

## POSTSTAPEDECTOMY REPARATIVE GRANULOMA

(Received May 1, 1991)

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### SUMMARY

A case of poststapedectomy reparative granuloma is reported together with the review of literature. Although classical textbooks of otolaryngology deal with this problem, we could not find recent literature about this unpleasant pathology and this has prompted us to report the present case.

**Key Words:** Stapedectomy, Reparative granuloma

### INTRODUCTION

Reparative granuloma is the overabundance of granulation tissue in the healing area of the oval window and the tympanomeatal flap (1). These granulomas are a major cause of sensorineural hearing loss following stapedectomy (2, 3). In this paper, possible etiological mechanism, clinical course and result of reparative granuloma of the oval window after stapedectomy are considered.

### CASE REPORT

A 40 year-old female was admitted to the Otolaryngology Department of the Hacettepe University Hospital with progressive hearing loss and tinnitus. According to the history, she has had hearing problem for twelve years and last two years there was marked hearing loss and tinnitus bilaterally.

There was no pathological finding on ENT examinations, except for tuning fork tests. Rinne was negative bilaterally and there was no lateralisation on the Weber test.

Audiologic evaluation revealed that there was 30 db. air-bone gap on the left ear, 20 dB. air-bone gap on the right ear. In both ears, bone conduction was 25 dB. There was no acoustic reflexes.

Left exploratory tympanotomy was done with diagnosis of otosclerosis. There was annular otosclerosis. A small-fenestra stapedectomy by inserting 0.6 mm diameter Teflon piston prosthesis was performed. Prosthesis was supported with gel-foam and bone paste which is made up by crushing stapes suprastructure. Preoperative tuning fork test revealed

Rinne positive. There was no problem in the postoperative period.

The packing was removed on the fifth day and audiologic test was done. There was 10 dB. air-bone gap. We interpreted this finding with hemotympanium. The patient was discharged with oral non-specific antibiotic.

On postoperative fifteenth day, the patient suffered from vertigo and dizziness. On the ENT examination, there was red color inflammatory response in the left tympanic membrane. Audiologic evaluation revealed that there was 30 dB. air-bone gap and also there was marked sensorineural hearing loss.

The diagnosis of poststapedectomy granuloma or prosthesis displacement with perilymphathic leakage had been established, immediate tympanotomy was performed. Under local anesthesia, the tympanomeatal flap was easily reelevated and the granulomatous mass encountered enveloping the long process of the incus and the oval window. The granuloma was removed piecemeal from the middle ear and the oval window. Teflon prosthesis was changed. Histopathologic examination was reported as granuloma.

Postoperatively, broad spectrum antibiotic was given to the patient. There was no complaint after this period and audiologic evaluations which were done on the 5th, 15th day and in the 6th month revealed that there was no air-bone gap. The bone conduction level was the same with the preoperative period. Also the patient was symptom free.

### DISCUSSION

The occurrence of granuloma in the oval window following stapedectomy has been described by several authors (3-5).

The incidence of sensorineural loss from all causes following stapedectomy was reported in several studies to range from 0.6 per cent to 3 per cent (6-8).

The symptoms of poststapedectomy granuloma

usually occur early in the postoperative period. The majority of the cases develop their symptoms within the first two weeks (2).

The earliest and most consistent symptom is hearing loss and most sensitive index of the labyrinthine reaction. It is important to describe it more precisely. Primarily, a sensorineural hearing loss with moderate elevation of bone conduction thresholds. An associated conductive component was frequently seen; this was undoubtedly related to the mass of granuloma tissue and/or fluid in the middle ear space (2).

The same audiological findings were prominent in our patient.

A consistent finding at the time of surgical exploration was a red, soft, vascular mass extending from the oval window niche to the tympanic membrane encompassing the prosthesis and long process of the incus (1,3).

The etiology of poststapedectomy granuloma is not known exactly. Several possibilities such as foreign body reaction (glove powder), infection, reaction to the graft and prosthesis materials, surgical trauma have been reasonably eliminated as causative factors (2, 3, 9).

As soon as the diagnosis is reasonably certain, immediate tympanotomy and complete removal of granuloma tissue is necessary (10).

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