

differ between groups ($p < 0.05$), except for the subscale "Hearing function". Partial association was found between questionnaire scores and objective parameters, such as age, PTA and sex.

Conclusions: A unanimous consensus on indications and limits of CWD versus CWU technique has not yet been established. We demonstrated in our study the absence of a significant difference in terms of QOL in CWU vs. CWD.

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Free Papers (F763)

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The new technique of Reconstruction of Posterior Canal Wall by using Skin-Musculo-periosteal Flap on Canal Wall Down Tympanomastoidectomy

Presenting Author: **Soekirman Soekin**

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Learning Objectives:

Introduction: most of large cholesteatomas have been done by Canal Wall Down (CWD) Tympano mastoidectomy. The problem is wet ear, a large ear canal or mastoid cavity, hearing gain, recurrency or recidief problems.

Objective: to introduce a new technique of Posterior Canal Wall(PCW) have been reconstructed by using skin musculo periosteal flap on CWD Tympano-mastoidectomy. Normal ear canal size, dry , less recurrency or recidief and hearing gain be achieved.

Method: during 2010–2014(5 years) among 752 ear surgery has been done reconstruction PCW on 67 ears during CWD Tympano-mastoidectomy as simultaneously surgery . The age of patient among 5- 73 years old, most among 20–40 years old . Soft connective tissue that is skin musculo periosteum have been use as material of PCW.

The middle ear such as ossiculoplasty be done by cartilage autograft or polymers teflon prostheses. This technique be classified as closed technique on management of cholesteatomas Chronic Otitis Media.

Result: most cases dry ear 3–4 weeks after surgery, ear canal on normal size , depends of the foot plate stapes movement and the audiogram pre- operative, hearing gain was 0–30 dB.

Complication: infection be founded 2 cases and can be cure by oral antibiotic untill 4 month after surgery. Recurrent 2 cases be revisioned by endoscopic middle ear surgery.

Conclusion: Reconstruction PCW by using skin musculo periosteum is better as a new technique surgery for to get normal ear on CWD tympano mastoidectomy.

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Bone conduction hearing devices in CSOM (R764)

ID: 764.1

The place of Bonebridge in the management of hearing loss in CSOM

Presenting Author: **Stephen Jones**

Stephen Jones

Ninewells Hospital & Medical School

Learning Objectives: The Bonebridge is viable and popular alternative to conventional hearing aids and other implantable devices in suitable patients.

Introduction: The Bonebridge is a semi-implantable transcutaneous bone conducting device that was introduced in 2012. The device consists of an internal Bone Conducting Implant device, consisting of a magnet, receiver coil, demodulator and Bone Conducting – Floating Mass Transducer (BC-FMT), and the external Samba sound processor. It is suitable for conductive and mixed hearing losses or for single-sided deafness (SSD). The manufacturers recommend BC thresholds no greater than 45 dB in conductive or mixed hearing loss.

Methods: Since the first surgery was carried out in Tayside in 2012 we have now carried out 16 implantations on 15 patients for a range of indications including ear canal atresia and stenosis, SSD and following CSOM surgery. The procedure requires pre-operative planning on CT due to the size of the BC-FMT, as the dura, ear canal and sigmoid sinus must be avoided or managed. Due to the amount of drilling required and the length of the procedure all cases in Tayside have been carried out under general anaesthesia.

We are able to offer suitable patients the choice between Bone Anchored Hearing Aids (BAHAs) from both manufacturers, BAHA Attract and Bonebridge. The majority choose Bonebridge. Due to the limited gain we recommend BAHA Attract rarely.

Results and Conclusions: The patients who have chosen Bonebridge generally do so because of cosmetic reasons and because of the avoidance of feedback. Hearing outcomes for BAHA and Bonebridge appear similar. Local patient satisfaction surveys have demonstrated a high level of satisfaction with Bonebridge.

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Bone conduction hearing devices in CSOM (R764)

ID: 764.2

Technique and long-term results of the semi-implantable transcutaneous bone conduction hearing device Sophono

Presenting Author: **Ralf Siegert**

Ralf Siegert

Prosper-Hospital

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.

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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

Cambridge University Hospitals

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.

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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**

Michal Luntz, Amjad Tubia, Riad Khnifes, Amit Wolfowitz, Talma Shpak, Noam Yehudai

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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