

XXXI Bány Society MEETING



MADRID, MAY 9th-11th 2022

CP01



CONTROVERSY PANEL FORM

- MODERATOR'S NAME and SURNAME: Tetsuo Ikezono
- MODERATOR'S E-MAIL: ikez@saitama-med.ac.jp
- ACADEMIC/HOSPITAL AFFILIATION: Saitama Medical University Faculty of Medicine, Otorhinolaryngology,
- SESSION TITLE: Perilymphatic fistula, The New Era

2 SPEAKERS PER CONTROVERSY PANEL:

- SPEAKER 1

NAME AND SURNAME: Todt Ingo
TOPIC DESCRIPTIVE TITLE: CTP evaluation in cases of sudden hearing loss and RW/OW revision
ACADEMIC / HOSPITAL AFFILIATION: Bielefeld University, Germany

- SPEAKER 2

NAME AND SURNAME: Eduardo Martin-Sanz
TOPIC DESCRIPTIVE TITLE: Changes in auditory and vestibular function after PLF management
ACADEMIC / HOSPITAL AFFILIATION: European University. University Hospital of Getafe

- **A BRIEF (<300 WORDS) DESCRIPTION OF THE THEME AND TARGET AUDIENCE:**

THEME: we discuss the resemblances and differences of otic capsule dehiscence syndrome (OCDs) and perilymphatic fistula with perilymph leakage (PLF w/leakage), clinical characteristics of PLF w/leakage and treatment strategies.

Target audience: Neuro-otologists, Ear surgeons.

PLF is defined as an abnormal communication between the perilymph-filled space and the middle ear, or cranial spaces. By this definition, OCDs and PLF w/leakage both belong to the same clinical entity "PLF". The diagnosis has been established in OCDs, which has typical symptoms and CT findings. On the other hand, the clinical entity of PLF w/leakage has remained a topic of controversy for more than 50 years due to the lack of an appropriate biomarker to detect perilymph leakage.

We have reported a clinical test for the diagnosis of PLF by detecting a perilymph specific protein, CTP (Cochlin-tomoprotein), as a diagnostic marker using ELISA. The ROC curve in differentiating the perilymph leakage condition from the normal middle ear was significant ($P < 0.001$) with an area under the curve (AUC) of 0.918 (95% CI 0.824-0.100). Diagnostic criteria using CTP has been established, and the test is available nationwide in Japan.

The manifestations of PLF w/leakage include a broad spectrum of neuro-otological symptoms such as hearing loss, vertigo/dizziness, disequilibrium, aural fullness, tinnitus, and cognitive dysfunction. This makes the diagnosis difficult. Typical symptoms and signs among CTP positive cases will be discussed.

It is noteworthy that, unlike other causes of sensorineural hearing loss and dizziness, PLF w/leakage is surgically correctable by sealing the fistula. By sealing the fistula, PLF is a surgically correctable disease. Also, appropriate recognition and treatment of PLF can improve a patient's condition and hence, the quality of life.

- **A 150-WORD ABSTRACT FROM EACH OF THE SPEAKERS:**

ABSTRACT 1

Introduction: Sudden sensorineural hearing loss (SSNHL) is assumed to be multicausal and has often been associated with PLF. Although RW/OW closure is regularly performed in the treatment pathway of SSNHL in many departments in Germany, so far no evidence was given of the existence of a PLF. The aim of the present study was to evaluate SSNHL cases for CTP.

Material and Methods: We evaluated 21 cases of SSNHL for CTP after performing an unsuccessful steroid treatment. During a RW and OW closure, middle ear fluid was taken for CTP evaluation. Additionally, controls were taken from inner ear, middle ear and mastoid cavity (N=10).

Results: We observed a rate of 28,5 % (6 out of 21) positive CTP cases. In 9 cases the results was intermediate. In the group of CTP positive cases, the occurrence of vertigo was more frequent, and the probability of an increase of the PTA after the RW closure higher. All controls were in line with the clinical expectation.

Conclusion: CTP is a promising tool for the objective evaluation of PLF

ABSTRACT 2

The typical PLF present with a sudden onset of hearing loss, vertigo or disequilibrium. Associated trauma includes surgery, head blows or barotrauma. Some patients are idiopathic. A classification based on the preceding events is utilized in our clinic. There is a similarity in symptoms with Meniere's disease, superior canal dehiscence syndrome.

Currently, studies employ clinical symptoms / histories as the tool to suspect PLF. We have recently included typical symptoms such as popping sound on the onset, stream water-like tinnitus in patient interview. Four PLF associated with stapedotomies, 4 cholesteatoma, 2 due to internal barotraumatic events and 2 idiopathic cases were analyzed. Auditory and vestibular test were performed, with a significant improvement of both vestibular and auditory function after its surgical or clinical management. We found above mentioned typical symptoms were crucial for suspecting / diagnosing PLF.