

The pathogenesis of cholesteatoma is complex and cholesteatomas may arise from various simultaneous mechanisms.

doi:10.1017/S0022215116001870

## Mastoidectomy: How I do it (1) (V637)

**ID: 637.1**

### How to do scutumplasty after cortical mastoidectomy or atticotomy

Presenting Author: **Masafumi Sakagami**

Masafumi Sakagami  
Hyogo College of Medicine

*Learning Objectives:* To learn how to do scutumplasty for intact canal wall tympanoplasty and atticotomy/antrotomy in the video session

*Introduction:* Postoperative retraction of the ear drum sometimes occurs after cortical mastoidectomy or atticotomy for attic cholesteatoma. One of the most important points to protect retraction is to firmly reconstruct the scutum with a sliced cartilage.

*Surgical procedures:* After the tympanomeatal flap is elevated anteriorly beyond the scutum, cholesteatoma matrix was removed with canal wall up method or atticotomy. Concha cartilage was thinned by 0.5 mm or less with a cartilage slicer. The most important point for the scutumplasty is to firmly pile up a thinly sliced cartilage on the anterior bony edge of the scutum bone defect. When a cartilage size is not enough to cover the posterior bony edge, a piece of cartilage is added to cover the posterior site. The inferior edge of the cartilage is placed on the malleus neck.

*Subjects and Methods:* Between 2006 and 2011, 138 ears with primary acquired cholesteatoma were operated on with atticotomy/scutumplasty (28 ears), canal wall up method (87 ears), and canal wall down and reconstruction (23 ears). One-stage operation was 49 ears and two-stage operation was 89 ears. The mean follow-up time was 44.1 months (9–100 months).

*Results:* Postoperative recurrence due to the ear drum retraction was 17.0% using Kaplan-Meier analysis. Successful hearing outcomes (A-B gap 20 dB or less) was 83/124 (66.9%) according to the AAO-HNS criteria in 1995.

*Conclusion:* To reconstruct the scutum bone defect firmly is a key point to succeed canal wall up method and atticotomy for attic cholesteatoma. At the presentation, surgical videos and slides will be presented.

doi:10.1017/S0022215116001882

## Mastoidectomy: How I do it (1) (V637)

**ID: 637.2**

### Cochlear Implantation after Subtotal Petrossectomy in Chronic Otitis Media

Presenting Author: **Gianluca Piras**

Gianluca Piras, Sampath Chandra Prasad, Mario Sanna  
*Gruppo Otologico*

*Learning Objectives:* Subtotal petrossectomy combined with cochlear implantation is a procedure required in specific situations and lowers the risk of repetitive ear infections, CSF leakage, and meningitis by closing off all connection with the external environment. Additionally, it gives excellent visibility and access in difficult anatomy or in drill-out procedures. Here we demonstrate the usefulness of Subtotal Petrossectomy in a case of recurrent chronic otitis media with sensorineural hearing loss in the only hearing ear, where it was possible to perform a simultaneous cochlear implantation.

doi:10.1017/S0022215116001894

## Emerging Technologies (1) (R641)

**ID: 641.1**

### Codacs as new treatment option for patients with severe and profound mixed hearing loss including cases with chronic otitis and cholesteatoma

Presenting Author: **Thomas Lenarz**

Thomas Lenarz  
*Medical University Hannover*

*Learning Objectives:* Use of Codacs

*Objective:* Implantable hearing aids have become a valid option for the therapy of various forms of hearing loss. Codacs Direct Acoustic Cochlear Implant System is the first vibratory implant available for patients with MHL. By directly coupling sound energy into the perilymph, a very high maximum power output (MPO) is achieved over a broad frequency range. Via a conventional stapedotomy, the vibratory energy of the electromagnetic actuator is transferred directly to the perilymph through the oval window.

*Patients and Methods:* Patients with different etiologies of MHL were implanted:

Otosclerosis: n = 29

Tympanosclerosis: n = 4 (1 with subtotal petrossectomy)

Chronic otitis media: n = 15 (12 with subtotal petrossectomy)

In cases with intact posterior canal wall the implantation was done through the posterior tympanotomy. Stapes footplate was perforated and the stapes prosthesis was fixed at the long process of the incus. In cases with canal wall down and chronic otitis media there was a two-step procedure with subtotal petrossectomy and optimal fat obliteration followed by Codacs implantation six month afterwards. Pre- and postoperative bone and air conduction thresholds and word recognition scores were recorded preoperatively with fitted hearing aid (only 32 of the reported patients were able to use a hearing aid before implantation or subtotal petrossectomy) and postoperatively over time.