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VIVA : ANATOMY

SUBMITTED TO : SIR WAQAS

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INU PESHAWAR.

QUESTION NO: 1

Write a note on the structure of Human Ear.

ANSWER:

STRUCTURE OF HUMAN EAR:

EAR:

⇒ The ear is the organ for hearing.
⇒ It is divided into three parts.

1. Outer Ear
2. Middle Ear
3. Inner Ear

1: OUTER EAR:

⇒ It is the external portion of the ear.

It consists of the following parts.

a. PINNA OR AURICLE:

It receives sound waves that travel through the auditory canal or ear canal.

b. HELIX:

The pinna consists of the curving

outer rim called helix.

c. AUDITORY CANAL OR (EAR CANAL):

⇒ Acts as a funnel with an length of 2.5cm and leads to ear drum.
⇒ It also protect the eardrum from shock and intrusion by external objects.

d. CONCHA:

⇒ The hollow region in front of the ear canal is called concha.

e. CARTILAGE:

⇒ The first part of the canal is surrounded by cartilage and the second part near the eardrum is surrounded by bone.

2: MIDDLE EAR:

The middle ear lies between the outer and inner ear.
It transfers the energy of a sound wave by vibrating three bones found there.

a. EARDRUM:

It is very sensitive.

⇒ It is cone-shaped piece of skin about 10 mm wide.
⇒ It separates the outer ear from the middle ear.

2: OSSICLES:

Smallest bones in the body eardrum.

1. MALLEUS (HAMMER):

⇒ Small bone
⇒ Hammer shaped
⇒ It connects with incus and is attached to the inner surface of the eardrum.

2. INCUS (ANVIL):

⇒ Tiny bone that passes vibrations from hammer to stirrup.

3. STAPES (STIRRUPS):

⇒ small bone
⇒ U-shaped
⇒ Passes vibrations from the stirrup to the cochlea.

3: EUSTACHIAN TUBE:

⇒ A tube that connects the middle ear to the back of the nose
⇒ It equalizes the pressure between the middle ear and the air outside.

INNER EAR:

It consists of the following parts.

a. COCHLEA:

⇒ It is a spiral tube that is covered in a stiff membrane.

⇒ Contains thousands of hair cells

⇒ It attached to the end of the organ of the auditory nerve called Organ of Corti.

b. THE AUDITORY NERVE:

⇒ The tiny hair cells of the cochlea are set in motion by vibrations.

⇒ These vibrations stimulate tiny nerve cells.

⇒ The nerve cell then send signals along the auditory nerve to the brain.

QUESTION NO: 2

What do you know about Sub mandibular and Sub lingual glands?

ANSWER:

1: SUBMANDIBULAR GLAND:

INTRODUCTION:

⇒ These are bilateral salivery glands.
⇒ The submandibular gland is located in the face.
⇒ Their mixed serous and mucous secretions is important for the lubrication of food during mastification.

STRUCTURE OF SUBMANDIBULAR GLAND:

⇒ It lies superior to the digastric muscles
⇒ Each submandibular gland is divided into.

1: SUPERFACIAL LOBE:

The superfacial lobe comprises most of the gland with the mylohyoid muscles runs under it.

2: DEEP LOBE:

The deep lobe is the smallest part.

FUNCTION:

➡ It is essential for digestion and for maintaining a healthy mouth.
➡ Saliva contains enzymes that break down food before it passess to the stomach
➡ It moistens food so that it slips easily down the esophagus.

NERVE SUPPLY:

Submandibular Ganglion

ARTERY:

Glandular branches of facial artery

2: SUBLIGUAL GLANDS:

INTRODUCTION:

⇒ Almond Shaped
⇒ It lie on the floor of the oral cavity.
⇒ Situated underneath the tongue

LATERALLY:

Laterally by the mandible.

MEDIALLY:

Medially by genioglossus muscle of the tongue.

SUBLINGUAL FOSSA:

The glands form a shallow grove on the medial surface of the mandible known as the Sublingual fossa.

