DIAGNOSIS OF EARLY ENDOLYMPHATIC HYDROPS

Hani El Garem 1, Mona Mourad 1
Alexandria Medical School, Alexandria, Egypt

OBJECTIVE
It is difficult to identify patients with endolymphatic hydrops (ELH) in the early stages when the presentation of the classic triad of tinnitus, fluctuating hearing loss, and episodic vertigo is incomplete. Consequently, delays in diagnosis and subsequent treatment may lead to fluctuating progressive sensorineural hearing loss and recurring vertigo, which may be incapacitating. Ear fullness may be a very early symptom though it is not salient. Therefore, the relation between the sense of fullness and possible hydrops may be unveiled if ear fullness is associated with enhanced SP/AP ratio on electrocochleography (ECochG) which is consistently present in patients with established Meniere’s disease.

METHODS
The present study was carried out in the Department of Otalaryngology, Head and Neck surgery, University of Alexandria between January 2010 and January 2011. The material consists of 30 cases divided as:

Group I: Twenty patients with normal hearing and complaining of sense of pressure (ear fullness) with no history of Eustachian tube dysfunction and with or without history of vertigo.

Group II: Ten persons as normal controls.

Full history taking, otological, audiological examination and cochlear electrophysiology assessment were done to all patients in the two groups.

Audiological assessment:
- Pure tone audiometry.
- Impedance tympanometry.
- Speech audiometry.
- ECochG.

ECochG was done to all patients for both ears. An SP/AP ratio of 0.30 was used in this study as the cut-off point to differentiate normal persons from subjects with ELH.

RESULTS
In Group I (n=20):

- Unilateral aural fullness cases (n=5) was present in (25%) of cases while bilateral aural fullness cases (n=15) was present in (75%) of cases. ECochG: The affected ears (n=35) showed SP/AP ratio ranged from 0.3-1.85 with a mean of 0.655±0.325.

In Group II (n=10)

- ECochG: The SP/AP ratio was ranged in 20 ears from 0.25-0.29 with a mean of 0.27±0.11.

There was a significant difference between the SP/AP ratio in the affected ears in Group I and in normal controls (P<0.001).

Conclusion
The isolated symptom of ear fullness can be a sign of early ELH confirmed by ECochG which is a reliable and highly specific tool leading to early treatment and stabilization of the condition.