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Autor(en) des Beitrags: Kiefer, Jan; Staudenmaier, Rainer

Titel des Beitrags: Combined Aesthetic and Functional Reconstruction of Ear Malformations

Abstract:

Background: Surgery for major malformations of the outer and middle ear involves aesthetic as well as functional aspects. Whereas reconstruction of the auricle with autogenous rib cartilage is well established and has shown favorable results, functional repair using classic reconstructive techniques is possible only in a limited group of patients and the outcome is often unsatisfactory. Active middle ear implants (MEI) offer a promising alternative to reconstructive surgery. Method: Fifteen patients with ear malformations underwent implantation of an active middle ear implant (Soundbridge), with or without concomitant reconstruction of the auricle. The vibrating element, the floating mass transducer (FMT), was coupled either to the round window, stapes, oval window or incus, according to each individual’s anatomical middle ear situation. Aesthetic as well as functional outcomes were evaluated. Results: Implantation could be integrated into aesthetic reconstruction of the auricle without complications. In 14/15 patients, a satisfactory functional result could be achieved (30 dB pure-tone audiometry). Neither facial nerve palsy nor inner ear hearing loss was observed after implantation. Conclusion: The versatile form of the FMT of the Soundbridge allows for adaptation of the coupling procedure to the individual anatomical situations. Implantation of a Soundbridge MEI is a valuable option for functional reconstruction of the malformed ear, which may offer more consistent and reliable results than classic reconstructive surgery.