The University of Jordan

Oral Pathology-II

4th Year
2016/2017

Prof Faleh Sawair: BDS, FDS RCS (England), PhD
Professor of Oral Pathology
Odontomes & odontogenic tumors
Odontomes:

- Developmental malformations (*hamartomas*)
- Not neoplasms

Types:

- **Invaginated Odontomes**:–
Coronal IO:

- Clinically:
  - Dens invaginatus
  - ULI, often bilateral
  - Dilated (conical)

- Degree variable

  - Types:
Dx:

- Invagination lined by E continuous w surface

- Tooth within a tooth”
  → “dens in dente”

Rx:
- **Hist:**
  - Defective, hypomineralized E & D lining
  - Absent at base
  - Containing CT before eruption
• **Pathogenesis:**
  - Unknown
  - Cingulum pit
  - Active proliferation
• Radicular IO:
  - Rare
  - Axial infolding
  - Saccular invagination (E lined)
2 Evaginated odontomes:

- Dens evaginatus
  - CI, LI, Premolars
  - Mongoloid
  - Globe-shaped projection
  - Pulpitis

Talon cusp
Enamel pearl (enameloma):

- Small droplet of E
- Bifurcation
- Asymptomatic

  - **Hist:** E, E & D, E & D & P
  - **Pathogenesis:** budding of ERSH

Pocket
4 Compound & Complex O:

- Reach fix size
- 1\textsuperscript{st} & 2\textsuperscript{nd} decade, permanent dentition
- Average age is 14 y

➢ Two types:
**Compound**

- Several tooth-like structures
- Inter-canine area esp. max

**Complex**

- Mass of haphazardly arranged E, D & C
- Premolar & molar/mandible
Dx:

- Rx
- Bone expansion
- Eruption
- Associated with impacted tooth
- Replacing missing tooth
Rx:

- **Initially**: radiolucent w deposited radiopaque material

Complex: solid radiopaque mass w a radiolucent zone
⇒ **Compound:** unilocular radcy containing multiple small denticles
Hist:

- Compound: denticles separated by fibrous tissue
Complex: disorganized but well-formed mass of E, D, C, P
Odontogenic tumors
Benign

- Epithelial lesions

1. Without odontogenic mesenchyme
   - Ameloblastoma
   - Squamous odontogenic tumor
   - Calcifying epithelial odontogenic tumor
   - Adenomatoid odontogenic tumor
   - Keratinizing cystic odontogenic tumor
2. With odontogenic mesenchyme

- Ameloblastic fibroma
- Ameloblastic fibro-dentinoma & fibro-odontoma
- Odontoameloblastoma
- Calcifying cystic odontogenic tumor
- Complex & compound odontomes

**Mesenchymal lesions**

- Odontogenic fibroma
- Odontogenic myxoma
- Cementoblastoma
Malignant tumors:

- **Odontogenic carcinomas:**
  - Malignant ameloblastoma
  - Ameloblastic carcinoma
  - Primary intraosseous squamous cell carcinoma
  - Clear-cell odontogenic carcinoma
  - Malignant variant of other epithelial tumors
  - Malignant change in odontogenic cysts

- **Odontogenic sarcomas:**
  - Ameloblastic Fibrosarcoma
  - Ameloblastic fibro-odontosarcoma
Tumors of debatable origin

- Melanotic neuroectodermal tumor of infancy
- Congenital gingival granular cell tumor (congenital epulis)
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Ameloblastoma
Ameloblastoma: Solid, multicystic

- Most common
- Benign but locally aggressive
- **Clinically:**
  - Age & gender
  - Site
  - Teeth
  - A symptomatic
Slow growing

May perforate bone
- **Rx:**
  - Multilocular “soap bubble”
  - Root resorption
  - Impacted tooth
  - Unilocular
**Hist:** many patterns

- **Follicular pattern:**

- Central angular Cs
- Peripheral columnar, cuboidal Cs

Islands, follicles against FCT stroma
Reversed polarity
Cystic changes
Granular cell variant

Acanthomatous pattern
Plexiform pattern:

- “Fishnet” arrangement
- Same cell layers
- Cystic changes
Desmoplastic variant

Basal cell variant
Pathogenesis:

- Resemble E organ
- Pre-ameloblast
- Dental lamina
- Behavior:
  - Locally invasive
  - Pulmonary metastasis
  - Malignant ameloblastoma
Site of poorest prognosis
Unicystic ameloblastoma:

- Clinically:
  - 5-15% of AM cases
  - Younger
  - Site

- Rx:
  - Unilocular
Hist:

- Dense FCT capsule surrounding a solitary, fluid-filled lumen
**Basal layer:** columnar  
**Other layers:** stellate reticulum
Peripheral ameloblastoma:

- **Clinically:**
  - Gingival firm sessile nodule
- **Origin:** Basal OE, Dental Lamina
- **Hist:** = intraosseous
- **Rx:** ± saucerization
- **Prognosis:** less aggressive