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**PAPER:** DENTAL MORPHALOGY

**Q no 1**

**Distinguish fibrous capsule and articular disc?**

**Fibrous capsule**

* Above to the interior edge of the preglenoid plane
* Posteriorly to the squamo tympanic fissure, between these to edges of the articular fossa.
* Below to the periphery of the neck of mandible.

**Articular disc**

* Fibro cartilaginous disc dividing joint cavity upper and lower component.
* Shape :oval
* It’s make articular surface

**Function of articular disc**

* Stabilize the TMJ
* Make articular surface
* Reduce wear of TMJ
* Lubrication

**DISK**

* Become thinner
* SYNOVIAL FOLD
* Become fibrotic with thick basement membrane

**Q NO 2: write short note on clinical consideration of salivery gland**

**Clinical consideration of salivery gland:**

* Age changes.
* Dieaseas viral and bacterial infection.
* Tumours.
* Auto immune dieaseas.
* Aids
* Cystic fibrosis
* Diabetes
* Drymouth
* Mucoceles
* Caaries and periodontal dieaseas
* Irradiation

Age changes

* Generalized loss of parenchymal tissue
* Increase in fibrous connective tissue
* Decrease in production of saliva
* Lost salivary cells often replaced by adipose cells
* Gradual reduction in proportional acinar volume in major salivary gland.
* 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.

**Radiation caries:**

* Radiation caries is a rampant form of dental decay
* May occur in individuals who receive a course of radiotherapy that include exposure of salivary glands.

**Carious Etiology (causes):**

* It produced due to the exposure of salivary glands and reduced flow of saliva,
* Decreased pH, decreased buffering capacity, and increased viscosity.

**Signs:**

* Superficial lesions (abnormal change in structure)
* Attack the buccal, occlusal, incisal, and lingual surfaces.
* It includes cementum and dentin in cervical lesions.
* Lesions progress around the teeth circumferentially and resulting in loss of the crown.

**Sjogren’s syndrome:**

* It consists of keratoconjunctivitis (inflammation of cornea and conjunctiva), xerostomia (dry mouth), and rheumatoid arthritis (inflammation of joint)
* . The cause of the disease can be genetic, autoimmunological, etc.
* Include dry mouth and dry eyes due to hypofunction of lacrimal and salivary glands.
* Most patients are treated symptomatically; ocular lubricants and salivary substitutes are given.

**Dry mouth:** It is defined as a subjective complaint of dry mouth.

* Result from a decrease in the production of saliva.
* It is not a disease but a symptom caused by many factors.
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* That may result from a decrease in the production of saliva.
* It is not a disease but a symptom caused by many factors.

**Etiology (causes):**

* Sjogren’s syndrome (immune system disorder)
* Therapeutic radiation of head and neck
* Surgical removal of salivary glands

**Diabetes mellitus**

* Acute viral infections involving salivary glands result in temporary xerostomia
* Anxiety, mental stress, and depression may temporarily decrease salivary flow

**Symptoms:**

* Oral dryness (most common)
* Loss of sense of taste or bizarre tasteXerostomia (dry mouth)
* It is defined as a subjective complaint of dry mouth
* That may result from a decrease in the production of saliva.
* It is not a disease but a symptom caused by many factors.
* Difficulty in swallowing
* Tongue tends to stick to the palate
* Decreased retention of denture

**Signs:**

* Saliva pool disappears
* Mucosa becomes dry
* Tongue shows glossitis (inflammation of tongue) and fissured with papilla atrophy
* Angular cheilitis (red, swollen patches in the corners of mouth)
* Rampant caries at the cervical or cusp tip
* Periodontitis
* fungal infection

**Other consideration**

* 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, stafnnes 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.

 **SUBMANDIBULAR GLAND**

* The entire submandibular gland and duct system lies in a dependent position,
* Which predisposes it to retrograde invasion by oral flora. Viral inflammation of the gland causes it to swell, resulting pain on movement of the jaw.
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 **Q no 3: factor play important role in shedding?**

* FACTOR PLAY IMPORTANT ROLE IN SHEDDIN

 **LOCAL FACTOR**

* Pressure
* Growth
* Genetic factor

**Pressure**

* erupting successional tooth plays an important role in sheddin

**Growth :**

* The face and jaws and Enlargement of the masticatory muscles probably increase the forces applied over the deciduous teeth.
* Pressure + Enlargement = Loss of Supporting Tissue Tooth Exfoliation Accelerated.