STRUCTURE OF SUBLINGUAL GLANDS:

➡ The Sublingual gland lie anterior and superior to the submandibular gland.
➡ Inferior and lateral to the tongue as well as beneath the mucous membrane of the floor of the mouth.
➡ They are bounded laterally by the bone of the mandible and inferolaterally by the mylohyoid muscle.

BLOOD SUPPLY:

Sublingual artery (branch of lingual artery of external carotid artery)

NERVE SUPPLY:

Submandibular Ganglion

QUESTION NO: 3

Why stone formation is more common in the submandibular gland than other salivary glands?

ANSWER:

STONE FORMATION IN SUBMANDIBU--LAR GLAND:

Stones formation occurs most commonly in the submandibular gland for many reasons.

REASONS:

➡ The concentration of calcium in saliva produced by the submandibular gland is twice that of the saliva produced by the parotid gland.

➡ The submandibular duct is long, means that saliva secretions must travel further before being discharged into the mouth.

➡ The duct possesses the two bends, the first posterior border of the mylohyoid muscle and the second near the duct orifice.

➡ The flow of saliva from the submandib-ular gland is often against gravity due to variations in the location of the duct orifice.

➡ The orifice itself is smaller than that of parotid.

➡ These factors all promote slowing and stasis of saliva in the submandibular duct making the formation of an obstruction with subsequent calcification more likely.

QUESTION NO: 4

What do you know about the vertebra's of the human skeleton. Explain in details.

VERTEBRAE:

INTRODUCTION:

➡ Vertebrae are the 33 individual bones that interconnected with each other to form the spinal column.

➡ The vertebrae in the human vertebral column are divided into different regions which correspond to the curves of the spinal cord.

➡ Only 24 bones are movable the vertebrae of the sacrum and coccyx are fused.

DIVISION OF VERTEBRAE:

The vertebrae are numbered and divided into regions

- Cervical
- Thoracic
- Lumbar
- Sacrum
- Coccyx.

The vertebrae in each region have unique features that help them to perform their main function.

1: CERVICAL (NECK):

⇒ The main function of the cervical spine is to support the weight of the head.

⇒ The seven cervical vertebrae are numbered C1 to C7.

⇒ Cervical vertebrae are the thinnest and most delicate bones.

⇒ C1 vertebrae is ring-shaped that connects directly to the skull.

⇒ C2 vertebrae is peg-shaped axis which has a projection called the odontoid.

2: THORACIC (MID BACK)(12):

⇒ The main function of the thoracic spine is to hold the ribcage and protect the heart and lungs.

⇒ The range of motion in the thoracic spine is limited.

⇒ The twelve thoracic vertebrae are numbered T1 - T12.

3: LUMBAR (LOW BACK) 5:

The main function of the lumbar spine is to bear weight of the body.

The five lumbar vertebrae are numbered L1 - L5.

➡ These vertebrae are much larger in size to absorb the stress of lifting and carrying heavy objects.

4: SACRUM:

⇒ The main function of the sacrum is to connect the spine to the hip bones.

⇒ There are five sacral vertebrae, which are fused together.

⇒ Together with the iliac bones they form a ring called the pelvic girdle.

5: COCCYX REGION:

➡ The four fused bones of the coccyx or tailbone provide attachment for ligaments and muscles of the pelvic floor

QUESTION NO: 5

Write about the importance of Radiology in medical field.

ANSWER:

IMPORTANCE OF RADIOLOGY IN MEDICAL FIELD:

⇒ Radiology plays a huge role in disease management by giving physicians more options, tools and techniques for detection and treatment.

⇒ Dignostic imaging allows for detailed information about structural or disease related changes.

⇒ With the ability to diagnose during the early stages, patient may be saved.

⇒ Without radiology this may not be possible.

⇒ Radiology saves lives.

⇒ Its vital role to medical care because its one of the most powerful diagnostic and treatment tools available.

⇒ Radiology is not only vital to medical care but its also one of the fastest growing careers.

➡ With more and more physicians relying on radiology its expected that this field will grow by 21% from 2012 to 2022.

END OF ASSIGNMENT....!