



# Dr. M.G.R

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**DEPARTMENT : ORAL MEDICINE AND RADIOLOGY**  
**TOPIC : CYSTS OF ORAL CAVITY**

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# CYSTS OF ORAL CAVITY



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Subject : Oral Medicine & Radiology

Topic : Cysts of Oral Cavity

Speaker : Dr. Sreedevi J

# DEFINITION

Cyst is a pathological cavity lined by epithelium containing fluid, semisolid or gaseous contents. It is frequently, but not always lined by epithelium.

# CLASSIFICATION

- TRUE CYSTS

- DEVELOPMENTAL & INFLAMMATORY

- ODONTOGENIC

- NON ODONTOGENIC

- FALSE CYSTS



# DEVELOPMENTAL CYSTS

## ODONTOGENIC

- Primordial cyst
- Dentigerous Cyst
- Odontogenic Keratocyst
- Calcifying Odontogenic
- Gingival cyst of infants
- Lateral Periodontal cyst
- Botryoid Odontogenic cyst
- Glandular Odontogenic Cy

## NON ODONTOGENIC

- Nasopalatine duct cyst
- Nasolabial cyst
- Midpalatal raphe cyst of infants
- Median palatine cyst
- Median Mandibular cyst
- Globulomaxillary cyst



1. Radicular cysts
2. Residual cysts
3. Para dental cysts
4. Mandibular infected Buccal cysts
5. Inflammatory Collateral cyst

# • PSEUDO CYSTS

## 1. Solitary Bone cyst

(Traumatic, simple , hemorrhagic bone cyst)

## 2. Aneurysmal bone cyst



## GENERAL CHARECTERISTICS OF CYSTS

- Cysts occur most often in the jaws
- Radiolucent lesions
- Swelling, lack of pain and missing teeth



# RADIOGRAPHIC FEATURES

## LOCATION

- Odontogenic cysts most often occur in tooth bearing region
- In Mandible-Above inferior alveolar canal
- In Maxilla – Extension into antrum

## PERIPHERY

Well defined & Corticated

- Fairly uniform, thin radio opaque line

## SHAPE

- Round or Oval – Resemble fluid filled balloon
- Some cyst ----- Scalloped Boundary

## INTERNAL STRUCTURE

- Totally Radiolucent
- Long standing cysts – dystrophic calcification
- Some have septa--- Multiple Loculations

- **EFFECT ON SURROUNDING STRUCTURES**

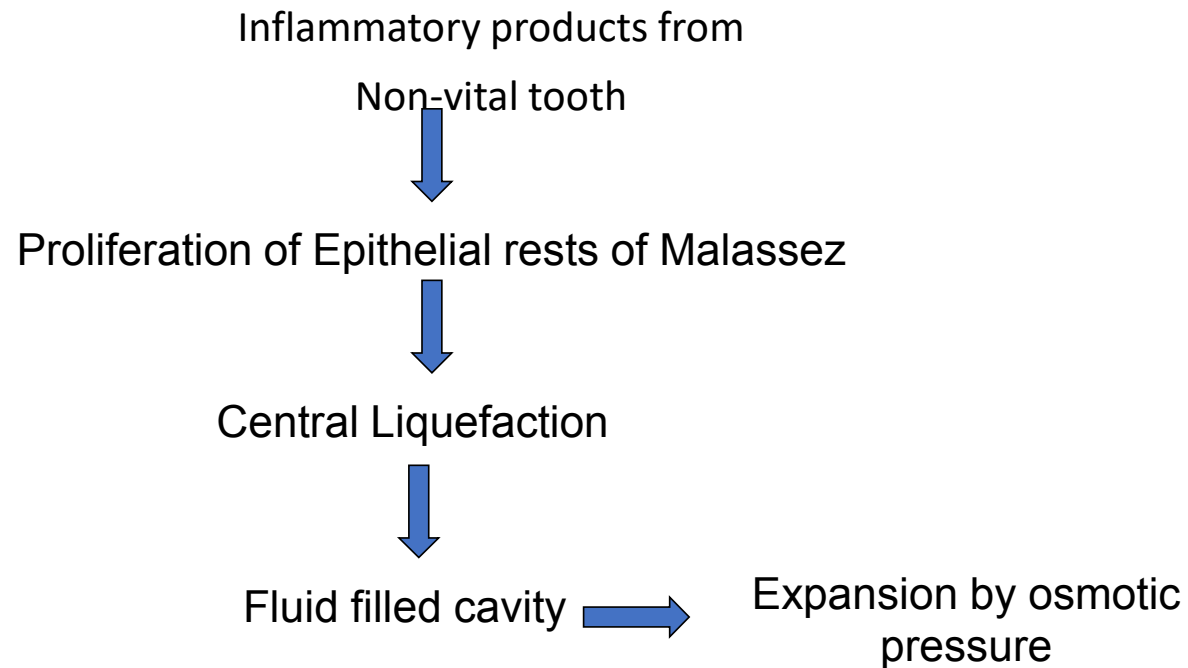
- Slow growing – displacement & resorption of teeth
- Resorbing root – sharp, curved border
- Expansion and thinning of buccal & lingual cortices
- Displace IAC inferiorly
- Expand into antrum

