



IQRA NATIONAL UNIVERSITY

(ALLIED HEALTH SCIENCES)

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SUBJECT: ORAL HISTOLOGY

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PAPER

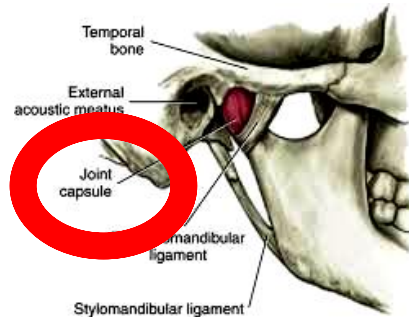
QUESTION NO 1:

❖ Fibrous capsule

- Composed of thick fibrous connective tissue & mainly present in synovial

joint

- Prevent unnecessary movement and also provide stability

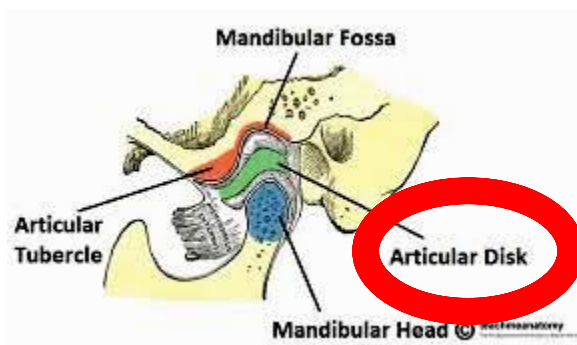


FOR EXAMPLE:

- In the TMJ it is present above to the edge of the preglenoid plane
- Below the periphery of the neck of the mandible
- Posteriorly to the squamotympanic fissure, between these to the edges of the articular fossa

❖ **Articular Disc:**

- Fibrocartilaginous pads that partially or completely divide the synovial cavity
- Improve the fit of some articular surfaces in the joint



FOR EXAMPLE:

- In the TMJ act as a shock absorber and helps in stabilize TMJ
- Oval shaped that reduces wear during movement
- Shape and thickness-Governed by muscle forces controlling position of mandible and condyle

QUESTION NO 2:

❖ CLINICAL CONSEDRATION of SALIVARY GLANDS:

- In a clinical consideration we can observe things which are related to a clinical or relating to beside of a patient course of disease, observation and treatment of patients directly.
- In clinical consedration of salivary gland, patient and doctor can facing many problems, disease, and disorders. Careful examination of a patient's medical history and profile can lend clues to dysfunction of the salivary glands because they are often associated with other systemic disorders such as hormonal imbalances, diabetes mellitus, arteriosclerosis, and neurological disorders.

For example:

- Xerostomia (dry mouth)
- Sialorrhea (increase salivary flow),
- Radiation carries (explosure of salivary gland)
- Sjogren's syndrome (inflammation of cornea & conjunctiva, dry

mouth, inflammation of joint)

- **Viral inflammation of the gland causes it to swell, resulting pain on movement of the jaw.**
- **Abscesses or cysts of the gland may result in pressure to the facial nerve.**
- **Stones or calculi in the duct can block it, causing painful swelling of the gland.**
- **Aplasia, Atresia, Stafnes cyst, Fordyce's granules, local/systemic disease, endocrine, autoimmune, infectious etc**

PAROTID GLAND

- **Because of fibrous fascia is covering the parotid, its inflammatory swelling is tense and hard.**
- **_Parotid duct is slightly larger along their course than at their caruncle.**
- **This permits storage of secretions so that a ready flow may be available on stimulation without waiting for secretory process.**
- **This relatively static reservoir may form obstructions and are a ready nidus for bacterial activity.**
- **The close association of the facial nerve with the gland is very important consideration, during surgical procedures.**

SUBMANDIBULAR GLAND

- The entire submandibular gland and duct system lies in a dependent position, which predisposes it to retrograde invasion by oral flora.
- Similar to the parotid duct, the Wharton's duct is also wider before reaching the papilla. This can lead to stasis of saliva and organic matter.
- The sharp bends of Wharton's duct at the posterior border of the myohyoid muscle allows stasis of the saliva favoring the formation of salivary stones.

SUBLINGUAL GLAND

- The sublingual gland and the minor salivary glands have short ducts, where the chances of stasis are less.
- Thus obstructive lesions do not occur in the glands.
- Since minor salivary glands are placed superficially, the traumatic lesions such as mucoceles commonly affect these glands.

