

rate among any size of the perforation or any frequency of otorrhea. There was no serious complication such as sensorineural hearing loss.

*Conclusions:* SUM is indicated for the case of chronic otitis media with central perforation as a minimally invasive surgery without serious complications.

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### Extended Indication of CI (R671)

#### ID: 671.1

#### SSD – indication and results of cochlear implantation in children

Presenting Author: **Susan Arndt**

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*Learning Objectives:* CI: favorable treatment option for acquired SSD children, as it is the only opportunity to restore binaural hearing abilities. Outcomes of auditory habilitation in congenital SSD children with CI vary significantly.

SSD in children can have a negative impact on the normal development of the auditory cortex in the young child. Furthermore, the ability to develop and use binaural hearing and its subsequent hearing abilities in daily life can be affected. Especially when entering full-time education, children with SSD display behavioural problems and academic weaknesses. The impairment of the auditory function may result in fatigue due to increased listening effort. It can also impinge on psychosocial factors. Particularly when the language reaches the deaf ear in additional background noise problems become evident. Furthermore, the localization capacity is significantly limited, since bilateral hearing is mandatory for spatial hearing. Patients with SSD can derive benefit from conventional CROS or Bi-CROS systems (contralateral routing of signal), bone anchored hearing systems or from a cochlear implant (CI). The indications and results of the treatment are presented.

Considering our experience, a thorough evaluation and extensive counselling regarding the treatment options is necessary. Irrespective of age, MRI of the cranium at pre-examination for CI surgery is essential to exclude aplasia or hypoplasia of the hearing nerve. CI as a treatment option for adult patients with acquired SSD is now widely accepted since it can achieve binaural hearing rehabilitation. In contrast, children suffering from SSD have been provided with a CI only in rare cases. While the decision for CI surgery in children with acquired SSD is quite simple due to the good results in adults, CI in children with congenital SSD has been discussed controversially.

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### Extended Indication of CI (R671)

#### ID: 671.2

#### Extended indications of cochlear implantation

Presenting Author: **Paul van de Heyning**

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*Learning Objectives:* The primary goal of the panel is to focus on extending indications for cochlear implantation in electric acoustic stimulation in children and postlingual adults, single sided and asymmetric hearing loss adults and children and to discuss cognitive capabilities in older cochlear implant candidates.

The last decade cochlear implantation was not only indicated for bilateral profoundly deaf patients, but the indications expanded to other groups of patients with an auditory handicap. Advances in surgical technique, insights into pathophysiology, viewpoints on outcome measures and technological innovations allowed clinical trials to demonstrate benefits for patients with substantial residual hearing. The primary goal of the panel is to focus on these groups of patients. An introductory lecture will be followed by a panel discussion specifically on the following topics:

Electric acoustic stimulation and structure preserving cochlear implant surgery in children introduced by Gunesh Rajan.

Partial Deafness Treatment in adults and what are the limits of residual hearing introduced by Piotr Skarzynski.

Cochlear Implantation in Single sided deafness and asymmetric hearing loss introduced by Susan Arndt.

A last topic which gained attention concerns Cochlear Implantation in elderly and the relation with cognitive functioning introduced by Paul Van de Heyning.

An emerging issue is the viewpoint of the care providers and insurers asking for evidence at the level of participation. Therefore outcome measures have to include also quality of life measures.

The panel discussion will lead towards a consensus on the different outcome aspects consisting of:

- Auditory test e.g. speech in noise.
- Hearing impairment quality of life e.g. SSQ.
- Directional hearing to ascertain central auditory integration.
- Hours of use per day as a measure of experienced benefit.
- Influence on participation (WHO handicap approach).
- Clinical test for cognitive assessment of older in cochlear implant candidates.