

Abstract – HMAA 2019

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Title of Presentation: Selective epitympanic dysventilation syndrome

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Introduction: There are three factors which effect the ventilation of the middle ear: the eustachian tube function, the buffer function and the transmucosal gas exchange of the middle ear. The eustachian tube plays a role in the middle ear's ventilation and keeps up the atmospheric pressure. The disorder of the eustachian tube function causes negative middle ear pressure leading to chronic diseases. The anatomic knowledge through endoscopic ear surgery could help to find a new factor, namely the blockage of the ventilation pathways causing a selective epitympanic dysventilation syndrome.

Methods: Cadaver dissections were carried out with endoscopic technique. During the dissections new anatomic structures were identified - epitympanic diaphragm, the tensor fold, and the isthmus- which play a role in the ventilation of the middle ear.

Results: A photo documentation was prepared about each step of the dissections. The anatomic structures involved in the dysventilation syndrome were identified. Graphic pictures were drawn of the middle ear endoscopic anatomy.

Conclusion: Selective epitympanic dysventilation syndrome may evolve even if the eustachian tube functions are well, but the ventilation pathways are blocked. The syndrome can be diagnosed when 4 symptoms persist paralelly: 1) attic retraction pocket or cholesteatoma, 2) type "A" tympanogram or a normal eustachian tube function test 3) total epitympanic diaphragm 4) isthmus blockage. Discovering the syndrome and recovering ventilation in the middle ear could prevent the development of pathological diseases.