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**ID: IP243****Management strategies of glomus jugular tumor**Presenting Author: **Yasheng Yuan**Yasheng Yuan<sup>1</sup>, Fanglu Chi<sup>2</sup>, Qiang Du<sup>2</sup>, Weidong Zhao<sup>2</sup>, Chunfu Dai<sup>2</sup>, Jing Wang<sup>2</sup>, Bing Chen<sup>2</sup><sup>1</sup>*EYE & ENT Hospital of Fudan University,*<sup>2</sup>*Department of Otolaryngology and Skull Base Surgery, EYE & ENT Hospital of Fudan University, Shanghai 200031*

**Learning Objectives:** Facial nerve management in the surgery Internal carotid artery management in the surgery Intracranial vascular bypass

As for the most challenging surgery of the lateral skull base, glomus jugular tumor resection is now safely controlled and managed. In this study we focused on the strategies of facial nerve and internal carotid artery management during glomus jugular tumor surgery, especially for the C and D stage tumor in which the internal carotid artery was severely involved and could not be easily separated. Furthermore we tried the extra-intracranial vascular bypass when the internal carotid artery could not be saved in the surgery, by which the mortality and intracranial complications were greatly reduced.

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**ID: IP244****Optotensometry – Development of an optic method for measuring tubal function by tympanic membrane movement in a middle ear model**Presenting Author: **Thorsten Zehlicke**Thorsten Zehlicke<sup>1</sup>, Hans Georg Fischer<sup>2</sup>, Mark Stamer<sup>3</sup>, Jörg Müller<sup>4</sup>, Hans Wilhelm Pau<sup>5</sup><sup>1</sup>*Armed Forces Hospital/ University of Hamburg,*<sup>2</sup>*Armed Forces Hospital/ University of Hmaburg,* <sup>3</sup>*Hamburg University of Technology, Institute of Micro System Technology,* <sup>4</sup>*Hamburg University of Technology, Institute of Micro System Technology,* <sup>5</sup>*University of Rostock, ENT Department*

**Learning Objectives:**

**Introduction:** The amount of pressure in the middle ear depends mainly on the function of the Eustachian tube. Currently there are no continuous recording techniques measuring Eustachian tube function in clinical context and under physiological conditions over extended periods of time.

**Purpose:** In this paper we investigate the suitability of an active optic triangulation method on the basis of a projected

laser-point-pattern in measuring tympanic membrane movement during pressure variations in a middle ear model.

**Material and Methods:** For projection we used a green semiconductor laser with an output of 1 mW and a diffractive optical element (DOE). As our measured object we used purple latex-foil (Kimberley-Clark<sup>®</sup>), fixed airtight on the cut-off end of a 2 ml syringe-tube. The movement of the foils was measured by an active optic triangulation method. To simulate pathological variations of the tympanic membrane we prepared the latex-foils in specific ways. One foil was perforated and then covered again (simulating tympanic membrane perforation), another one was partly strengthened by sticking a piece of thick, hard paper to it from the inside (simulating calcification).

**Results:** The test-setup, as well as the appliance of pressure-changes worked fine and measurement of foil movement in all the modified foil surfaces was possible. This shows that it is possible to record foil-movement with this system even in tympanic membranes with pathological variations. Recording tympanic membrane movements in the temporal bone model need a different set up of the measuring system.

**Conclusions:** In the course of this study we were able to show that it is possible to assess and record foil movement and tympanic membrane movements using a system of optic triangulation and to simulate different tympanic membrane pathologies. This could be used both in ENT medicine, as well as in aviation and diving medicine.

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**ID: IP245****Congenital Cholesteatoma of middle ear in children (14 cases experience)**Presenting Author: **Jie Zhang**

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**Learning Objectives:**

**Objective:** To investigate the clinical features of Congenital Cholesteatoma (CC) of middle ear in children and provide methods for early diagnosis.

**Methods:** A retrospective chart review of 94 patients with a diagnosis of middle ear cholesteatoma, in Beijing Children's Hospital, between 2009 and 2015 was carried on. 14 patients with CC were identified using the criteria proposed by Levenson and Pariser, and were divided into two groups according to the course of disease. The main complaints, diagnostic methods and Potsic's stage of temporal bone CT findings were recorded.

**Results:**

1) 11/14 (78.57%) patients with CC were boys, with a median age of 7.20 years (from 3.33 to 10.17 years).