

II. Odontogenic Tumors

Odontogenic Tumors

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graph TD; A[Odontogenic Tumors] --> B[Epithelial]; A --> C[Mixed]; A --> D[Mesodermal]
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Epithelial

Mixed

Mesodermal

Epithelial

Epithelial
Odontogenic
Tumors

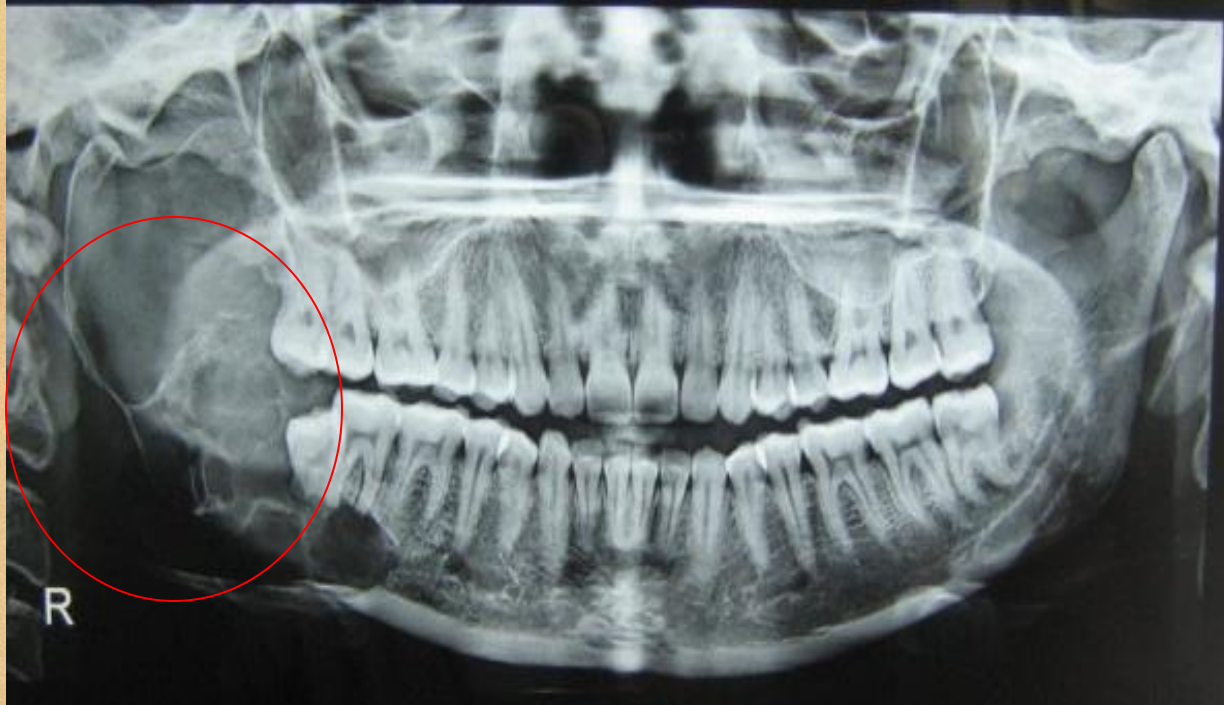
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graph TD; A[Epithelial Odontogenic Tumors] --> B[Ameloblastoma]; A --> C[Adenomatoid odontogenic tumor]; A --> D[Calcifying epithelial odontogenic tumor];
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Ameloblastoma

