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COURSE CODE: ANA 301

ASSIGNMENT TITLE: Assignment 2

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**QUESTION 1: Write an essay on the cavernous sinus.**

 The cavernous sinus is one of the dural venous sinuses of the head. The cavernous sinuses are large venous plexuses of the head which are located on each side of the sells turcica on the upper surface of the body of the sphenoid which contains the sphenoidal sinus.

 The cavernous sinus consists of a venous plexus of extremely thin-walled veins that extends from the *superior orbital fissure anteriorly* to the *apex of the petrous part of temporal bone posteriorly*.

It receives blood from:

1. Superior and inferior ophthalmic veins
2. Superficial middle cerebral vein
3. Spheno-parietal sinus.

 These venous channels in these sinuses communicate with each other through venous channels anterior and posterior to the stalk of the pituitary gland--- the ***intercavernous sinuses*** and sometimes through the veins inferior to the pituitary gland.

 It drains postero-inferiorly through:

1. Superior and inferior petrosal sinuses ultimately into the IJV- Internal Jugular Vein via the sigmoid sinus.
2. Emissary veins to the *basilar and pterygoid plexuses*.

NOTE THAT:

* Although the cavernous sinus is the only anatomical location in the body in which an artery travels completely through a venous structure. If the internal carotid artery ruptures within the cavernous sinus, an arteriovenous fistula is created (more specifically, a ***carotid cavernous fistula***). Lesions affecting the cavernous sinus may affect isolated nerves or all nerves transversing it. This is said to be an **applied anatomy of the cavernous sinus**.
* ***Cavernous sinus syndrome*** may occur by the lesion of the cavernous sinus and it may result from mass effect of these tumors and cause ophthalmoplegia (from compression of the occulomotor, trochlear and abducens nerves), ophthalmic sensory loss (from compression of ophthalmic nerve), maxillary sensory loss (from compression of maxillary nerve). This is also an **applied anatomy of the cavernous sinus**.

**QUESTION 2: Discuss the walls of the nose**.

 The nose which is the principal organ for breathing has a cavity. The nasal cavity is the large internal space located in the nose and it is divided into *right and left cavities* by the **nasal septum**. However, this nasal cavity has walls, and they are:

1. Medial wall (septum)
2. Lateral wall.
* MEDIAL WALL:

 The medial wall of the nasal cavities of the nose is formed by the *nasal septum*. The nasal septum is what that divides the nose into 2 cavities and it is a structure consisting of both **bony and cartilaginous** components.

* The **bony components** are:
1. The perpendicular plate of the ethmoid bone superoinferiorly
2. The vomer posteroinferioly
3. The crests of the maxillary bone anteroinferiorly
4. The crest of the palatine bone inferior to the vomer.
* The **cartilaginous component** is:

 The *septal cartilage*, which divides the nasal cavity into two halves. The antero-inferior part of the cartilage has an expansion known as the 'footplate' which lies in free contact with the membranous septum. This cartilage is expanded also in other regions with the lateral wall cartilage termed the posterior process. The cartilage is adhered to the nasal bone by taut collagen fibers. It is also termed the '*quadrangular cartilage*' due to its shape.

* LATERAL WALL:

 The lateral wall of the nasal cavities are irregular owing to the three bony plates, the **nasal conchae** (superior, middle and inferior) which projects inferiorly, somewhat like louvers or short curtains.

NOTE THAT:

The nasal cavity also has a *roof and a floor*.

* The **roof** of the nasal cavities is curved and narrow, except at its posterior end where the hollow *body of the sphenoid bone* forms the roof. It is divided into three parts (frontonasal, ethmoidal and sphenoidal) named from bones forming each part.
* The **floor** of the nasal cavities is wider than the roof and it is formed by the *palatine processes of the maxilla and the horizontal plates of the palatine bone* andthis makes up the hard palate of the roof of the mouth.