HEAD AND NECK TUMORS II[1]

TUMORS OF THE EAR

EXTERNAL EAR

-The cause not known until now.

- The most common is basal cell carcinoma

- **Basal cell carcinoma**
    - Most common in the pinna
    - The main cause is sun exposure
    - Sometimes may invade the temporal bone
    - Does NOT metastasis to the neck lymph nodes
- May confuse with OE there may be palsies of VII & VIII cranial nerves.
- **Squamous cell carcinoma**
    - Most common in external ear canal
    - Metastasis to the neck lymph nodes
- Treatment for both BBC and SCC
    - Surgical resection + [neck dissection and dressing in SCC]
    - Radiation (alternative therapy)
    - do temporal bone exploration

- Osteoma and exostosis are benign bony growth in the external auditory canal.

[1] Special Thanks for Turki AlDakhil for his help.

Pedunculated	Single	Unilateral	Osteoma
Broad- base	Multiple	Bilateral	Exostosis

- treatment : nothing until there any obstruction.

MIDDLE EAR

- **Paraganglioma** is the most common neoplasm of middle ear.
- Many types , two of them are Glomus Tympanicum and Glomus juglary
- Glomus Tympanicum
    - from promontory of ear [vascular tumor]
    - most common symptom is pulsatile tinnitus
- Glomus juglary
    - From jugular foramen at skull base
    - Most important sign is brown sign

    Q. How to differentiate between brown sign and hemotympanum ?

    A. Brown sign ➔ after using pneumoscope & it is disappear .
- Treatment :

    1- Surgery [trans canal or trans mastoid or through the neck(cervical)]

    2- Radiation (in case of irresectable tumor or patient is old)

    3- Observation.
- The structures passing through jugular foremen

    1- IX , X , XI cranial nerves

    2- Sympathetic chain

    3- Internal jugular vein

PETROUS APEX AND CLAVIUS

- The most common benign tumor at petrous apex is **cholesterol granuloma** it is expansile lesion.
- Result from bleeding or closure in drainage of the ear (may be inner ear) which result in hemoglobin change and cholesterol deposit
- MRI ➔ it appear **anteriorly** in the petrous apex (high intense)
- Rx : no symptoms observe , Surgical drainage (cannot be excised)

INTERNAL AUDITORY CANAL , CEREBELLOPONTINE ANGLE

- Shwanoma
  - comes from sheath at 8th cranial nerve
  - The most common tumor of the inner ear
  - MRI ➔ it is located **posteriorly**

- **Rx** : surgery if there symptoms.

TUMORS OF THE NOSE AND PARA-NASAL SINUS

- the nose : 50% benign , 50% malignant (confusing)
- Paranasal sinus : the most common is malignant
- The most common site of malignancy is **maxillary** sinus then ethmoid .
- **NOT** related to smoking or alcohol [are not risk factors]
- The risk factors are wood and nickel
- The most common presentation is unilateral nasal symptoms ➔ like unilateral nasal obstruction (on examination you will find unilateral nasal polyp)

BENIGN LESIONS

1- ***Papilloma***

- 3 subtypes
    1- Fungiform : the most common 50% [usually in the nasal septum]
    2- Cylindrical [lateral wall]
    3- Inverted [lateral wall]
- High risk to develop malignancy (need follow-up)
- Treatment : surgery (FESS), bilat rhinotomy , trans nasal resection.

2- ***Osteoma***

- Benign bony tumor
- The most common location is **frontal**
- Treatment : do **NOTHING** unless there is symptom (headach , recurrent sinusitis) then you have to do local excision

3- ***Fibrous dysplasia***

- Transformation of normal bone [with collagen & fibrous]
- 2 subtypes
    1- Monostotic (Involving a single bone) [80%]
    2- Polystotic (Involving many bones).
- Treatment : surgical excision
- risk of malignant transformation

MALIGNANT LESIONS

1- ***Squamous cell carcinoma***

- The most common tumor , then adenoid cystic CA due to the presence of small minor salivary gland.
- The most common site is **maxillary**
- Very aggressive (extend to the eye ..) by local expansion.
- Only SCC in the head & neck that don't have lymph node changes.
- Staging [Ohngren's line]
    - There is an imaginary oblique line across the nose (through inner canthal)
    - If the tumor (above) this line ➔ poor prognosis
    - If the tumor (below) this line ➔ better prognosis
- Treatment : aggressive surgical excision (remove nasal septum , lamina papyracea)

