without perichondrium is readily available and can be used to repair external auditory canal, scutum, and tegmen defects. Bone pate collected during the mastoidectomy can be used to repair bony defects. The advantages and disadvantages of these materials and techniques will be discussed. Photos and videos will be used to demonstrate these techniques.

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Mastoid reconstruction (R666)

ID: 666.2

Bone Cements for Mastoid/Posterior Canal Wall Reconstruction

Presenting Author: **Sujana Chandrasekhar**

Sujana Chandrasekhar

New York Otology; Hofstra-Northwell School of Medicine

Learning Objectives: 1. Understand need for reconstruction of the posterior canal wall in canal wall down mastoidectomy 2. Describe the different types of bone cements that are available for mastoid/PCW reconstruction 3. Know the indications and contraindications for use of cement(s) in chronic ear cavities.

Long-term management of the canal wall down mastoidectomy cavity remains a concerning issue. Quality of life (QOL) measures are reduced in patients with large mastoidectomy bowls that necessitate life-long otologic care. Interestingly, QOL between patients with intact canal wall mastoidectomies and reconstructed canal wall down mastoidectomies is not different. This has spurred attention to various posterior canal wall reconstruction techniques. Since the early 1980s various cements have been tried for reduction of cavity/bowl size and reconstitution of the posterior canal wall. These have fallen into and out of favor as long-term results have become available. The bed should be as pristine and clean as possible before the cement foreign body is placed there. Cement can be used alone or in conjunction with a free island of bone – either from the posterior canal wall or from the cortex of the skull. Certain cements, such as glass ionomers, cannot be used if there is potential contact with cerebrospinal fluid because of possible aluminum encephalopathy. Care must be taken for early identification and treatment of local infection (6% to 35%) or delayed extrusion of the cement. In clean, selected cases, bone cement can be used as a tool for mastoid reconstruction when the canal wall must be removed due to extent of disease. Types of available cements, techniques for use, clinical 'pearls' and images of good and bad reconstructive outcomes will be presented.

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Mastoid reconstruction (R666)

ID: 666.3

The benefits and expectations using mastoid reconstruction and obliteration technique

Presenting Author: **Jona Kronenberg**

Jona Kronenberg

University of Tel-Aviv

Learning Objectives: Mastoid obliteration with posterior wall reconstruction techniques gained much popularity among the mastoid surgeon in recent years. The results published in the literature are promissing ranging between 0–15% cholesteatoma recurrences. Because of its aggressivity and irreversibility, radical mastoidectomy for cholesteatoma was totally abandoned in some institutions. This presentation describes our attitude toward this surgical trend.

Methods: The experience of the author includes 114 patients operated since 2008. The follow-up ranged between 12 months and 8 years (mean of six year and 5 months). Sixty-nine primary procedures (i.e., no previous mastoidectomy) and 45 secondary procedures (more than one previous mastoidectomy) were performed. Autologous bone was used for posterior wall reconstruction and bone patè was used for mastoid obliteration. The results of cholesteatoma recurrences and the rate of dry ear were evaluated and compared in the two groups of patients.

Results: There were 18 cases of recurrent cholesteatoma in the total group (15.8%). Seven of them in the primary group (10.1%) and 11 in the secondary group (24.4%). Nine patients had a stubborn cholesteatoma, 4 patients of those were operated more than 3 times. Two patients finally underwent radical mastoidectomy. All cholesteatoma were located in the middle ear and no one in the obliterated mastoid. Dry ear with no need for taking precautions against water was achived in 53 of the primary group of patients (76.8%) compared to 29 in the secondary group of patients (64.4%).

Conclusions: Reconstruction techniques of the posterior wall and obliteration of the mastoid had first appeared to be the "promised land" of a solution for mastoid cholesteatoma, and raised the hopes that radical mastoidectomy surgery could be abandoned. With more experience, however it emerged that this held true solely for primary surgery. The surgical outcomes for cases of secondary cholesteatoma were worse than those achived in radical mastoidectomy. Thus, radical mastoidectomy is still indicated for stubborn cholesteatoma.

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Mastoid reconstruction (R666)

ID: 666.4

Mastoidectomy reconstruction: titanium sheeting and middle temporal flap technique

Presenting Author: **Bruce Black**

Bruce Black

University of Queensland/Lady Cilento Children's Hospital

The chronically infected open mastoidectomy cavity is a common problem in otologc surgery. Corrective surgical options include revision surgery, obliteration with flaps or