**Cysts of the Jaws**

A Cyst is a benign pathologic cavity filled with fluid, lined by epithelium, and surrounded by a connective tissue wall.

- A = connective tissue wall
- B = epithelium

**Effects on adjacent structures**

**Types**

- Odontogenic
- Non-Odontogenic
- Pseudocysts

**Odontogenic Cysts**

- Radicular cyst
- Residual cyst
- Dentigerous cyst
- Paradental cysts (Buccal bifurcation cysts)
- Odontogenic Keratocyst (OKC)
  - Basal cell nevus-bifid rib-OKC syndrome
- Lateral periodontal cyst
- Calcifying odontogenic cyst

**Non-Odontogenic cysts**

- Nasopalatine cyst
- Nasolabial cyst
- Dermoid cyst
- Cysts formerly known as “developmental cysts”
**Pseudocysts**
- Simple bone cyst (Traumatic bone cyst)
- Aneurysmal Bone Cyst
- Mucous Retention Cyst
- Stafne Bone Cyst (aka Stafne Bone Defect)

**Odontogenic Cysts**
- Radicular cyst
- Residual cyst
- Dentigerous cyst
- Paradental cysts (Buccal bifurcation cysts)
- Odontogenic keratocyst (OKC)
  - Basal cell nevus-bifid rib-OKC syndrome
- Lateral periodontal cyst
- Calcifying odontogenic cyst

**Radicular cysts**
- Results from the stimulation of the epithelial cell rests in the PDL by the inflammatory products from the non-vital tooth
- Most common type of cysts in the jaws
Residual Cyst/Scar

Residual Cyst

Residual Cyst

Residual cyst with Squamous Cell Carcinoma

Residual cyst with squamous cell carcinoma

Odontogenic Cysts

- Radicular cyst
- Residual cyst
- Dentigerous cyst
- Paradental cysts (Buccal bifurcation cysts)
- Odontogenic keratocyst (OKC)
  - Basal cell nevus-bifid rib-OKC syndrome
- Lateral periodontal cyst
- Calcifying odontogenic cyst
**Dentigerous cyst** (follicular cyst)

- Develops around the crown of an unerupted permanent or supernumerary tooth
- Second most common type of cyst in the jaws
- Asymptomatic
- Internal aspect is completely lucent except for the crown of the involved tooth
- Either resorbs or displaces the adjacent teeth
- Follicular spaces $>$5mm (normal 2-3 mm) should be closely followed for potential development of dentigerous cysts.
The buccal bifurcation cyst: Is non-surgical treatment an option?

**Buccal Bifurcation Cyst**

Lesions tend to resolve without intervention

An OKC is a non-inflammatory odontogenic cyst that arises from the dental lamina. The epithelium in OKC appears to have innate growth potential similar to some benign tumors.
**Odontogenic Keratocyst (OKC)**
- First reported by Philipsen in 1956
- Peak occurrence in the 2nd and 3rd decades
- Asymptomatic, swelling on occasion
- Pain from secondary infection
- Aspiration may reveal thick yellow cheesy material (keratin)
- High recurrence rate after surgical enucleation

**Basal cell nevus-bifid rib syndrome**
- Age range 5-30 years
- Abnormalities including multiple nevoid basal cell carcinomas of the skin, skeletal abnormalities (bifid ribs, agenesis and/or synostosis of ribs, kyphoscoliosis, vertebral fusion, temporoparietal bossing, etc.), CNS abnormalities (calcification of falx cerebri), eye abnormalities, multiple OKCs
Multiple OKC’s

Odontogenic Cysts
- Radicular cyst
- Residual cyst
- Dentigerous cyst
- Paradental cysts (Buccal bifurcation cysts)
- Odontogenic Keratocyst (OKC)
  - Basal cell nevus-bifid rib-OKC syndrome
  - Lateral periodontal cyst
  - Calcifying odontogenic cyst

Lateral periodontal cyst
- Usually unicystic, it may also appear as a cluster of small cysts → botryoid odontogenic cysts
- Arise from the epithelial rests in the periodontium lateral to the root
- 50-75% develop in the mandible from lateral incisor to the premolar region
- In the maxilla, they appear between lateral incisor and canine
Lateral periodontal cyst
- Botryoid lateral periodontal cyst
- Origin from dental lamina?

