

## 6.2

### **Storage of the incus in the mastoid bowl for use as a columella in staged tympanoplasty**

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**Purpose:** To evaluate whether the incus of the cholesteatomatous ear preserved in the mastoid bowl during the first stage of planned two-stage tympanoplasty can tolerate long-term implantation and be used in ossicular reconstruction during the second stage.

**Methods:** The study group included 24 patients who underwent staged tympanoplasty for the treatment of middle ear cholesteatoma. At the first stage, after removing the incus to eradicate the middle ear disease, it was returned to the mastoid bowl and stored there until use at the second stage. The average interval between the two stages was 8.3 months (range 6–12 months).

**Results:** The incus was identified in all cases at the second stage: ten incudes were found to be covered with a thin mucosa layer, 12 were buried in fibrous or granulation tissue, and two were joined to the surrounding bone. Residual cholesteatoma was found in six ears, either in the attic (three ears) or tympanic sinus (three ears). It never occurred in the mastoid bowl where the incus had been preserved. In 19 cases, the incus was available as a short columella for ossicular reconstruction. The remaining five cases were reconstructed using a hydroxyapatite ossicle as a long columella, since the stapes superstructure was missing at the second stage. In one case, the stored incus underwent remarkable absorption between stages.

**Conclusion:** Preservation of the incus in the mastoid bowl is an effective option in planned two-stage tympanoplasty, when the incus is considered useful for ossicular reconstruction at the second stage.