

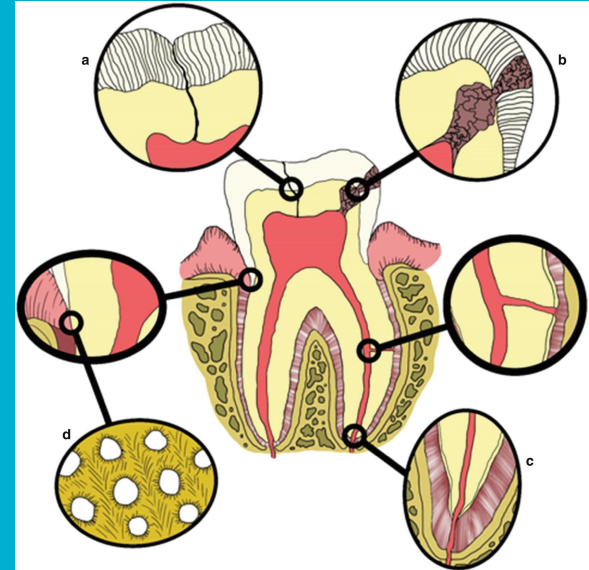
Periapical Pathology (PAP)

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Periapical Pathology

- Acute or chronic inflammatory lesion around root of tooth.
- Most commonly caused by bacteria invasion at pulp of the tooth.
- Usually forms from untreated Dental Caries.
- Can develop into periapical abscess if left untreated for too long.

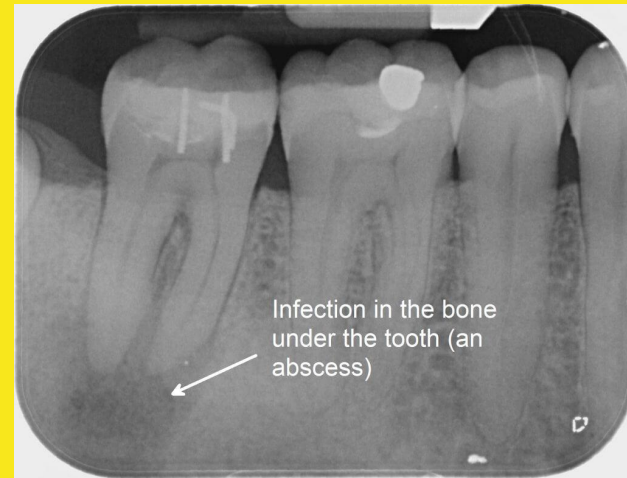


Periapical Abscess

- A localized collection of pus that forms at the apex of a nonvital tooth that results from pulpal death.
- Formation of a periapical abscess starts when bacteria enters the tooth and causes an infection in the pulp.
- Symptoms include sensitivity to hot or cold, throbbing toothache that can radiate to the jaw, neck or ear, and swelling in face.
- The abscess must be drained. A root canal or antibiotics may be needed. In some cases, the tooth may need to be extracted.
- On a radiograph periapical abscesses appear radiolucent.



https://rickwilsondmd.typepad.com/rick_wilson_dmds_blog/2010/07/silent-root-canal-infections.html



<https://www.andrewthomasdental.co.uk/endodontics/>

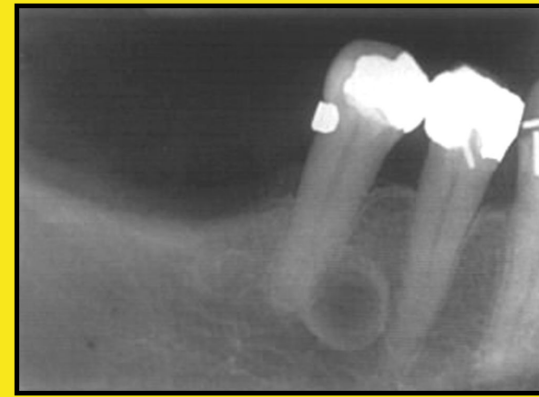
Granuloma

- A localized mass of granulation tissue around the apex of a nonvital tooth. The fibrous mass forms as the body's natural defense mechanism to wall off infection and to prevent the spread into surrounding areas. In some cases, the spread of bacteria can still occur.
- Asymptomatic cases are detected during dental exams and radiographs. The granuloma lies dormant and the capsule gets thicker walling off the bacteria and the pulp. In this case, the patient has no pain.
- Symptomatic cases present with severe pain and swelling due to the flare up of the infection. The patient will experience sensitivity to hot, cold, and to pressure.
- Factors that can cause a dormant granuloma to flare up include: injury, fracture to the tooth, or tooth decay that results in pulpitis (inflammation of the pulp).
- Treatment options are extraction or root canal with or without apicoectomy. If left untreated it progress to a periodontal cyst.
- On a radiograph, a granuloma appears radiolucent.



