**\*ANATOMY \* PARANASAL SINUSES \* LEC.18**

- **Paranasal sinuses:** 🡪 4 pairs  
 🡪 they are developed from nasal cavity  
 🡪 they drain in the nasal cavity  
 🡪 they are evagination from the nasal cavity, so they drain in it  
 🡪 they communicate with nasal cavity through nasal opening “**aperture**”   
 🡪 their problem: they drain through **small** opening leading sometimes to “**sinusitis**”  
  
- **Functions:**  
 🡪**note**: changing of the voice during flue is the result of closure of the sinus by mucous   
 resulting in tiny aperture 🡪 preventing resonance of sound.  
 🡪 we can determine the shape of the face after 7 years, because these sinuses are rudimentary   
 at early age, but at 7 years they are mature helping us determining the shape of the face.  
  
- **Mxillary sinus:** 🡪It has a thin bony wall “3omarak la tensaha”  
 🡪 it looks like a pyramid on it’s side  
 🡪 **ostium**: is a small opening located on the highest point of it’s base “problem”, because   
 it can’t evacuate it’s content until it’s filled  
 🡪 if we wait it till being full, this will cause severe pain because of concentrated mucous that   
 compress the nerve endings  
 🡪 tooth extraction at the floor of this sinus mus be meticulous, to prevent reaching sinus therefore preventing transmission of dental caries.  
 🡪 we mustn’t do tooth implantation after extraction directly, we must wait for bone to be healed or formed.  
 🡪 anterior wall of the maxilla is thin, thin, thin  
 🡪 dental caries **may** affect the ptyrigopalatine ganglion because If we weren’t careful in tooth  
 extraction, it will affect it posteriorly .  
   
- **Slide #5:** 🡪 notice : - maxillary artery  
 - third division gives first branch which is posterior superior alveolar artery   
 - infraorbital artery gives (middle and anterior) superior alveolar artery  
 - post./ant./middle superior alveolar arteries are for upper teeth and supply the maxillary   
 sinus as well  
 - accurately which supply max. sinus are: 1. Post. Sup. alveolar A.  
 2. Middle sup. alveolar A.  
 3. Infraorbital A.  
  
  
  
  
  
  
- **Slide #8: مهم مهم مهم**  
 🡪 notice: - trigeminal nerve  
 - mandibular nerve  
 - ophthalmic nerve  
 - maxillary nerve (V2): - enters through foramen routandum  
 - then to the pterygopalatine fossa ”ganglion”  
 - within this fossa, it gives: 1. Lesser palatine nerve  
 2. Greater palatine nerve

- infraorbita nerve before entering certain space, it gives the upper dental nerve which is  
 the posterosuperior alveolar nerve 🡪 post. Sup. alv. Foramen🡪 then passin within  
 the wall supplying certain teeth + MUCOSA of maxillary sinus.  
  
 - Again: 🡪 infraorbital nerve before entering the inferior orbital fissure gives “dental N.”  
 🡪 In the inferior orbital fissure, it gives the middle, passing in the wall supplying  
 mucosa.  
 - pain in the maxillary sinus will be transmitted through: - poaterior….  
 - middle …  
 - infraorbital مهم  
- **Growth of maxillary sinus:**  
 🡪 Frontal sinuses at birth are abscent  
 🡪 maxillary permenant dentition = second dentition  
- **Frontal sinus:**  
 🡪 Pain as a result of compressing the mucous membrane of the frontal sinus will be carried by  
 supraorbital nerve 🡪 migraine   
- **Relations of sphenoid sinus:**  
 🡪 If infection transmitted from sphenoid sinus to cavernos sinus, it will cause meningitis   
 🡪 some times the epithelium of the sphenoid sinus is eroded by infection affecting the pituitary gland  
 therefore resulting in deficiency in GH 🡪 dwarfism.  
 🡪 infection may also affect the optic chiasma, affecting the vision 🡪 blindness  
- **Ethmoid sinus**:  
 🡪 3 im #  
 🡪 3 sets of nasal sinuses  
 🡪 anterior one drains into infundibulum  
 🡪 middle one drains on the SURFACE of bulla  
  
- Notes: \*\* full gear of enlargement at 7 years  
 \*\* spurts 🡪 eruption   
  
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