Learning Objectives:

Objective: To report a case of idiopathic oculostapedial synkinesis without facial nerve disorder.

Patient: A 30-year-old woman with tinnitus synchronous with eye closure is presented. The patient had no history of facial nerve disorder.

Result: An impedance audiometer, in the absence of an auditory stimulus, was used to record tympanic membrane compliance without sound stimulation, revealing decreased compliance in the concomitant with eye blinking. Her symptoms disappeared spontaneously, so no intervention was undertaken.

Conclusion: Although oculostapedial synkinesis is often observed as one of the sequelae of facial nerve palsy, idiopathic oculostapedial synkinesis is very rare. The use of an impedance audiometer in the absence of an auditory stimulus is very useful for demonstrating objective changes in the compliance of the tympanic membrane. It is assumed that the cause of the synkinesis in our case was abnormal transmission of signals for orbicularis oculi muscle to the stapedial and orbicularis oris muscles rather than misdirected regenerating fibers. Resection of the stapedial muscle tendon should be considered if her symptoms recur.

ID: IP038

Factors influencing the decision-making of cochlear implantation in congenital hearing loss: A retrospective cohort study

Presenting Author: **Takashi Fujiwara**
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Learning Objectives:

Background / Objective: Cochlear implantations (CIs) are well recognized and accepted treatment for severe to profound congenital hearing loss, but CIs are not performed because of malformation, family attitude and others. We conducted retrospective chart review to examine the clinical factors influencing the decision making of CIs in congenital hearing loss.

Study Design: Retrospective chart review.

Methods: We included bilateral congenital hearing loss children who first visited Ehime Welfare Center for the Handicapped from April 2007 to December 2015, and met the criteria of the indication for CsI. To examin factors associated with opt-out cochlear implantation, we performed univariate analyzes of following factors; age, sex, birth weight, maternal age, cochlear malformation, multiple organ abnormalities, severe handicap, deaf family and availability of CI-rehabilitation service.

Results: During the study period, 38 bilateral congenital hearing loss children met the criteria for cochlear implantation. Of 38 children, 10 children were unwilling to use CIs. In univariate analysis, severe handicap and deaf family are correrate with opt-out CIs.

ID: IP039

Diffusion-weighted MR imaging for evaluation of cholesteatoma and the value of T1 weighted MR imaging in the exclusion of the false-positive

Presenting Author: **Atsushi Fukuda**

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Learning Objectives:

Introduction: Magnetic resonance imaging (MRI) is becoming increasingly used as a tool for cholesteatoma diagnosis. The purpose of this retrospective study was to assess a role of T1 weighted imaging (T1WI) in diagnosing recurrent temporal bone cholesteatoma with Diffusion-weighted MR imaging (DWI).

Method: We studied 44 patients (45 temporal bones) with preoperatively suspected cholesteatoma. Each patient underwent an MRI examination including both DWI and T1WI. Diagnosis of cholesteatoma was based on the evidence of a high intense image on DWI. Results of MRI were compared with operative diagnosis.

Result: The patients were consisted of 24 males and 20 females, ranging in age between 8 and 87 (median age = 53). DWI accurately predicted the presence of cholesteatoma in 31 of 36 cases, and it correctly excluded in 5 of 9 cases. False positives included 2 cholesterol granulomas, 1 schwannoma, and 1 fibrosis. False negatives included 4 small keratin pearls, 1 wetter debris caused by infections. Overall sensitivity and specificity for detection of cholesteatoma were 86.1% and 55.6%, respectively. Positive predictive value and negative predictive value were 88.6% and 50.0%, respectively. Overall accuracy for detection of cholesteatoma was 80.0%.Only 5.6% of cholesteatomas (2/36) showed high intensity on T1WI, on the other hand, 75.0% of false positives (3/4) showed high intensity on T1WI. When diagnosis of cholesteatoma was based on the evidence of both high intensity on DWI and low or intermediate intensity on T1WI, overall accuracy for detection of cholesteatoma increased to 82.2%.

Conclusion: The combination of DWI and T1WI may improve specificity and overall accuracy for detection of cholesteatoma.