

factors were: Age below 15 years, extension of cholesteatoma into the mastoid, erosion of the incus, and erosion of the stapes. Overall, there was a significant pre- to post-operative air-bone gap (ABG) improvement of 4.05 dB (1.0–7.1).

*Conclusions:* Long term recurrence rates and prognostic factors of CWU mastoidectomy help decision making in surgical approach and risk stratification of patients. Especially children with large cholesteatomas extending into the mastoid and with concomitant bone erosions should be carefully followed up.

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### How do we approach cholesteatoma (N613)

**ID: 613.1**

#### Modified Bondy technique: indications and technique

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*Learning Objectives:*

*Introduction:* Modified Bondy technique is indicated in patients with epitympanic cholesteatoma, good hearing and intact pars tensa and ossicular chain. It permits to eradicate the disease with a single stage procedure. This presentation evaluates the short- (6 mo) and long-term (5 yr) outcomes of modified Bondy technique, with particular reference to hearing results.

*Methods:* Four hundred eight ears were operated on, using a modified Bondy technique between 1983 and 2013. All patients had primary acquired epitympanic cholesteatomas with intact pars tensa and intact ossicular chain in normal or good-hearing ear. Preoperative audiometric results revealed a mean air conduction pure-tone average of  $27.7 \pm 9.6$  dB (range, 10–65 dB) and a mean bone conduction pure-tone average of  $14.2 \pm 6.4$  dB (range, 5–50 dB). The mean preoperative air-bone gap was  $13.5 \pm 6.7$  dB (range, 0–25 dB). The average length of follow-up was 7.8 years (range, 5–16 yr).

*Results:* There was no recurrent cholesteatoma in the present series. A pearl-like residual cholesteatoma was found in the cavity in 7.4% of ears; 0.8% developed stenosis of meatoplasty, 1.3% exhibited retraction pockets extending to the attic. Postoperative discharging ear was observed in 3% of cases and was successfully treated with topical drops. At the long-term follow-up, the air-bone gap was unchanged or improved from the preoperative level in 88% of cases. The mean postoperative short- and long-term air-bone gaps were  $14.6 \pm 8.5$  dB (range, 0–55 dB) and  $14.1 \pm 8.2$  dB (range, 0–50 dB), respectively. Postoperative high-frequency sensorineural hearing loss was observed in 1.7%. No dead ears were encountered postoperatively.

*Conclusion:* A modified Bondy operation is recommended in selected cases of epitympanic cholesteatoma in normal or good-hearing ear with an intact pars tensa and ossicular

chain. Modified Bondy technique ensures complete eradication of disease while preserving a good preoperative hearing in 1-stage operation.

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### How do we approach cholesteatoma (N613)

**ID: 613.2**

#### How to perform a good canal wall up mastoidectomy

Presenting Author: **Gianluca Piras**

Gianluca Piras, Alessandra Russo, Enrico Piccirillo, Flavia D’Orazio, Sampath Chandra Prasad Rao, Mario Sanna  
*Gruppo Otorologico*

*Learning Objectives:* How to perform a good canal wall up mastoidectomy.

Various techniques for cholesteatoma surgery have been developed, practiced, criticized, and favored by different otologists. The current dilemma regarding the choice of technique reflects differences of opinion between various schools of thinking in Otolaryngology. However, both the open and closed techniques have now been individualized, and the choice of procedure can be made in accordance with certain indications in order to optimize the results. In the 1960s Bill House popularized Canal Wall Up (CWU) mastoidectomies; since then CWU mastoidectomy has remained the ideal surgical treatment for pediatric cholesteatoma. This technique allows preservation of the hearing function without aesthetic modification of the external ear. The limit of this technique is the increased risk of cholesteatoma recurrence or residual; for this reason, a two-stages procedure is preferred. Indications for CWU mastoidectomy are cholesteatoma in pneumatized mastoids, children, limited epitympanic erosion, mesotympanic cholesteatoma, limited congenital cholesteatoma. Contraindications are a widespread disease, bony destruction and poor hearing. The aim of our presentation is to show technical refinements of this technique, focusing on surgical cases and results in pediatric population.

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### How do we approach cholesteatoma (N613)

**ID: 613.3**

#### Subtotal Petrossectomy in the management of difficult cases of cholesteatoma

Presenting Author: **Sampath Chandra Prasad**

Sampath Chandra Prasad, Valeria Roustan, Enrico Piccirillo, Annalisa Giannuzzi, Mario Sanna  
*Gruppo Otorologico*

*Learning Objectives:*

*Objectives:* The purpose of this study was to review the indications for subtotal petrossectomy in difficult cases of cholesteatoma, report our management of complications, as