**Factors of genetic**

* Apoptosis in the periodontal ligament fibers.
* The initiation of root resorption may be inherent developmental process.

**Histology of shedding**

* Resorption of the hard tissue “odontocalst”
* Resorption of the soft tissue:

**ODONTOCLASTS**

* 1. Derived from blood monocytes, migrate to the resorption site and fuse to form multinucleated cells.
	2. Are cells with same histological nature of osteocalsts.
	3. They have ruffled border and sealing zone.
	4. They have the ability to resorb the pre-dentine.

**PULP response**.

* While the root is being resorped; coronal pulp appears normal with odontoblasts line the pre-dentine.
* Once the root resorption is almost completed the odontoblasts degenerate, mononuclear cells migrate form pulpal and fuse forming odontoclasts.
* **PERIODONTAL LIGAMENT** **response.**
* Fibroblasts of the P L exhibit sings of interface with cytotoxic alteration as well as apoptosis.

**Pattern of shedding anterior** **teet**h

* For all deciduous anterior teeth resorption initiated at the lingual side of the root
* With subsequent movement and relocation of the teeth in the growing jaws, the growing permanent tooth becomes directly below the deciduous one.
* The resorption become apically.

**Clinical considerations Abnormalities of shedding**

1. 1. Retained deciduous teeth.

 2. Submerged deciduous teeth.

3. Remnants of deciduous teeth.

 4. Pre-deciduous teeth.

**Retained deciduous teeth.**

* Deciduous teeth that persist beyond their shedding time is known as retained deciduous teeth.
* Most common in upper B and lower E.
* Usually due to congenital missing or impaction of permanent ones ankylosis due to trauma.
* Appears normal and persist for a while till resorption occurs due to heavy masticatory forces.

**Q no 4: classification of tooth movement?**

**Physiology**

* The term physiological tooth movement primarily refers to the slight tipping of the tooth in its socket and secondarily to the changes in tooth position that occur during and after tooth eruption.

**Physiology of tooth movement**

* Naturally occur in tooth movement
* Take place during and after tooth eruption

THAT INCLUDE

* Tooth eruotion
* Migration
* Change in teeth opposition during mastication

**Orthodontic movement of teeth**

* Pathological process which recover the tissue

**Histology of tooth movement.**

* This movement bring areas of pressure and tension around the teeth.
* This movement occur during the amount of force applied.

**Changes on tension side.**

* PDL stretch
* Mobilization of fibroblast
* Increased vascularity.

**On tension side**

* Over stretched p
* Tearing of blood vessels
* Extreme force applied

**Q no 5: enlist the function and component of TMJ?**

**Introduction:**

* Important function of TMJ
* are mastication and speech and great interest to dentist orthodontists and radiologist
* TMJ is a ginglymoarthrodial joint a term that is derived from ginglymus, means a hinge joint which allow motion backward and forward.

**Component**

* **Ligaments**
* **Fibrous capsule**
* **Articular disc**
* **Lateral ligament of jaw**
* **Sphenomandibular ligament**
* **Stylomandibular ligament**

**Ligaments**

**Fibrous capsule:**

* Above to the interior edge of the preglenoid plane
* Posteriorly to the squamo tympanic fissure, between these to edges of the articular fossa.
* Below to the periphery of the neck of mandible.

**Articular disc**

* Fibro cartilaginous disc dividing joint cavity upper and lower component.
* Shape: oval
* It’s make articular surface

 **Lateral ligament of jaw**

* Attached above the articular tubercle on the root of zygomatic process of temporal bone
* Extend down word nd up word angle of 45degre to horizontal attached to lateral surface.
* Function: prevent posterior displacement of the resting condyle

**Age changes of the TMJ**

* Candyle
* Become more flattend
* Fibrous capsule become thickr
* Osteoprosess underlying bone

**Function of TMJ**

* Speech and mastication
* When the mouth opens, two distinct motions occur at the joint.
* The first motion is **rotation** around a horizontal axis through the condylar heads.
* The second motion is **translation**.
* The condyle and meniscus move together anteriorly beneath the articular eminence.
* In the closed mouth position, the thick posterior band of the meniscus lies immediately above the condyle.
* As the condyle translates forward, the thinner intermediate zone of the meniscus becomes the articulating surface between the condyle and the articular eminence.
* When the mouth is fully open, the condyle may lie beneath the anterior band of the meniscus.