

Pulpitis : is the inflammation of the pulp and is the most common cause of dental pain and loss of teeth

*****causes of pulpitis *****

- 1) dental caries which is the usual cause
- 2) traumatic exposure of the pulp
- 3) fracture of crown or cusp
- 4) thermal and chemical irritation
- 5) cracked tooth syndrome

--pulpitis if untreated is followed by death of the pulp , spread of infection through the apical foramen in to periapical area pulpitis **classified to**



- 1) acute closed pulpitis
- 2) chronic closed pulpitis
- 3) chronic open pulpitis
- 4) chronic hyperplastic (pulp polyp)
- 5) pulp stones (pulp calcification)

*****General characteristic feature of pulpitis***

- 1)early stage inflammation /acute pulpitis
- 2)tooth hyper sensitive to cold ,hot food
- 3) as inflammation progress ,pain become more persistent
- 4)spontaneous pain indicate acute irreversible pulpitis
- 5) pulp pain is poorly localized
- 6)chronic pulpitis is often symptomless ,painless

****Periapical-periodontitis***

Periapical- periodontitis is usually due to spread of infection following death the pulp.Causes:

- 1)infection:** A- spread from chronic infection of gingival margins B-sequence of caries ,pulpitis ,death of pulp and periodontitis .
- 2)trauma**
- 3) chemical irritant :**

Cellulitis

Rapidly spreading inflammation of soft tissue associated with streptococcal infection, not well localized, it is a complication of acute periodontitis ,formation of edema due to acute apical periodontitis such as in acute periapical infection of canine the buccal plate of the bone perforated causing edema of the face

Changes and periapical pathology

Bacterial causes → non vital tooth ← nonbacterial caries cause

Apical periodontitis

✓

↘

1) acute –cellulitis

2) chronic

A-Chronic abscess(sinus) ✓ ↓ ↘ B-periapical granuloma

C-Radicular cyst

Acute periapical periodontitis

Clinical feature

1) history of pain due previous pulpitis

2) extruded tooth and on the bite feel more heavily on it (the tooth tender to percussion)

3) hot ,cold substances do not causes pain in tooth

4) as inflammation becomes more sever, pus start to form, pain become inters and throbbing in character

5) the inflammation is confined within the bone (no swelling)

chronic periapical periodontitis (periapical granuloma)

Clinical feature

1) A low grade infection ,follow acute infection

2) tooth non vital, tender to percussion



Histopathology_

- 1)chronic inflammatory reaction characterized by (lymphocyte, macrophage and plasma cells)
- 2)granulation tissue surround the area (granuloma)
- 3)osteoclast resorb the bone

Radiological examination

First show a widening of the periodontal ligament space around the apex and later a definite periapical radiolucency may

Develop

Possible complication of chronic apical periodontitis

1-Granuloma :granulation tissue grows into around mass appear as a rounded area of radiolucency at the apex of tooth in radiograph

2-Radicular cyst: epithelial. proliferation lead to cyst formation ,variable degree of proliferation of the epithelium .periapical granuloma at apex of dead tooth lead to jaw cyst, lining with hyperplastic epithelium . and filled with fluid.

3-Sinus formation: pus may reach the surface by resorption of bone usually on buccal surface of gingiva at apex of tooth ,bone

destruction ,tracking of a sinus on the skin surface