Adenomatoid
odontogenic
tumor

Calcifying
epithelial
odontogenic
tumor

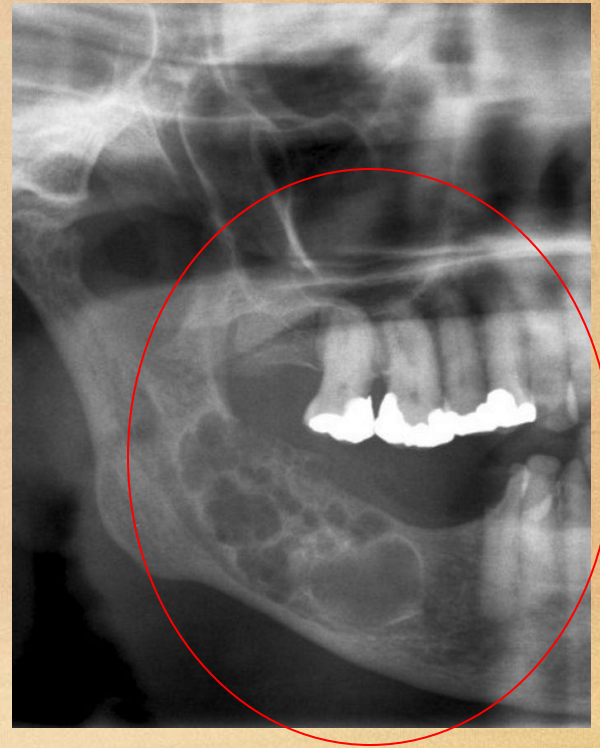
Ameloblastoma



- This a true neoplasm of odontogenic epithelium
- It is an aggressive neoplasm the arises from the remnants of the dental lamina and dental organ(odontogenic epithelium)

Ameloblastoma

- Benign, locally aggressive odontogenic tumor. Usually it slowly grows as painless swelling of the affected site.
- It can occur at any age.
- Localized invasion into the surrounding bone.
- 80-95% in the **mandible** (**posterior body, ramus region**). In the **maxilla** mostly in the **premolar-molar** region.



Ameloblastoma

- Unilocular (small lesions). Multilocular (large discrete areas or honeycomb appearance)
- Smooth, well-defined, well-corticated margins
- Adjacent teeth are often displaced and resorbed.
- It causes extensive bone expansion.
- Incomplete removal can result in recurrence.



Mixed

Mixed Odontogenic Tumors



Odontoma

- It is a tumor that is radiographically and histologically characterized by the production of mature enamel, dentin, cementum and pulp tissue.
- Relatively Common lesion



Odontoma

- It usually occurs in young patients.
- Usually asymptomatic.
- **Failure of eruption** of a permanent tooth may be the first presenting symptom. It is commonly found occlusal to the involved tooth.



Odontoma

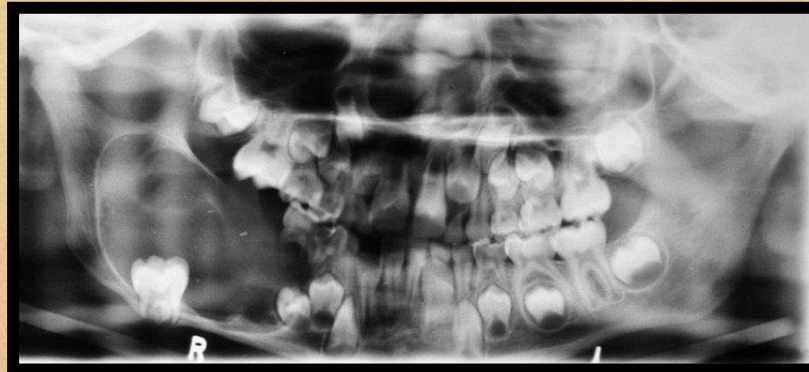
- Well defined
- Two types: complex and compound odontoma
- Complex odontoma is composed of haphazardly arranged dental hard and soft tissues.
- Compound odontoma is composed of many small "denticles".
- internal aspect is very radiopaque in comparison to bone.



