Transcanal Endoscopic Anatomy of the Middle Ear

M Tarabichi, Dubai, UAE
D Marchioni & L Presutti, Modena, Italy
D Pothier, Toronto, Canada

Ear Canal Anatomy

• Orientation of Canal.
• Anterior Overhang.
• Prominent Spine of Henle.
• Vascular Supply.

Orientation of Ear Canal

Positioning of Patient

• The canal should be in line of vision.
• You' got to take away the shoulder, the endoscope can be held almost parallel to patient.
Blood Vessel Bearing Tissue

Removal of Skin and Epithelial Layer of TM & Enlarging Canal

Watch out for the Neighbors

Take Down the Fibrous Layer of TM

Detach the TM Remnant from Handle of Malleus

Inspect Facial Recess
Sub Pyramidal Space

Retro tympanum

Retrotympanum

Retro tympanum

Retro Tympanum

• Oval Window.....Posterior Sinus
• Sinus Tympani
• Subtympanic Sinus.... Round Window
• Hypotympanum

Sinus Tympani

Oval Window & Posterior Sinus

Sinus Tympani

Subtympanic Sinus & Round Window

Oval Window & Posterior Sinus

Subtympanic Sinus & Round Window

Oval Window & Posterior Sinus
Sinus Tympani

Ponticulus

Round Window

Retro To Hypo-tympanum

Retro to Hypo-Tympanum
Subiculum: Inferior Limit to Sinus Tympani

Finniculus & Subtymppanic Sinus

Lateral Incudo-Malleolar and Malleolar Folds

Retro to Hypo-Tympanum

Moving up to the Attic

Anterior Epitympanic Space
The Attic

Moving Anteriorly

ET Tube

Supratubal Recess and Tensor Fold

Flat Tensor Fold
= No Supratubal Recess

The Epitympanic Diaphragm
The Narrow Isthmus

Incus Removed

Head of Malleus Removed

Attic & Upper Mesotympanum

Facial Nerve