Learning Objectives: Symptoms of ETD may be confusing to the patient and the physician evaluating the condition. Obstructed ET may have symptoms of aural pressure, otalgia, popping, snapping, hearing loss, tinnitus, disequilibrium, and even vertigo. Patients with patulous ET may complain of aural pressure, otalgia, fullness, autophony of breathing or voice and habitual sniffing. Although there is a certain degree of overlap of the symptoms, a careful history taking should be able to differentiate these two conditions. However the main and absolute difference is in the findings in examination and testing. While continuously patulous ET has pretty straightforward symptoms and findings, the semi-patulous ET, with a very low ET opening pressure and closing pressure, or the ET that intermittently becomes patulous may be more difficult to diagnose and differentiate from the obstructed ET.

There are exciting new developments regarding the examination, testing and treatment of ETD. More recently, a number or new surgical procedures to improve the ETD are described. Naturally, the surgical treatment methods for obstructed versus patulous ET are different, while former aims widening the ET lumen, the latter needs to tighten it. If the type of ETD is not accurately diagnosed, there is greater chance for a diagnostic error. If a treatment for reducing the ET resistance is applied to a patulous or semi-patulous ET, the condition will worsen. Although less likely, if a procedure to increase the ET resistance is applied to an ET with obstruction, condition will get worse.

Differentiation of patulous versus obstructed ETD can be made with otoscopy, otomicroscopy, otoendoscopy, Valsalva, Toynbee, sniffing, tympanometry, 9-step test, inflation and deflation test, sonotubometry, forced response test, tubomanometry and pressure chamber tests. Tests can accurately differentiate patulous ET and ET obstruction, risk of worsening of the patulous or obstructive ETD with surgical interventions may be prevented.

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Eustachian tube patulous vs obstruction (R611)

ID: 611.4

Endoscopic Repair of Patulous Eustachian Tube

Presenting Author: **Brian Rotenberg**

Brian Rotenberg

Western University

Learning Objectives: At the end of this presentation the audience will understand the various methods available to repair a patulous Eustachian tube via endoscopic techniques.

Patulous Eustachian tube remains a vexing problem for both patients and surgeons. The degree of impariment patients have can severely impact their quality of life. In this presentation I will reivew transnasal endoscopic repair techniques that have been developed to treat PET, including an in depth discussion of surgical steps and a critical analysis of the results. Some promising new potential therapies will also be reviewed. In collaboration with other panelists we will present both interesting and representative cases, and encourage audience interaction.

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Free Papers (F612)

ID: 612.1

Surgical management of congenital middle ear cholesteatoma

Presenting Author: **Zhaomin Fan**

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Eye & Ear Infirmary of Shandong Provincial Hospital Group

Learning Objectives:

Objectives: To analyzed the clinical features and surgical findings in 29 cases of congenital cholesteatoma of the middle ear.

Methods: 29 patients (30 ears) who underwent surgery for congenital cholesteatoma between September 2012 and January 2016 were involved in this retrospective study. The otoscope examination, HRCT and audiogram were routinely done before surgery. The location and type of cholesteatoma, the surgical procedures, and the results were evaluated. Patient who had prior middle ear diseases were excluded.

Results: Of these 29 patients, the median age was 12 years (ranged from 3 to 54 years old). Hearing loss was complained of as a main symptom, and conductive hearing loss was found in 26 cases with the AB-gap were about 35.8 dB HL pre-operation. Two of these patients were misdiagnosed as secret otitis media in other hospital. Nine (30%) patients had closed-type cystic masses, while other 21 (70%) had open-type lesions. Canal wall down technique was performed in 20 cases, while Canal wall up in 1cases, and Trans-canal approach was applied in 9 cases of which the lesion was limited in the mesotympanum. The erosion of the ossicular chain was found in 28 cases during the surgery. Ossicular chain reconstruction were done in 21 cases(TORP13, PORP 3, Cartilage 5), and the hearing thresholds were improved satisfied after more than 1 year follow up.

Conclusions: Congenital cholesteatoma of middle ear was a rare disease and usually delayed to be diagnosed in clinical practice. Conductive hearing loss was the most common symptom of these patients. There were different clinical features between the open-type and the closed-type lesion, which reflect a distinct pathogenesis. Surgery was the best choice when the middle ear congenital cholesteatoma was identified.