QUESTION NO 3:

❖ FACTORS THAT PLAY ROLE IN SHEDDING:

- 1) ODONTOCLAST
- 2) PRESSURE

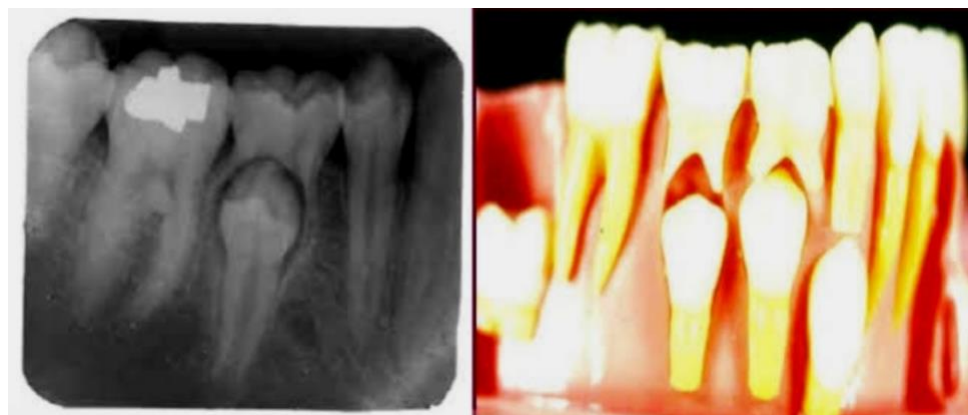
➤ ODONTOCLAST:

- When root resorption is almost complete, these odontoclasts degenerate, and mononuclear cells emerge from pulpal vessels and migrate to the predentin surface.
- Less is known about the resorption of soft tissues as it sheds.
- Just before exfoliation, resorption ceases as the odontoclasts migrate away from the dentin surface.
- The tooth sheds with some pulpal tissues intact.



➤ PRESSURE:

- The pressures exerted by the erupting permanent teeth seem to play an important role in resorption of deciduous teeth.
- The local pressure is responsible for initiation of resorption.
- In addition to this local pressure, heavy masticatory and muscular forces play a role in resorption.



QUESTION NO 4:

❖ CLASSIFICATION OF TOOTH MOVEMENT:

➤ Physiologic tooth movement

- Eruption
- Drifting

➤ Pathologic tooth movement

- Periodontal Pathology
- Oral pathologies (Cysts, Tumors etc)

➤ Orthodontic tooth movement

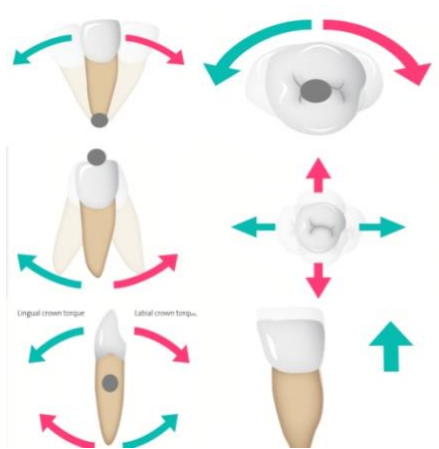
- Tooth Movement under external clinical forces

1) PHYSIOLOGICAL TOOTH MOVEMENT:

Naturally occurring tooth movements that take place during and after tooth eruption.

This include:

- Teeth Eruption.
- Migration or drift of teeth.
- Changes In tooth position During mastication

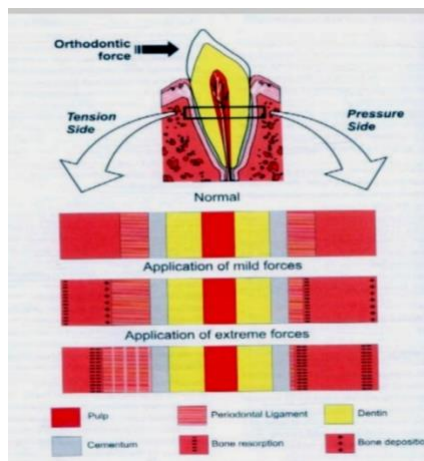


2) ORTHODONTIC TOOTH MOVEMENT:

It is a pathological process from which the tissue recovers.

Histology of tooth movement:

Orthodontic movements bring about areas of pressure and tension around the tooth. The histologic changes seen during tooth movement vary according to the amount and duration of force applied.



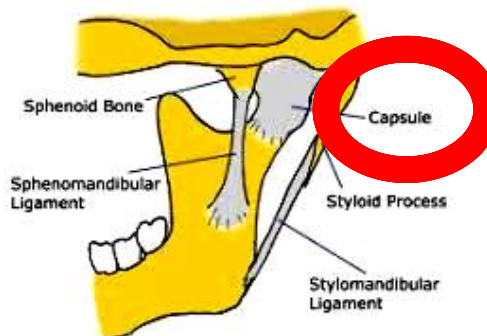
QUESTION NO 5:

COMPONENTS I N TMJ STRUCTURE

- Ligaments
- Articular disc
- Fibrous capsule
- Fluid

❖ Fibrous capsule:

