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ID: IP060**Autoimmune inner ear disease presenting as Menière's Disease**Presenting Author: **Eu Chin Ho**Eu Chin Ho, Yao Guang Leow
*Tan Tock Seng Hospital**Learning Objectives:* To highlight Autoimmune Inner Ear Disease as a condition that may mimic Meniere's Disease.*Introduction:* Autoimmune inner ear disease (AIED) is a rare cause of sensorineural hearing loss, accounting for less than 1% of all cases. However, it is also one of the few forms of sensorineural deafness that can potentially be treated. The diagnosis of AIED may be missed for several years as it often mimics the symptoms of other inner ear pathologies such as Menière's disease (MD), with up to 50% of patients meeting the criteria for MD.*Method & Results:* We present a 52-year-old man, previously diagnosed with MD, manifesting the classical symptoms – sensorineural deafness, tinnitus, aural fullness and episodic vertigo. 4 years after the onset of MD symptoms, he was discovered to have autoimmune-associated conditions, namely psoriasis, joint pains and anterior uveitis. Given the patient's autoimmune-related diseases, we suspected the diagnosis of AIED and started him on a therapeutic trial of steroids. He responded favorably to the therapy, and was subsequently switched to a steroid-sparing immunomodulator treatment. His vestibular symptoms were abolished and there was also significant sustained improvement in his hearing tests, demonstrating an autoimmune cause for his audiovestibular symptoms.*Conclusion:* Our case report illustrates the difficulty in differentiating the idiopathic MD from AIED. As the history was typical of MD, it was easy to have concurred with the initial diagnosis. However, this patient had features of autoimmune diseases that raised our suspicion of AIED. The response to immunosuppressant therapy confirmed an autoimmune etiology for his symptoms.

With no diagnostic tests to confirm AIED available, clinicians must maintain a high index of suspicion when treating patients with symptoms of MD who have one or more autoimmune conditions, bilateral symptoms, or a rapid progression of disease. Starting the patient on a trial of treatment with steroids and monitoring his response closely can often be a simple way of confirming the diagnosis.

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ID: IP061**Efficacy of a parametric assistive listening system to enhance the audibility and intelligibility of speech**Presenting Author: **Eu Chin Ho**Eu Chin Ho¹, Medapati Vijay Reddy¹, Santi Peksi²,
Woon Seng Gan²¹*Tan Tock Seng Hospital*, ²*School of Electrical & Electronic Engineering, Nanyang Technological University, Singapore**Learning Objectives:* Parametric speaker system can be used for targeted sound delivery to the hearing impaired.*Introduction:* An ultrasonic transducer together with a traditional transducer were implemented as a Parametric Assistive Listening System (PALS), to produce a directional narrow beam of sound at a target location. We aim to investigate the efficacy of utilizing PALS when compared to a traditional transducer.*Methods:* This abstract is part of a currently ongoing (n = 300), double blinded controlled study. The system was constructed such that the PALS can be enabled (parametric condition) or disabled (non-parametric condition). Under non parametric condition, the system acts like a traditional omnidirectional transducer.*Results:* We present the initial analysis of the data available from some subjects with normal hearing (n = 10) and mild hearing loss (n = 10). Free-field hearing thresholds and speech discrimination scores in +10 dB SNR using recorded NAL-AB words were studied in both the transducer conditions. The order of transducer conditions were randomized such that both the subject and the tester were blinded to the condition being tested. Parametric condition resulted in a significantly improved (>30%) speech discrimination scores in both the groups tested.*Conclusion:* Results of this small sample data available so far are in support of PALS for superior audibility as well as speech intelligibility. Further data collection is under way from a population of normal hearing and various degrees of hearing loss.

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ID: IP062**Factors Affecting Attitudes towards Loss of Hearing in Individuals with Unilateral Hearing Loss**Presenting Author: **Eu Chin Ho**

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*Tan Tock Seng Hospital**Learning Objectives:* To identify the factors that affect attitudes towards unilateral hearing loss.*Background:* The present study is aimed at investigating if attitudes towards loss of hearing (ALHQ) questionnaire subscale scores in unilateral hearing loss participants are comparable to the established normative data, and also to study if age, gender, duration, tinnitus, cause and degree of hearing loss have any effect on their attitudes.*Participants:* A total of 29 unilateral sensorineural hearing loss case files from both genders (11 male, 18 female) with a mean age of 56.3 years were reviewed retrospectively.