II. Odontogenic Tumors
Odontogenic Tumors

- Epithelial
- Mixed
- Mesodermal
Epithelial Odontogenic Tumors

- Ameloblastoma
- Adenomatoid odontogenic tumor
- Calcifying epithelial odontogenic tumor
Ameloblastoma

- This is a true neoplasm of odontogenic epithelium.
- It is an aggressive neoplasm that 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 Odontogenic Tumors

- Odontoma
- Ameloblastic fibro-odontoma
- Ameloblastic fibroma
- Adenomatoid odontogenic tumor
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
• 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

- Odontogenic myxoma (myxofibroma)
- Cementoblastoma
- 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 hallo surrounding the calcified mass.

- Internal structure: mixed RL-RO lesions may be amorphous

- Effect on surrounding tissues: expansion, external root resorption