[From Greek botruoeid s : - botrus, bunch of grapes + - oeid s, -oid].

Odontogenic Cysts
- Radicular cyst
- Residual cyst
- Dentigerous cyst
- Paradental cysts (Buccal bifurcation cysts)
- Odontogenic keratocyst (OKC)
  - Basal cell nevus-bifid rib-OKC syndrome
- Lateral periodontal cyst
- Calcifying odontogenic cyst

Calcifying odontogenic cyst
- Calcifying odontogenic cysts have a wide age distribution that peaks at 10 to 19 years of age, with a mean age of 36 years.
- Clinically, the lesion usually appears as a slow-growing, painless swelling of the jaw. Occasionally the patient complains of pain. In some cases the expanding lesion may destroy the cortical plate, and the cystic mass may become palpable as it extends into the soft tissue.
- Aspiration often yields a viscous, granular, yellow fluid.
Calcifying odontogenic cyst

Case courtesy of the KAOMFR

Calcifying odontogenic cyst

Case courtesy of the KAOMFR

Calcifying odontogenic cyst

Case courtesy of the KAOMFR

Non-Odontogenic cysts

- Nasopalatine cyst
- Nasolabial cyst
- Dermoid cyst
- Former “developmental cysts”

Nasopalatine Duct Cyst
Nasopalatine duct cyst

Nasopalatine duct cyst / aka incisive canal cyst
- If it involves the posterior hard palate, termed median palatal cyst
- Anteriorly, may be called median anterior maxillary cyst, depending on the radiographic features

Non-Odontogenic cysts
- Nasopalatine cyst
- Nasolabial cyst
- Dermoid cyst
- Former “developmental cysts”

Pathoses formerly known as “Globulomaxillary” Cysts
- Discredited as a developmental cyst
- Most are found, upon re-examination of histopathological and radiographic evidence, to be radicular or lateral periodontal cysts.

“Globulomaxillary” Cyst

Source of the epithelium may be embryonic nasolacrimal duct, which initially lies on the bone surface.

Image courtesy of Asahi University School of Dentistry
Pseudocysts

- Simple bone cyst (Traumatic bone cyst)
- Aneurysmal Bone Cyst
- Mucous Retention Cyst
- Stafne Bone Cyst (aka Stafne Bone Defect)

Simple Bone Cyst
(aka Traumatic Bone Cyst)

Simple bone cyst associated with florid cemento-osseous dysplasia
Pseudocysts
- Simple bone cyst (Traumatic bone cyst)
- Aneurysmal Bone Cyst
- Mucous Retention Cyst
- Stafne Bone Cyst (aka Stafne Bone Defect)

Aneurysmal Bone Cyst (ABC)
- Considered to be a reactive lesion
- There is a proliferation of vascular tissue in the lesion
- Swelling may be buccal or lingual
- Mandible: Maxilla 3:2
- Expands and thins cortices
- Internal architecture may show thin septae
- Similar appearance to a CGCG

http://www.thejcdp.com/issue022/martins/03martins.htm

Mucous retention cyst
- Generally seen as a dome-shaped opacity in the floor of the maxillary sinus
- Not lined with epithelium, hence, a pseudocyst
- Generally not clinically significant unless the ostium is blocked
Mucous retention cyst

Pseudocysts
- Simple bone cyst (Traumatic bone cyst)
- Aneurysmal bone cyst
- Mucous retention cyst
- Stafne bone cyst (aka Stafne bone defect)

Mandibular salivary gland depression

Thank you!