Learning Objectives:

Introduction: The most common place of damage of the conductive apparatus of the middle ear in cases of chronic otitis media is the area of the incudostapedial joint. The incudostapedial joint may be disconnected also in congenital deformations or after head and ear injuries.

Aim: The aim of the study was to analyze the results of hearing improving surgeries in ears with hearing loss caused by damages of the ear's conductive apparatus in the area of the incudostapedial joint.

Material and Methods: Analysis was performed in the group of patients operated in years 1999–2015. Reconstruction surgeries were performed using autogenous (incus interposition) or allogenous (glassionomer cement or various types of prostheses) materials. The results were assessed, following the standard adopted by the Institute, after 1 month, 3 months, 6 months, one year and then after 2 and 3 years.

Results and conclusions: The results confirm that an isolated damage of the auditory ossicles within the incudostapedial joint allows, in most cases, to achieve stable reconstruction or connection of the damaged chain, resulting in improvement of hearing, measured as decrease or total closing of the air-bone gap. Good and very good results achieved in the large percent of ears after surgery confirm that the technique and materials applied may be a correct approach in this type of damages of the conductive apparatus of the middle ear.

doi:10.1017/S0022215116006654

ID: IP169

The treatment of cholesteatoma with intact ossicular chain

Presenting Author: **Nicola Quaranta**

Nicola Quaranta[1], Francesco Barbara[2], Vito Pontillo[1], Valentina De Robertis[2]

[1]*University of bari,* [2]*University of Bari*

Learning Objectives: To discuss the surgical treatment of cholesteatoma with intact ossicular chain.

Introduction: The primary goal of cholesteatoma surgery is complete eradication of the disease. The objective of this study is to compare the results obtaine in patients affected by cholesteatoma with intact ossicular chain and submtted to Bondy Modified radical Mastoidectomy (BMRM) and canal wall up tympanoplasty (CWUT).

Methods: 65 patients were treated: 30 with BMRM (group A) and 35 with CWUT(group B). Of these last, 27 have undergone single stage technique (20 transcanal approach, with mastoidectomy 7) and 8 second look technique (2 transcanal approaches, with mastoidectomy 6). The location and the extension of the cholesteatoma was considered. The anatomical and functional postoperative complications were recorded. Functional analysis was conducted by comparing the Air Bone Gap (ABG) pre- and postoperatily.

Results: As for the group A, 2 patients (6.66%) presented post-operative complications (3,33% vertigo, 3,33% tinnitus); 5 patients (16.67%) had late anatomical complications (3,33% retraction pocket, 3,33% epidermal cyst, 10% otorrhea). As for the B group, 2 patients (5.9%) had post-operative complications (2,85% vertigo, 2,85% tinnitus); 7 patients (20%) had anatomical complications (8,75% recurrent cholesteatoma, 8,75% retraction pocket, 2,86% otorrhea). Group A had a preoperative ABG of 11,79 ± 6,48 dB and post operative of 13,86 ± 9,03 dB; group B had a pre-operative ABG of 17.45 ± 9,18 dB and a postoperative of 19,53 ± 13,62 dB. One patient of the group A and one of the B presented a significant decline of bone conduction (>30 dB).

Conclusion: Both techniques lead to good anatomical and functional results. In case of cholesteatoma with intact chain, RMB is indicated in cholesteatoma spreading posteriorly, in antrum and mastoid, while CWUT in case of cholesteatoma located in epitympanum and mesotympanum.

doi:10.1017/S0022215116006666

ID: IP170

Study of Biocompatibility Between Bone Pâté with Fibrin Glue and Human Osteoblast in Vitro

Presenting Author: **Nicola Quaranta**

Nicola Quaranta[1], Anna Eugenia Salzo[2], Concetta De Luca[2], Cinzia Buccoliero[2], Graziana Colaianni[2], Giorgio Mori[3], Giacomina Brunetti[2], Silvia Colucci[2], Maria Grano[2]

[1]*University of Bari,* [2]*University of Bari,* [3]*University of Foggia*

Learning Objectives: To decribe the fate of bone patè when in contact with osteoblast cultures.

Hypothesis: The aim of the present study was to evaluate the effect of bone patè (BP) on human osteoblast differentiation by measuring cellular viability, expression of the transcription factors and the major components of extracellular matrix.

Background: Although BP has been used in ear for many years and it has been reported that after surgery BP become viable bone, the cellular mechanisms that lead to BP osteointegration have never been described.

Methods: BP obtained from 4 patients subjected to mastoidectomy and affected by middle ear and mastoid cholesteatoma was placed in contact with osteoblast-like cell (OB) cultures obtained by mastoid bone. Cell culture were treated with BP, BP with fibrin glue (BPG) and with fibrin glue alone. Cells viability was evaluated after 24 hours; After one week of treatment OBs cultured in the different conditions were subjected to the evaluation of alkaline phosphatase expression, the expression of transcription factors and bone matrix proteins by qPCR.

Results: The MTT assay revealed that, after 24 hours, OBs have increased viability when treated with BP (19% increase)