2- ***Olfactory neuroblastoma***

- Originate from olfactory nerve (from neural crest)
- 3 stages [kadish classification]
    1- Stage A : in the nose
    2- Stage B : in paranasal sinus
    3- Stage C : in the orbit or skull base
- Treatment : aggressive surgical excision and post op. therapy
- N.B. staging in the nose is according to the location

TUMORS AT ORAL CAVITY

- The risk factors are smoking , alcohol & HPV (subtype 16).
- Diagnosis (evaluation) : Hx , Ex , DDx , investigations (tissue biopsy + CT)
- The most common site is the tongue.
- Pre-malignant lesion
    1- Leukoplakia ➔ in the buccal area
    2- Erythroplakia
    3- Submucous fibrosis
- Malignant lesion :
    - SCC is the most common
- Treatment
    - Early : surgery or radiation [single modality]
    - Late : surgery with radiation OR chemotherapy with radiation

TUMORS OF THE PHARYNX

1- Nasopharynx

- Very common in KSA
- SCC is the most common because the lining of the pharynx is squamus epi
- 3 subtypes
    1- Keratinized
    2- Non-keratinized
    3- Un-differentiated [the best Prognosis]
- Risk factors
    - o Viruses [HPV , EBV]
    - Genetics [Chinese]
- - The first most common presentation is neck mass [level V – in the post. Triangle]
- The second most common presentation is an adult with unilateral OME
- Treatment : [no role of surgery]
    - Early : radiation
    - Late : radiation and chemo

2- Oropharynx

- Components of Oro-pharynx
    1- Tonsils
    2- Tongue base
    3- Soft palate
    4- Posterior pharyngeal wall
- Risk factors ➔ smoking and alcohol

- Like oral cavity : 3 pre-malignant lesions and 1 malignant lesion (SCC)
- Treatment : like oral cavity

3- hypopharynx (or laryngopharynx)

- The 2nd most common head and neck tumor & associated with Plummer- Vinson syndrome.
- Between hard palate & hyoid bone
- SCC is the Most common
- Risk factors ➔ smoking and alcohol
- Components of hypo-pharynx
    1- Piriform sinus (the most common site)
    2- Post-cricoid area
    3- Posterior pharyngreal wall
- The most important about these tumors that they usually have sub-mucusal spread ➔ we excise the lesion with safe margin , then do histopathology
(it become is positive [contain tumor cells])
- Treatment : like oral cavity
- The nasty surgery because you should excise the adjacent structure as larynx.

LARYNGEAL TUMORS

- 3 parts of larynx
    1- Supra-glosttic
    2- glottic
    3- infra-glottic
- The 1st most common head and neck tumor
- **SCC**
    - is the most common
    - the most common site is glottis area
    - Risk factors ➔ smoking , alcohol , acid reflex (metaplastic changes), HPV
    - Treatment : as oral cavity
- **Laryngeal papillomatosis**
    - The most common benign laryngeal tumor
    - Caused by viruses (HPV)
    - [The most common subtypes of HPV are 6 and 11 but 16 and 18 are more common to develop malignant transformation]
    - The most common site is ① vocal folds and ② sub-glottic area
    - Common in pediatric age group (because cervix is usually infected with HPV , so the virus transmit during birth)
    - It is benign but sometime it become malignant
    - Investigations : biopsy

- Treatment of benign tumor.

  Surgery

  a- Laser (the main treatment)

  b- Microdoplizer

-- Adjuvant treatment:

1- Interferon

2- Intra-lesional acyclovir

3- Vitamin A

4- Photodynamic

:: VERY IMPORTANT NOTES ::

- Staging
  - For nose and larynx ➔ by location
  - For oral cavity and pharynx ➔ by size
- The most common tumor of (oral cavity, pharynx, larynx) is SCC
- Treatment of SCC at (oral cavity, Oropharynx, hypopharynx, larynx)
  - Early stage ➔ surgery or radiation
  - Late stage ➔ surgery and radiation OR chemo with radiation

** When you consider open biopsy in the neck?
1- If FNA not conclusive
2- FNA at least 3 times ➔➔ pathologist may consider lymphoma [cannot confirm diagnosis].

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