- Composed of thick fibrous connective tissue & mainly present in synovial joint
- Prevent unnecessary movement and also provide stability
- In the TMJ it is present above to the edge of the preglenoid plane
- Below the periphery of the neck of the mandible
- Posteriorly to the squamotympanic fissure, between these to the edges of the articular fossa

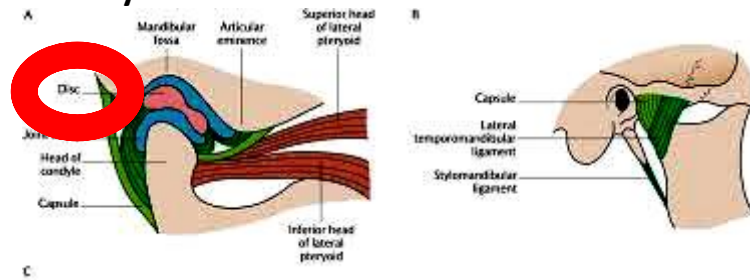


The Temporomandibular Ligaments and Joint capsule (medial view)

❖ Articular Disc:

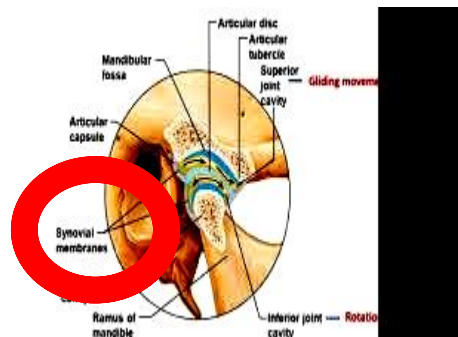
- Fibrocartilaginous pads that partially or completely divide the synovial cavity
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- In the TMJ act as a shock absorber and helps in stabilize TMJ

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❖ Synovial Fluid:

- A.k.a synovial, is a viscous, non-Newtonian fluid found in synovial joints
- During movement reduce the friction and contain specialized cells (synoviocytes)
- Act as lubricant, provide nutrients and lessens the shock of joint compression
- It's produced by synovial membrane intimal cells
- Formed of viscous fluid (plasma, protein & mucin) and containing varying types of cells (monocyte, lymphocyte, sometimes multi-nuclear leukocyte & macrophage)



❖ Ligaments:

1. Lateral ligament:

- Attached above to the articular tubercle on the root of the zygomatic process of the temporal bone It
- It extends downwards and backwards at an angle of 45 ° to the horizontal, to attach to the lateral surface and posterior border of the

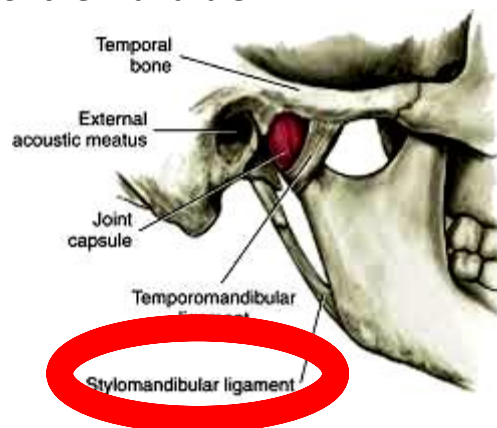
neck of the condyle, deep to the parotid gland

FUNCTION: To prevent posterior displacement of the resting condyle



2. Stylomandibular ligament:

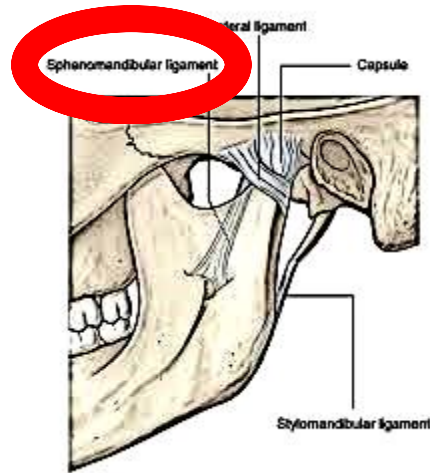
- It is attached to lateral surface of the styloid process above and below to the angle and post border of ramus of mandible
- It represents a thickened part of the deep cervical fascia which separates the parotid and submandibular salivary gland
- Along with sphenomandibular ligament it is responsible for limitation of mandibular movement
- A thickened band of deep cervical fascia that stretches from the apex and adjacent anterior aspect of the styloid process to the angle and posterior border of the mandible



3. Sphenomandibular ligament:

- it is attached superiorly to the spine of sphenoid and inferiorly to the lingula of mandibular foramen
- It is an accessory ligament which lies on a deep plane away from the fibrous capsule
- The fibers are directed downward and Outward
- It is separated from the pharynx by fat and a pharyngeal vein

- Widens at the lingual of the mandibular foramen. This part is a vestige of the dorsal end of Meckel's cartilage.



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THANK YOU SO MUCH