Odontoma

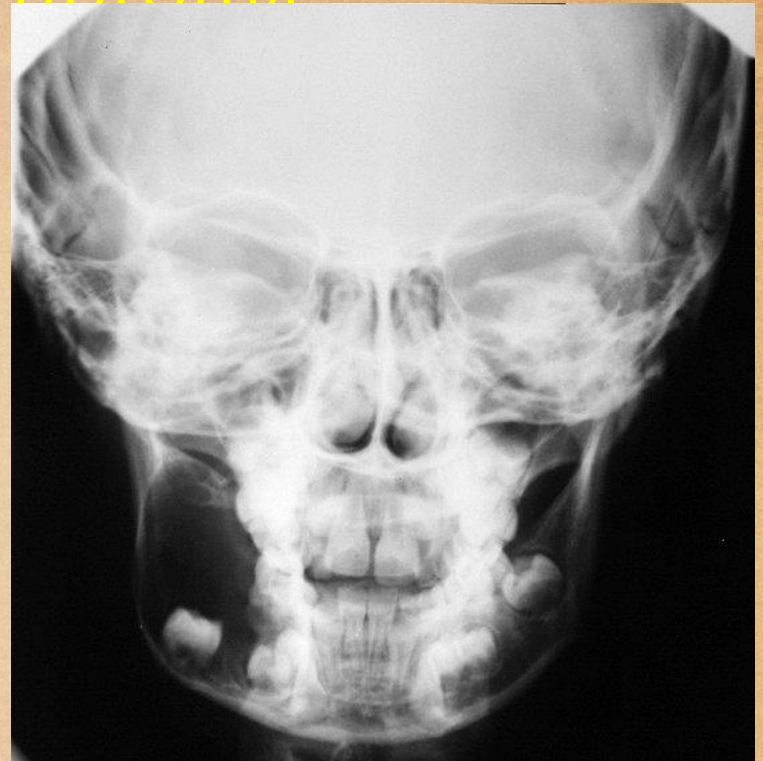


Ameloblastic fibroma



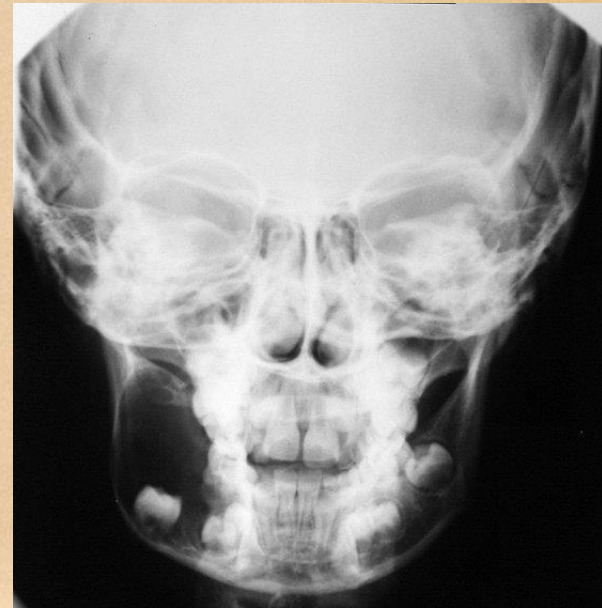
Ameloblastic fibroma

- These are benign mixed odontogenic tumors .
- They are characterized by neoplastic proliferation of maturing and early functional ameloblasts as well as the primitive mesenchymel components of the dental papilla

