 

**Oral Pathology**

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**Lecture 6 Periapical pathology and changes**

**Lec. 6 ORAL PATHOLOGY Dr. Muna**

**Periapical pathology and changes**

**PERIAPICAL CYST (RADICULAR CYST; APICAL PERIODONTAL CYST)**

Epithelium at the apex of a non-vital tooth can be presum­ably stimulated by inflammation to form a true epithelium- lined cyst, or periapical cyst.

- The radicular cyst is derived from the epithelial rests of malassez which are within the periodontal membrane surrounding a tooth

- in the presence of chronic inflammation of the granuloma, the epithelial rests proliferates , sometime the growing ball of epithelial cells enlarges to such a degree that the nutrients to the central core of cell is too far from the C.T. that contains the blood supply .

- Those central cells undergo necrosis and liquefy (liquefaction necrosis).

- This form a small cavity or lumen with fluid and / or cells, lined by epithelium (cyst).

**Clinical and Radiographic Features**

**Clinical** **Features**

1. Patients with periapical cysts have no symptoms unless there is an acute inflammatory exacerbation.
2. If the cyst reaches a large size, swelling and mild sensitivity may be noted.
3. Movement and mobility of adjacent teeth are possible as the cyst enlarges.

**Radiographic Features**

The radiographic pattern is identical to that of a periapical granuloma.

**Treatment**

A periapical cyst is treated in the same manner as a periapical granuloma.

1. Extraction or conservative nonsurgical endodontic therapy is performed.
2. Periapical surgery is indicated for lesions exceeding 2 cm and those associated with teeth that are not suitable for conventional endodontics.

**PERIAPICAL ABSCESS**

It is an acute or chronic suppurative (pus producing) process in the periapical or radicular area of the involved tooth.

It can develop directly as an acute abscess or from an area of chronic infection such as the P.A.G.

The usual causes are:-

1- Infection from carious tooth

2- Traumatic injury to the teeth.

3- Mechanical and chemical trauma can result in death of the pulp and abscess formation.

**Clinical Features**

1-Sever pain (pus and odema at the root end causes pressure which act on nerve endings in the P.D.L. and cause pain ) because the pressure is transmitted through the fluid exudates to the sensory nerve ending

2-Extrution of the tooth from its socket (the inflammatory exudates pushes against the root causing the tooth to extrude).

3-The tooth is sensitive to percussion so tapping teeth can locate the offending tooth.

4-Regional lymphadenitis and fever may be present.

**Radiographic Features**

In the acute abscess there may be only or slight widening of the periodontal ligament at the tooth apex

If the abscess originates in a preexisting granuloma or cyst, there will be clearly defined radiolucency shadow about the root or beyond it .

**Treatment and Prognosis**

Treatment of the patient with a periapical abscess con­sists of drainage and elimination of the focus of infec­tion.

**Routes of spread**

**If the cause of the abscess is not removed suppuration will continue and the abscess continues to enlarge. With progression, the abscess spreads along the path of least resistance in one of a number of directions.**

**1-It may drain through the root canal**

**2- Occasionally it may track through the periodontal ligament to**

**discharge into the gingival sulcus**

**3- More commonly, the pus tends to track through the cancellous**

**bone**

but if exudates cannot escape ,distends the soft tissue to form a swelling e.g .upper canine swelling spread to the face and eyelids and may close the eye on that side

**Cellulitis** Is a painful swelling of the soft tissue of the mouth and face because of the rapidly spread inflammation of the soft tissue

**Clinically,** there is

1. Diffuse, tense, painful swelling of the involved soft tissues
2. Usually associated with malaise and an elevated temperature.

**Cellulitis associated with** **maxillary teeth** initially involves the upper half of the face. Extension towards the eye is a potentially serious complication.

**Cellulitis associated with mandibular teeth** initially involves the lower half of the face; extension into the submandibular and cervical tissues may **cause difficulties in respiration.**