

children and decrease in ME volume over time in 40% of cases.

*Conclusions:* Results support that the ME volume, the ME surface area/volume ratio along with the duration of ET dysfunction influence the extent of ME pathological changes. These parameters can be important to consider for a pathophysiology-oriented approach to the ME surgery that may improve the long-term outcome.

doi:10.1017/S0022215116003005

## Bone conduction hearing devices in children (R734)

**ID: 734.1**

### Tissue preserving technique for introducing bone conducting devices in children

Presenting Author: **Malou Hulcrantz**

Malou Hulcrantz

CLINTEC, Karolinska Institutet

*Learning Objectives:* BHCD in children operated with tissue-preserving technique has a better outcome.

*Objectives:* A tissue preserving surgical technique has shown no increased inflammatory reactions after a non-skin reduction technique in adults. Objective was to evaluate in children the extent of the stability, the skin in contact with the device, numbness and clinical signs and symptoms of inflammation or infection at the site of the skin penetration.

*Methods:* A single-centre clinical investigation comparing the surgical technique without the skin thinning procedure with the results from earlier techniques, now using longer individualized abutments. Participants in the study were included consecutively and operated in general surgery in a day surgery setting. The Ostell instrument for registration of stability was used.

*Results:* Clinically there were no surface related adverse events, nor were any skin reactions noted in the test or control groups during 12 months follow up. Numbers of stability with RFA is given.

*Conclusions:* This human clinical trial in children, as compared to earlier techniques support and extend findings of newer surgical tissue preserving techniques, with good tissue response and no surface related adverse events.

doi:10.1017/S0022215116003017

## Bone conduction hearing devices in children (R734)

**ID: 734.2**

### Use of bone conduction hearing devices in management of patients with congenital aural atresia and microtia- Experience in Hong Kong Chinese

Presenting Author: **Michael CF Tong**

Michael CF Tong, Willis SS Tsang

The Chinese University of Hong Kong

*Learning Objectives:* Understand the approach in using bone conduction hearing aids in children with aural atresia and microtia.

*Introduction:* The prevalence of external ear abnormalities is around 1 % in Chinese children in Hong Kong. Coexisting hearing loss could be of outer ear, middle ear or inner ear in origin. Management of hearing losses depends on whether it is unilateral or bilateral, the severity and type as well as the plan of management of the external ear abnormalities.

*Methods:* A review of the management of Chinese patients underwent bone-conduction hearing aid with co-existing outer ear deformities is made from 1995 to 2015 in a single tertiary referral centre in Hong Kong.

*Results:* Early cases were managed with percutaneous Baha™ until 2012. With the introduction of Bonebridge™ and Baha Attract in 2013 and 2014 respectively in our centre, there is a change of management leaning towards these transcutaneous devices. Adults or older children were managed with either Bonebridge™ or Baha™ Attract system and children were managed with Baha™ Attract.

Auricular reconstruction could be performed in the same procedure or as a separate procedure as long as a good surgical planning is made.

Two children and one adolescent (age 9, 13 and 19) with Nagata stage 1 auricular reconstruction and Baha™ Attract at same setting were described as an illustration of our technique. Adults with Bonebridge™ cum Nagata stage 1 were described in parallel for discussion.

*Discussion and Conclusion:* We describe the successful management of a series of congenital atretic and microtia patients with bone conduction hearing devices.

The transcutaneous system allows earlier switch on. The Baha™ Attract system is particularly suitable for some of these children with very thin skull. We see more patient/parental acceptance with transcutaneous devices after their introduction into clinical practice.

doi:10.1017/S0022215116003029

## Bone conduction hearing devices in children (R734)

**ID: 734.3**

### Adapting the BAHA surgical technique for Children

Presenting Author: **Iain Bruce**

Iain Bruce

Royal Manchester Children's Hospital

*Learning Objectives:* 1. Percutaneous and transcutaneous BAHA are both important options in children