympanic ring of bone was removed as shown by Plate II.

In the last two cases the epitympanic ring was left in position, e. g., Plate I.

All of these were cases of chronic running ears. Three of them are now dry and have been so from three to nine months. In three cases the hearing has been improved since operation; in the fourth case it has remained about the same.

In dressing these cases it is most important to prevent a thick plug of granulations from developing in the attic and antrum regions, as it easily becomes infected and serves as a constant source of infection to the entire wound. The most satisfactory method of preventing this is to remove all packing from the canal at the end of a week—even removing the cotton plugs from the meatus—permitting the atmospheric air to freely enter the interior of the wound. This, combined with a system of cleansing the cavity, which the patient himself can carry out at home, has proved very effective.

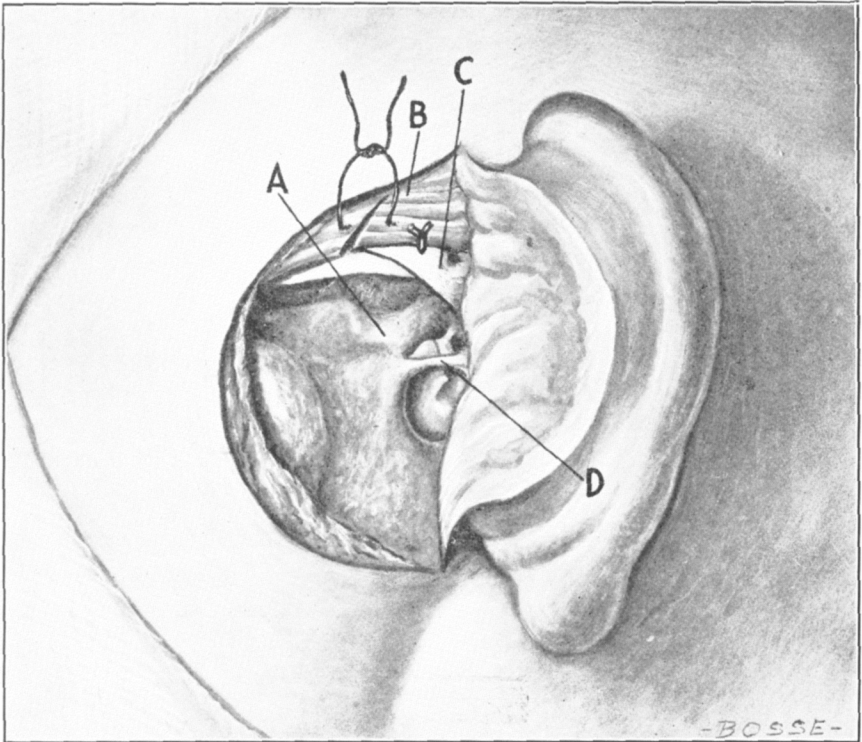


PLATE I.

View of operation prior to closure of posterior wound. Epi-tympanic ring of bone has been left in position. Drum and ossicles are intact. A—External semicircular canal. B—Temporal muscle. C—Plastic meatal flap sutured to fascia of temporal muscle. D—Epi-tympanic ring of bone, showing the malleoincudal body lying just above and internal, and the drum below.

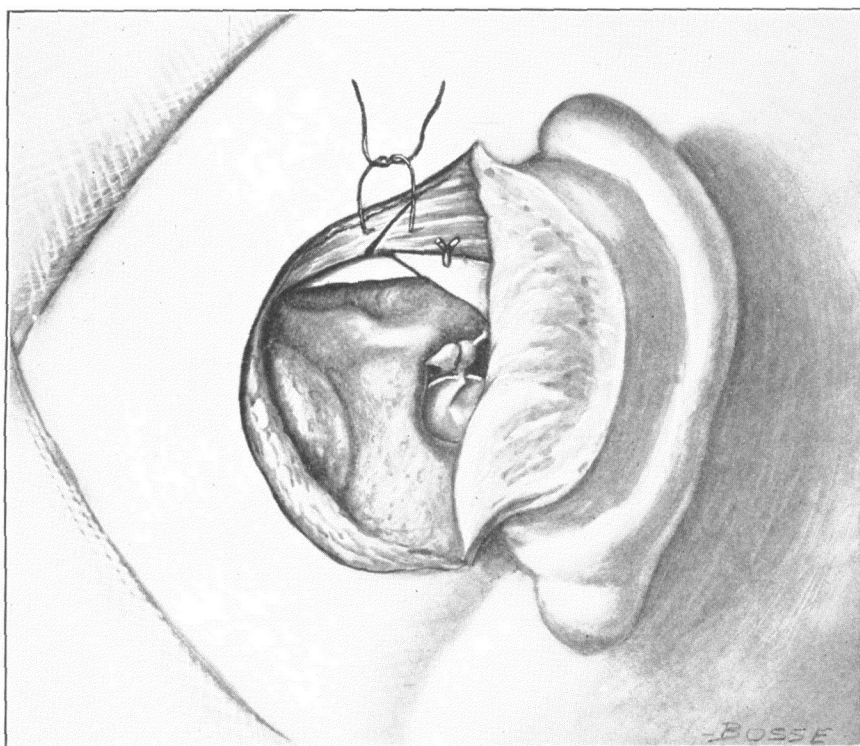


PLATE II.

View of operation completed, when the epitympanic ring of bone has been removed in the superior quadrant. Drum and ossicles are left in position.