Periodontal Cyst

- A epithelial lined cavity or sac located around the apex of a nonvital tooth that results from pulpal death.
- The patient may present with current or previous symptoms of tenderness, pain, swelling, or drainage in the affected area.
- It is also possible that periodontal cyst are asymptomatic and are discovered on radiographs.
- On a radiograph, periodontal cyst appear radiolucent at the apex due to the loss of lamina dura.
- Periodontal or periapical cyst are also known as radicular cyst.



<http://www.intelligentdental.com/2011/12/27/radiographic-appearance-of-cysts-part-2/>

Radiographic Features:



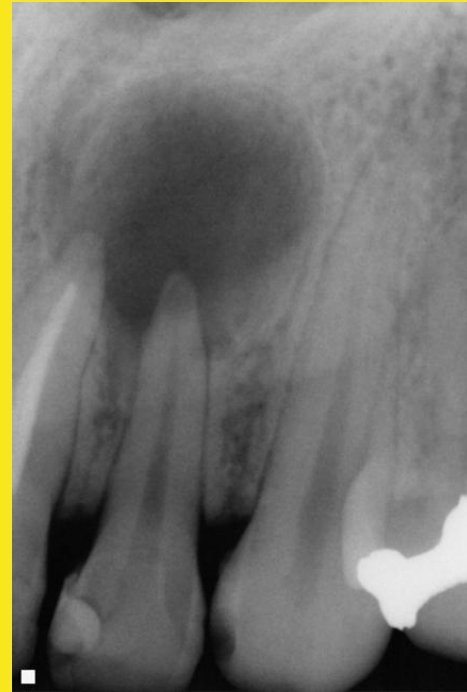
Lateral periodontal cyst. Radiolucent lesion between the roots of a vital mandibular canine and first premolar.



Lateral periodontal cyst. A larger lesion causing root divergence.

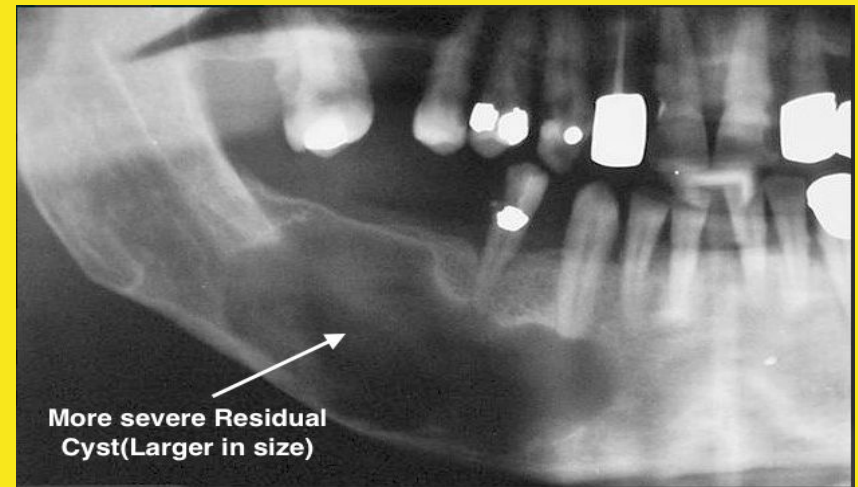
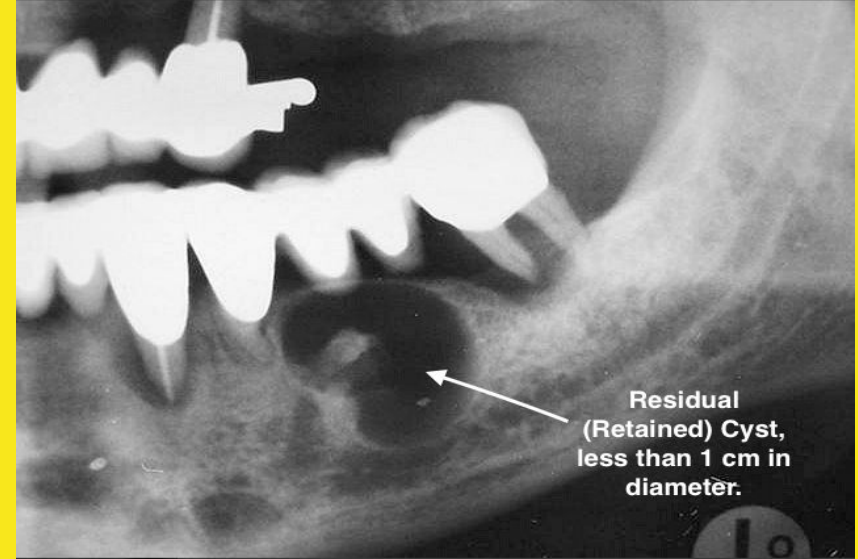
Radicular Cyst