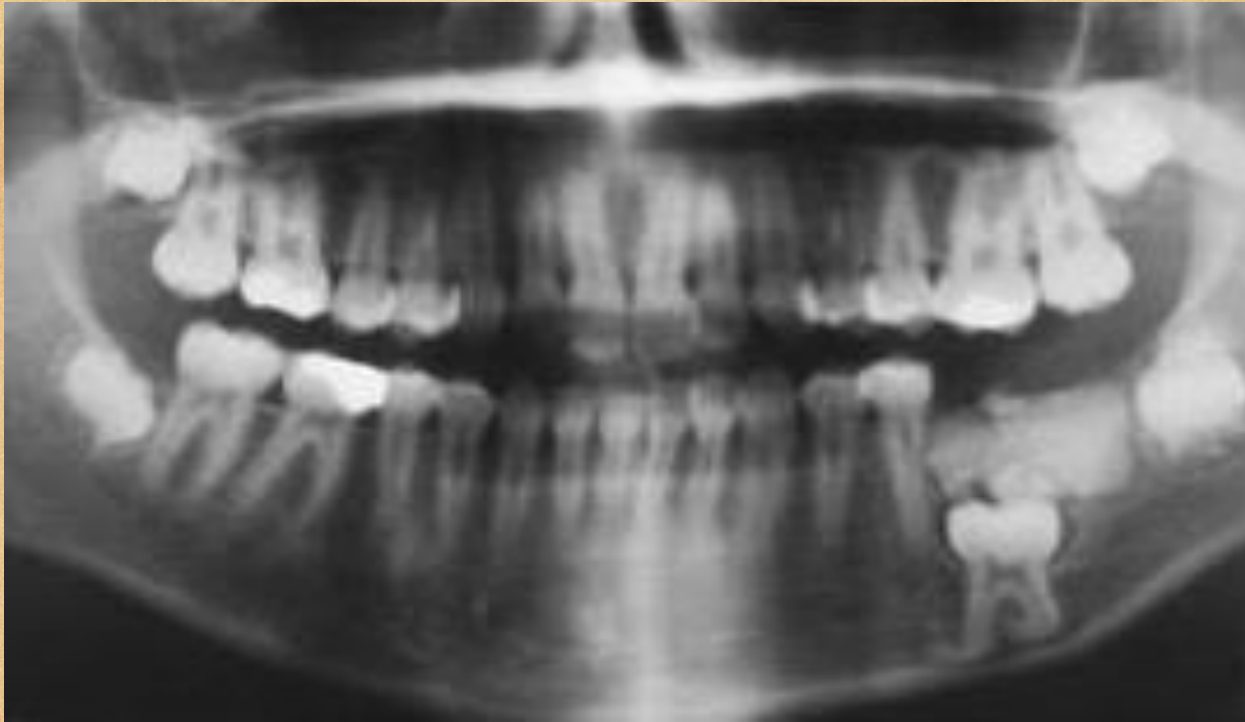


Ameloblastic fibroma

- **Benign Rare.** Occurs in children and adolescents.
- Most common site: **mandible posterior region.**
- Often associated with an **unerupted tooth.**
- Well defined, well corticated. Small lesions are monolocular. Large lesions are multilocular.
- It may cause **displacement** of adjacent teeth. Large lesions cause buccal/lingual **expansion.**



Ameloblastic fibro-odontoma



- This is an extremely rare lesion. It consists of elements of ameloblastic fibroma with small segments of enamel and dentin.

Adenomatoid odontogenic tumor

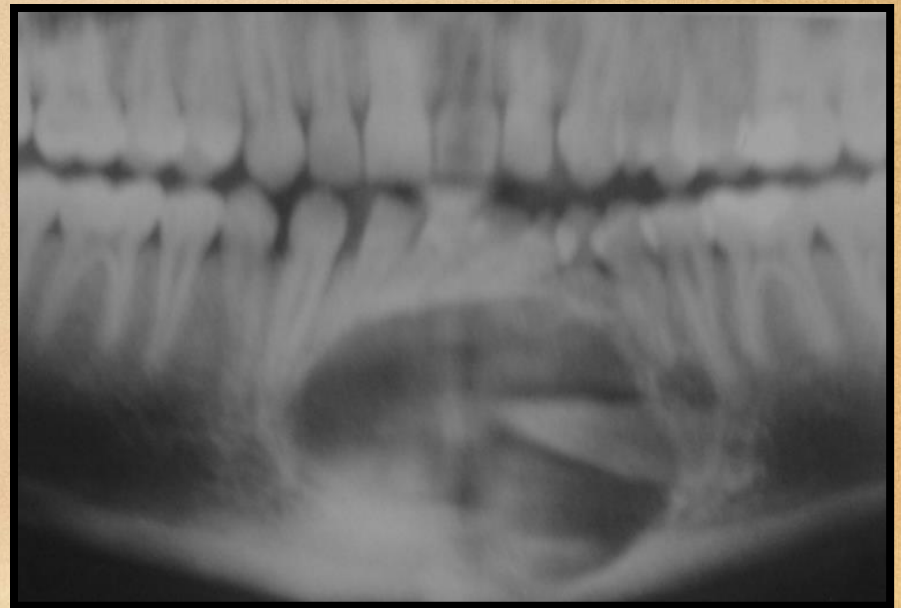
Features

- Benign. Relatively rare.
- It occurs in young patients (70% of cases in patients younger than 20 years).
- Most common site: anterior maxilla.
- Often surrounds an entire unerupted tooth (most commonly the canine).
- Usually well defined, well corticated. Some tumors are totally radiolucent; others show evidence of internal classification.



Adenomatoid Odontogenic Tumor ("Adenoameloblastoma")

- These are uncommon , nonaggressive tumors of odontogenic epithilum.



