CONCEPTS OF FUNCTIONAL ENDOSCOPIC EAR SURGERY

João Flávio Nogueira, MD
Sinus & Oto Centro - Fortaleza, Brazil

DISCLOSURE

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WHERE I AM FROM

www.sinuscentro.com.br

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Joseph Toynbee
1815 - 1866

The healthy middle ear is a sterile site

Ventilation
Muco-ciliary
Immunological

Innate immunity
- Muco-ciliary clearance
  - Mucins
  - Surfactant
  - Aquaporins
- Peptides and Antimicrobial Proteins
  - Lysozyme (Lz)
  - Lactoferrin (Lf)
  - Defensins
  - Collectins and surfactant (SP-A, SP-D)

Available at: http://flylib.com/book/en/2.953.1.20/1/
Differences of the Nose-Pharynx-Tube-Tympanum-Mastoid Unit

Ventilation

Embriological pathway

The Embriology

Between the third and seventh foetal month the gelatinous tissue of the middle ear cleft is gradually absorbed. At the same time the primitive tympanic cavity develops by a growth into the cleft, of an endothelial lined fluid pouch extending from the eustachian tube. Four primary sacs or pouches then bud out. They are saccus anticus, saccus medius, saccus superior and saccus posticus (Hammar, 1902). Where these pouches contact each other mucosal folds are formed. Between the mucosal layers of the folds are remnants of the mesoderm, including blood vessels supplying the “viscera” of the tympanic cavity.

Hammar JA
In this sense we can define the intratympanic ventilation routes as the result of the path travelled by four pockets of the middle ear embryological cavitation process.
The tympanum is a single, large air cell that contains the ME ossicles.

The MACs are multiple partitioned cellular airspaces that increases ME volume.
Small mastoid volumes tend to cause greater changes in pressure.

History of Otologic Surgery

- 1921 – Microscope in otology
  – Carl Olof Nylen (Sweden)
- 1950 - Drills

History of Otologic Surgery


Endoscopic Otologic Surgery

Myringoplasty
Endoscopic cochlear implantation – a new procedure, primary results.

Mazen M Alhajri MD
FRACP, FRCSI, FRCSED, MSc, PhD
FNT consultants. The prince medical specialists
Nabyl charity organization (medical camps md)
Alhajri@iolfree.ae

Koerner’s efforts at entering the attic and antrum through the external auditory canal cannot help but arouse our interest. The day may be near, with our increasing knowledge of these parts and improved technique, when this operation will not be considered as ill advised to avoid under certain conditions the more radical and disfiguring procedure against the mastoid cells. Its analogy to vaginal hysterectomy and ovariectomy is interesting.
"In clear contrast to the impact of the introduction of endoscope in most surgical disciplines, the practice of ear surgery has changed little and it continues to be the domain for the microscope. Depending on the task at hand, there are many distinctions that would make the endoscope a better instrument than the microscope and vice-versa.

We all need to master working with both instruments to better understand and treat pathologies of the ear.

The objective of the IWGEES is to neutralize these longstanding biases toward the microscope and to get all of us to use the best instrument in the best way possible to help our patients."

Muaaz Tarabichi – American Hospital of Dubai