- Similar to a periodontal cyst, a radicular cyst arises from epithelial residues in the periodontal ligament as a consequence of inflammation, usually following the death of the dental pulp.
- It is usually found at the apices of teeth but it can also form on the lateral aspect of the root as well in relation to accessory root canals.
- Non surgical treatment would include endodontic treatment (root canal).
- On a radiograph, radicular cyst appear radiolucent with a thin radiopaque border.



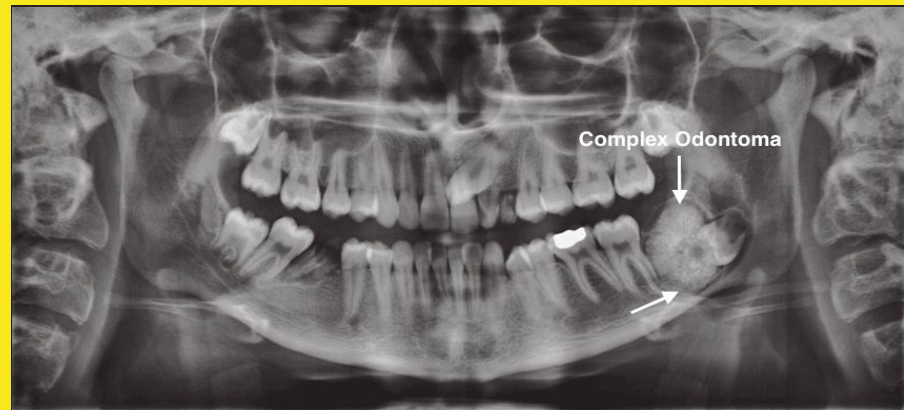
Residual (Retained) Cyst

- Is a radicular cyst that remains once a tooth has been extracted.
- Most are small in size (1 cm or less in diameter).
- Asymptomatic(No symptoms).
- Can be round, oval, unilocular, corticated and well-defined.



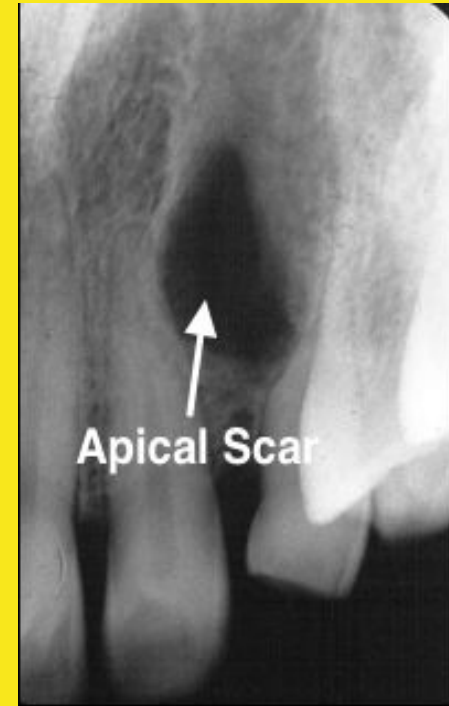
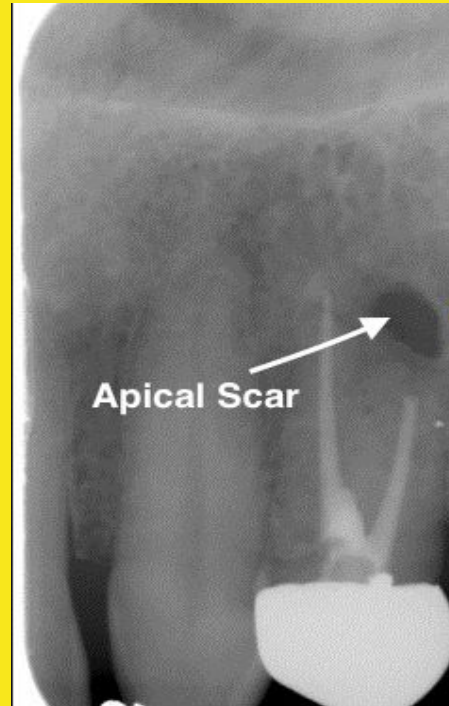
Complex Odontoma