Mesodermal Odontogenic Tumors

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graph TD; A[Mesodermal Odontogenic Tumors] --> B[Odontogenic myxoma (myxofibroma)]; A --> C[Cemento-blastoma]; A --> D[Odontogenic fibroma];
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Odontogenic
myxoma
(myxofibroma)

Cemento-
blastoma

Odontogenic
fibroma

Odontogenic myxoma (myxofibroma)

- They are benign, intraosseous neoplasms that arise from the mesenchymal portion of the dental papilla.



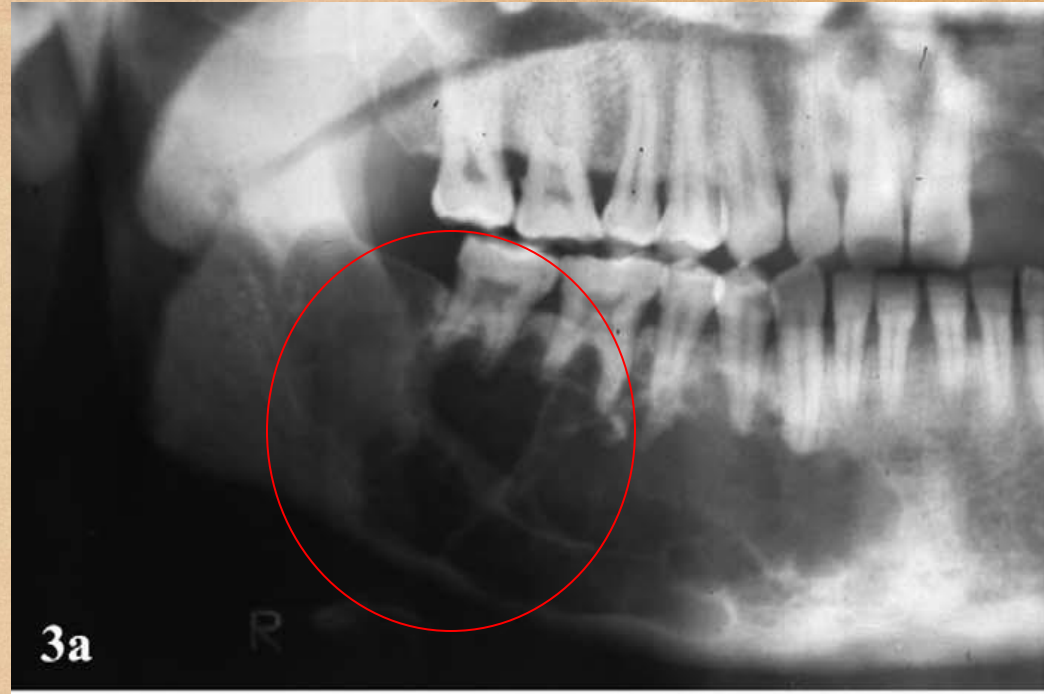
Odontogenic myxoma (myxofibroma)

- Features
- It represents approximately 3 - 6% of all odontogenic tumors. It is painless and grows slowly.
- It can occur at any age but most commonly in the **second** and **third decades** of life.
- More often affect the **mandible** (molar/premolar region).



Odontogenic myxoma (myxofibroma)

- Features
- Typically multilocular (internal septa- strings of a tennis racket or honeycomb appearance).
- Large lesions can have the sun ray appearance of an osteosarcoma.
- Often well-defined.
- Adjacent teeth can be displaced but rarely resorbed. It causes less bone expansion than in other benign tumors.



Cementoblastoma

- This is a slow growing mesenchymal neoplasms composed principally of cementum.



Cementoblastoma

- *Features*
- Benign neoplasm. Most commonly in the second and third decade.
- Site: usually mandibular premolar and molar regions.
- Attached to the root of the affected tooth. Tooth displacement, resorption are common.
- Pain in 50% of the cases, swelling.
- When radiopaque is usually surrounded by a thin radiolucent halo.



Radiographic Features

- **Location:**
- **Periphery:** well defined RO with RL halo surrounding the calcified mass.
- **Internal structure:** mixed RL-RO lesions may be amorphous
- **Effect on surrounding tissues:**
expansion, external root resorption

