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Learning Objectives:

Introduction: Patients with air bone gaps can be treated with bone conducting hearing aids. The disadvantages of the conventional and percutaneous systems are the obvious external fixation components or the biological and psychosocial problems of open implants. This project was set up to develop a semi-implantable transcutaneous bone conducting device, introduce it into clinical application and follow-up on the results.

Material and Method: The principle of this bone conducting device is the magnetic coupling between implanted and external magnets. After extensive lab tests it was introduced clinically in 2006. Since then there have been performed more than 300 implantations in Recklinghausen and more than 3000 worldwide.

Results and Conclusions: The operative technique is relatively simple. With the new “Up-Side-Down-Technique” bone does not have to be removed at all anymore. The 2.6 mm thin implants are hardly palpable. The hearing improvement is similar to other bone conducting hearing aids. This semi-implantable transcutaneous bone conduction hearing device is another option for patients with CSOM, air-bone-gaps, mixed hearing loss or single sided deafness.

doi:10.1017/S0022215116003522

Bone conduction hearing devices in CSOM (R764)

ID: 764.3

Bone conducting hearing devices for chronic suppurative otitis media – which device should we should?

Presenting Author: **James Tysome**

James Tysome

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Learning Objectives: To understand the factors influencing choice of BCHD in the context of a conductive or mixed hearing loss found in patients with CSOM.

Introduction: Bone conduction hearing devices (BSCD) are well established for use in patients with chronic suppurative otitis media (CSOM). The rationale for using BCHD over conventional hearing aids when surgical reconstruction is not effective will be discussed, the factors important in choosing between them discussed and the options available introduced. The remaining speakers in this session will describe these in detail.

Methods: Structured review of options for BCHD in CSOM including maximum power output (MPO) and feasibility.

Results: The MPD of BCHD varies and should be taken into account when choosing a device to use in patients with CSOM.

Conclusions: All BCHD are suitable for use in patients with CSOM that cannot otherwise be improved by middle ear surgery, although the device choice depends on the degree of conductive or mixed hearing loss, MPO as well as feasibility, availability and patient choice.

doi:10.1017/S0022215116003534

Bone conduction hearing devices in CSOM (R764)

ID: 764.4

Outcomes of implantation and willingness of BAHA candidates to undergo BAHA implantation

Presenting Author: **Michal Luntz**

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Learning Objectives: To evaluate hearing and medical outcomes with contemporary BAHA implants as well as willingness of BAHA candidates who suffer from chronic otitis media to undergo BAHA implantation.

Introduction: Osseo-integrated bone-anchored hearing implants are used in patients with conductive/mixed complex hearing loss, when other rehabilitation alternatives are not feasible.

Methods: The study included two groups of patients: 62 candidates with COM who were referred for BAHA during 2012–2015 and 34 BAHA implantees. Information in the first group was collected regarding the willingness of these individuals to receive a BAHA implant. In the second group, hearing thresholds before and after implantation were analyzed and patients were asked to complete a questionnaire regarding their habitual daily use of the system and medical issues related to the implant.

Results: Out of 62 BAHA candidates, only 21 (34%) decided on BAHA surgery. Of the 34 BAHA implantees, 30 (88%) are using their devices. Recurrent local infection surrounding the abutment have led 4 patients with older generation BAHA connect to stop using their device, and two of them had it surgically removed. The other two are scheduled for replacement to a BAHA attract device. Hearing outcomes with BAHA implants mirror bone conduction thresholds in the BAHA Connect group and are slightly below bone conduction thresholds in the BAHA Attract group. Pre-implantation thresholds with the BAHA Soft Band predict post-implantation BAHA Connect as well as BAHA Attract thresholds.

Conclusions: Hearing outcomes with BAHA implants are good and predictable. The only reason for non-use is medical issues concerning the abutment in older generations BAHA Connect systems. Despite excellent experience among BAHA users and professionals, these technologies