- Most common odontogenic tumor in relation to tooth eruption.
- Occurs in posterior jaws.
- Mostly in children and young adults.
- Asymptomatic(No symptoms) and slow growing.
- Found during radiographic examination.
- Usually does not require treatment unless it blocks tooth eruption.



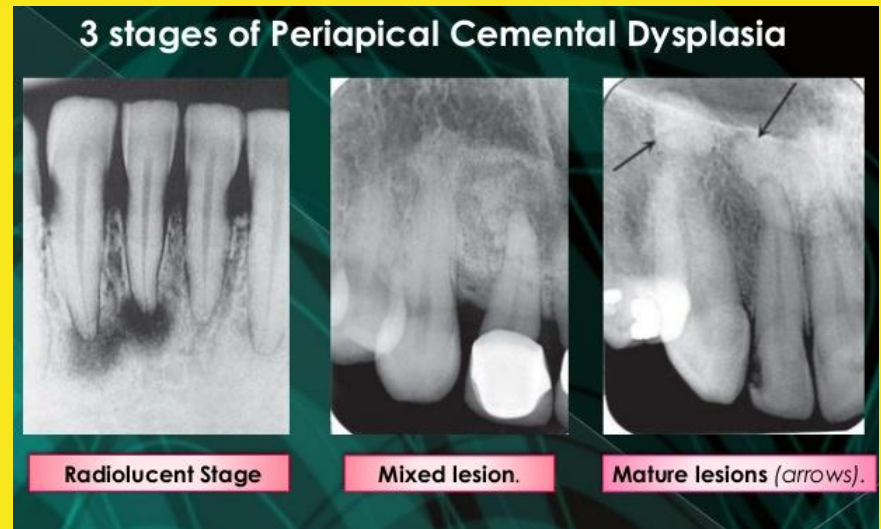
Apical Scar

- Found at the Apex of the tooth.
- Usually found after surgical procedure or endodontic treatment.
- Most commonly found after procedures done at the root of the tooth.
- Is created by excess connective tissue sent to the tooth.
- Not dangerous and usually presents no symptoms.
- Can be mistaken for cysts or granulomas, biopsy may be performed to ensure it's Apical Scar.
- Can be treated by dentist with therapy but may not always be beneficial.

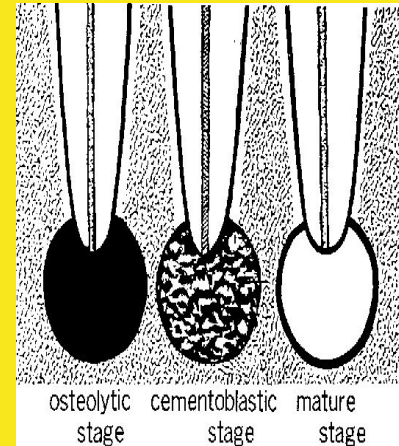


Cementoma (Periapical Cemental Dysplasia)

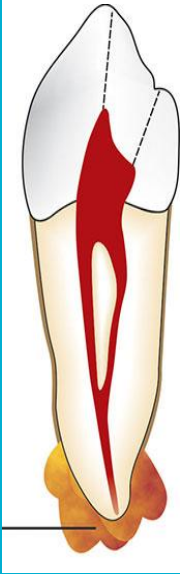
- A benign lesion that develops in and near the periodontal ligament around the apex of a tooth, usually a mandibular incisor.
- **Three stages of Periapical Cemental Dysplasia:**
 - Early stage:** the lesion appears radiolucent resembling periapical granuloma or cyst.
 - Second stage:** beginning of calcification in the radiolucent area.
 - Third stage:** appears on the roentgenogram as a well-defined radiopacity that is usually bordered by a thin radiolucent line.
- It is difficult to radiographically distinguish this lesion from a periapical granuloma. To make this determination a vitality test of the pulp should be done.
- No treatment is necessary.



- **Cementoma:** appears at the apex of the tooth as a radiolucent area in its early stages and converted into radiopaque at the terminal stages



References



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