TUMORS OF
THE MIDDLE EAR

Mokhtar Bassiouni
• The most common benign tumor of the ME is glomus tumor

While

• The most common malignant tumor of the ME is Squamous cell carcinoma
GLOMUS JUGULARE

• **Definition:** rare, benign, encapsulated, slowly-growing, highly vascular, and locally invasive tumor arising within the jugular foramen of the temporal bone

• **Synonyms of glomus tumors:**
  – Chemodectoma
  – Non-chromaffin paraganglioma

• **Incidence:**
  – More common in females (Female : male = 6 : 1)
  – More common on the left side
  – Commonest age: 40-60 y
  – Multi-centric in 10% of cases
  – Although rare, glomus tumors are the most common tumor of the middle ear
GLOMUS JUGULARE

- **Origin:** Arises from glomus bodies (collection of chemoreceptor cells) located in:
  - The adventitia of the dome of the jugular bulb (*Glomus Jugulare*).
  - Along the branches of the tympanic plexus (*Glomus tympanicum*).

- **Histology:** dense network of thin walled sinusoidal capillaries surrounding nests of tumor cells
GLOMUS JUGULARE

Clinical Picture:
Symptoms: (arranged chronologically)

1. Pulsating tinnitus (earliest symptom)
   a) Pulsatile or blowing in character
   b) Synchronous with the pulse
   c) Relieved by pressure on the neck great vessels
2. Hearing loss (progressive)
3. Spontaneous bleeding per ear
4. Facial palsy in late cases
5. Jugular foramen syndrome (lower cranial nerve palsies and Horner’s syndrome)
GLOMUS JUGULARE

Clinical Picture:

Signs:

1. TFTs: Conductive hearing loss
2. Otoscopy:
   • Reddish or bluish mass behind the TM (sunset appearance)
   • Pulsatile bulge of the TM
   • Blanches on seiglization
   • Bleeding polypus in the EAC
Reddish or bluish mass behind the TM
Sunset appearance
Sunset appearance
Sunset appearance
Pulsatile bulge of the TM
Bleeding polypus in the EAC
GLOMUS JUGULARE

Clinical Picture:

Signs:

1. TFTs: Conductive hearing loss
2. Otoscopy:
   - Reddish or bluish discoloration of the TM (sunset appearance)
   - Pulsatile bulge of the TM
   - Blanches on seiglization
   - Bleeding polypus in the EAC
3. Manifestation of nerve palsies (late)
GLOMUS TUMORS

TREATMENT

• Glomus tympanicum: Excision via tympanotomy or tympano-mastoidectomy
• Glomus jugulare: Lateral Skull Base /Infratemporal fossa approaches
  – May be preceded by embolization of feeding vessels
• Non-operable: Irradiation and/or embolization.
Infratemporal Fossa Approach - Type A