

Conclusion: CI surgery for patients 79 years or older was well tolerated. Patients benefited greatly from the device with improved hearing. CI should not be denied older individuals who are otherwise in good health. Non-use in the elderly was associated with post-operative vertigo and tinnitus, severe disease and limited social support.

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Important clinical research in otology (N615)

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Human Cochlear Morphology and how it relates to Cochlear Implantation

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Learning Objectives: The ability to preoperatively estimate the insertion depth in a particular patient may influence the results in hearing preservation CI surgery.

Introduction: Modern cochlear implant (CI) surgery also purposes to preserve and maintain residual hearing and intra-cochlear structures. The rich variations in design and dimensions of the human cochlea may influence surgical trajectories and functional outcome. Here, we present anatomical data and experiences from hearing preservation CI-surgery.

Material and Methods: The sampled cochleae originated from unidentified autopsy materials and collection of inner ear mould created in Uppsala during the 70th. No information regarding gender, age or hearing was present. Data were collected from 73 plastic inner ear moulds. Reference points were constructed from photographic reproductions taken at different angles. Hearing preservation technique was performed in 21 patients and the dimensions of the cochlea were studied pre- and postoperatively.

Results: The length of the first turn represented approximately 53% of the total cochlear length. The width of various turns differed greatly between individuals and the height varied by as much as 1.4 mm, representing one third of the total height. The electrode configurations in each of the 21 cases were shown in insets and its relation to the round window. Hearing was conserved in all patients after one year.

Conclusions: The human cochlea displays wide and individual anatomic variation. These variations can influence the trajectory chosen by the surgeon and also the possibilities to preserve microstructures and residual hearing. Some variations may even explain difficulties experienced by surgeons to reach full insertion, even in normal cochleae.

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Important clinical research in otology (N615)

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Mastoiditis in Sweden, a large pilot for future studies

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Learning Objectives: Descriptive studies are needed to define good comparative studies on the most important issues in a clinical disorder. The findings in this large pilot study can direct future prospective studies on how to treat acute mastoiditis in an era with efficient antibiotics and in a possible post-antibiotic era.

Introduction: Since the year 2007, the largest study on acute mastoiditis, so far, has been performed in Sweden. The main reason for performing it was to evaluate how reduced antibiotic treatment of acute otitis media affected its most common complication.

Methods: Most of the published results in the study “Mastoiditis in Sweden” were based on interpretation of medical records. This poses special challenges regarding definition and interpretation of the results and if antibiotic resistance has affected the results.

Results: More than 1300 cases have been included but still the findings are mainly descriptive. The typical patient with acute mastoiditis has been well defined, an otherwise healthy toddler without previous ear problems.

Conclusions: Some patients are difficult to fit into a pre-formed definition which might lead to an unfortunate exclusion of “odd cases” that should be part of the diversified group of patients suffering from complications of AOM.

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Epidemiology aspects of CSOM (R616)

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Health check up system for hearing and congenital cholesteatoma

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Learning Objectives:

Introduction: At 6th Cholesteatoma and ear surgery meeting held at Canne, France in 2000, we had the discussion about the figure of congenital cholesteatoma in Japanese patients and in the patients of other countries. In the nineties most of the children with congenital cholesteatoma belonged to the severe cases. At the initial operation, cholesteatoma extended not only in the tympanic cavity, but to the mastoid in most of the Japanese children.

Recently the figure of the congenital cholesteatoma has changed. Introducing the endoscope and microscope into the ordinary tools of ENT office contributed to make diagnosis of congenital cholesteatoma in early stage. The hearing

check up system was also useful to detect congenital cholesteatoma in Japan.

We present the recent congenital cholesteatoma cases in our hospital and describe the check up system for hearing from newborns to infant in Japan.

Study design: retrospective chart analysis of consecutive patients with congenital cholesteatoma.

Patients: Between September 2004 and August 2015 conclusive 47 patients underwent primary procedure.

Intervention: The diagnosis of congenital cholesteatoma with Potsic staging system and the therapeutic operation were performed.

Main outcome measures: The chance of detecting the congenital cholesteatoma, the patient age, the stage of the disease, the pathology of the ossicles and the hearing result of the surgery were studied.

Results: Twenty two percent of the patients belonged to the Stage I and II without ossicular involvement. They showed normal hearing. Eighty eight percent of the patients belonged to the Stage III or IV and 76% of the patients showed good hearing result postoperatively. Thirty percent of the patients had diagnosed by the hearing check up and 32 % of the patients had found accidentally with microscopic examination at the ENT office.

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Epidemiology aspects of CSOM (R616)

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Condition of the contralateral ear in patients with cholesteatoma

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Learning Objectives: 1. Anatomical variants of tympanic compartments and their aeration patterns are one of the relevant pathogenetic factors involved in type of cholesteatoma occurrence. 2. The isthmus blockage theory could be a condition for the epitympanic type while tubal dysfunction is mandatory for mesotympanic type of cholesteatoma since the contralateral ear abnormalities are more frequent in the last one.

Introduction: In the recent years the incidence of chronic otitis media with cholesteatoma has decreased but remain a major challenge for surgeons due to the destructive characteristic of the disease. Although the pathophysiology of the acquired cholesteatoma remains to be clearly elucidated, it is presumed to be multifactorial, as many theories have been proposed and investigated. Anatomical variants of tympanic compartments and their aeration patterns are one of the contributing factors. Retraction pocket theory is the

most widely accepted but the contralateral ear in patients with cholesteatoma is less studied. The purpose of this study was to evaluate the contralateral ear in patients with cholesteatoma and to determine whether the characteristics of it differ according cholesteatoma growth patterns.

Methods: The charts of 924 operations for cholesteatoma performed from January 2000 to December 2013 at the Department of Otorhinolaryngology-Head and Neck Surgery, Iuliu Hațieganu University of Medicine and Pharmacy, Cluj-Napoca were analyzed retrospectively. Otomicroscopy was performed on both the affected and the contralateral ear. Cholesteatoma extension was noted during surgery.

Results: The age average for patients included in the study was of 41 ± 6.5 years (95%CI [39.32–42.85]). The frequency of significant changes in the contralateral ear was 49.2 %. 6.5% of patients presented with bilateral cholesteatoma. Other abnormalities were retraction pockets (32%), perforations of the tympanic membrane (25%), serous otitis media (5%). Contralateral ear modifications were more frequent in the posterior mesotympanic type of cholesteatoma cases.

Conclusions: Lower damage of contralateral ear in posterior epitympanic type of cholesteatoma supports the isthmus blockage theory for epitympanic cholesteatoma occurrence. Long-term follow-up of the condition of contralateral ear in cholesteatoma patients is mandatory for early intervention in order to prevent progression of the disease.

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Epidemiology aspects of CSOM (R616)

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Similarities and Differences in the Diagnosis and Treatment of Necrotizing Otitis Externa and Diabetic Foot Osteomyelitis

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Learning Objectives: Understand the similarities and differences between DFO and NOE

Background: Necrotizing otitis externa (NOE) is a severe inflammatory process effecting both soft tissue and bone. This disease is strongly associated with diabetic patients and, to a lesser extent, immunocompromised conditions. Diabetic patients are also at risk for the development of diabetic foot osteomyelitis (DFO), another inflammatory condition effecting soft tissue and bone.

Objective: compare NOE with DFO.

Methods: clinical review.

Results: Patient's characteristics and co-morbidities are similar in both entities. Similar to NOE, Pseudomonas A. is associated with DFO, particularly in warm climates. Unlike NOE, there is no role for superficial swab cultures in DFO and deep bone biopsies are recommended for the