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Malleostapedotomy – The Marburg Experience

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Abstract

Background: The surgical procedure for patients with otosclerosis routinely is incus stapedotomy. In case of otosclerosis with incus necrosis or a bony fixation of the malleus and incus, malleostapedotomy is performed. **Patients and Methods:** Between May 2002 and September 2003, malleostapedotomy was performed in 6 out of 34 patients with otosclerosis. In 2 primary cases, a middle ear dysplasia was found. The malleus was fixed in 2 further primary cases. Two revision surgeries were performed with incus necrosis present. A titanium piston was used, which was fixed at the malleus handle and introduced into an opening of the footplate. **Results:** The preoperative air-bone gap was reduced from 36 dB(A) to 13 dB(A) after surgery for an average checkup time of 3 months. The length of the prostheses varied from 6.3 to 7.5 mm. No patient showed a hearing loss or vertigo after surgery. **Conclusion:** Malleostapedotomy is the technique of choice in case of an additional pathology of the ossicular chain in patients with otosclerosis. Larger numbers of patients and long-term investigations need to compare the results of malleostapedotomy with those of a conventional incus stapedotomy.

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The technique of stapedioplasty introduced by Shea for patients with otosclerosis has been changed in the last decades [1, 2]. Despite the development of new operating microscopes, instrumentation, and implant materials, the principle has remained unchanged. Many discussions and publications have dealt with successful results obtained by numerous surgeons. Hence, the search for possible reasons for a persistent conductive hearing loss after stapedioplasty has become more and more acknowledged. Beside a prosthesis dislocation following incus necrosis, a possible incus or malleus fixation became more evident. By focusing on the anterior malleal process and ligament, the identification