# RADICULAR CYST

## Periapical cyst, Apical periodontal cyst, Dental cyst

Most common cystic lesion of the jaw

### PATHOGENESIS



## CLINICAL FEATURES

- Non vital tooth
- Asymptomatic unless secondarily infected
- On Palpation- Bony hard--→ Crepitant -→ fluctuant and rubbery
- Aspiration-straw coloured, glistening fluid

## RADIOGRAPHIC FEATURES

- **LOCATION** ----- Apex of non vital tooth ----- 60% in maxilla
- **PERIPHERY & SHAPE** – well defined cortical border --curved/circular
- **INTERNAL STRUCTURE** – Radiolucent

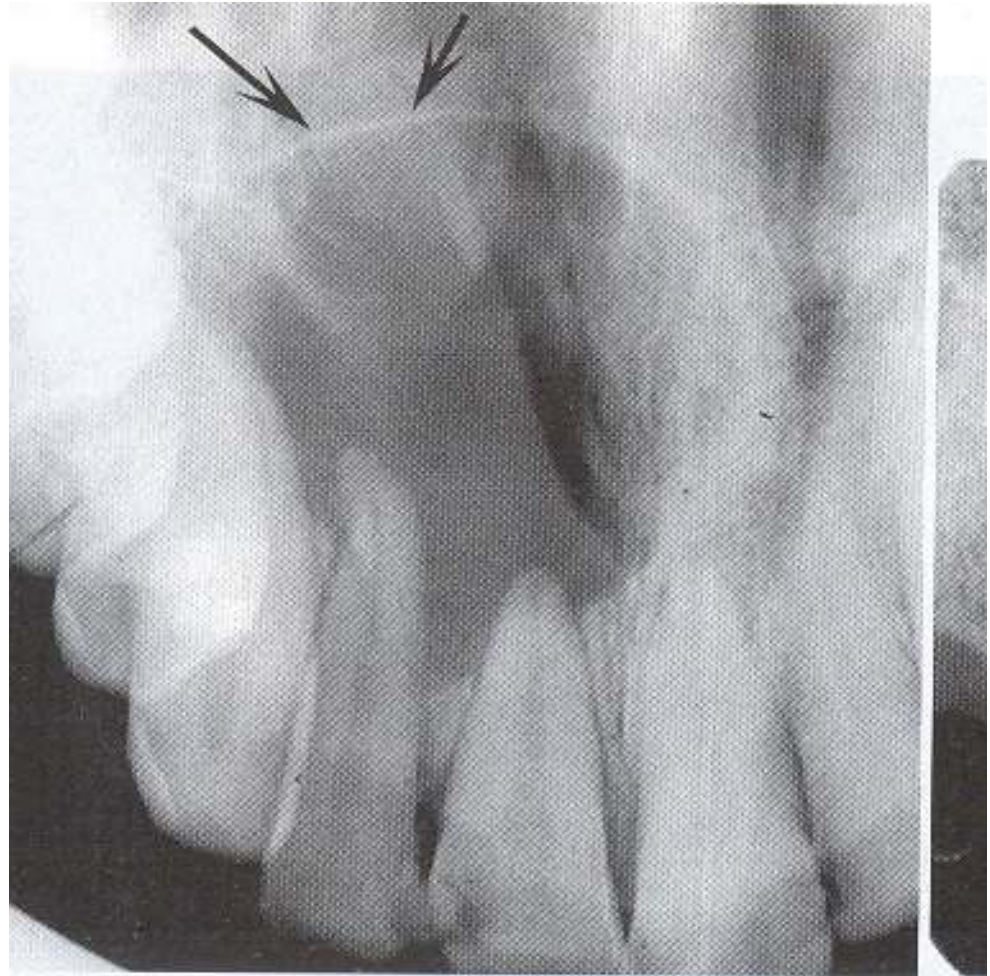
## ➤ EFFECT ON SURROUNDING STRUCTURES

Displacement and resorption of roots of adjacent teeth

Invasion of antrum

Displacement of mandibular canal

# RADICULAR CYST



**DD**

**Periapical Granuloma**  
**Early stage of PCOD**  
**Apical scar**  
**Surgical defect**

## **MANAGEMENT**

**Extraction/RCT of the tooth**  
**Enucleation**  
**Marsupialization**



## RESIDUAL CYST

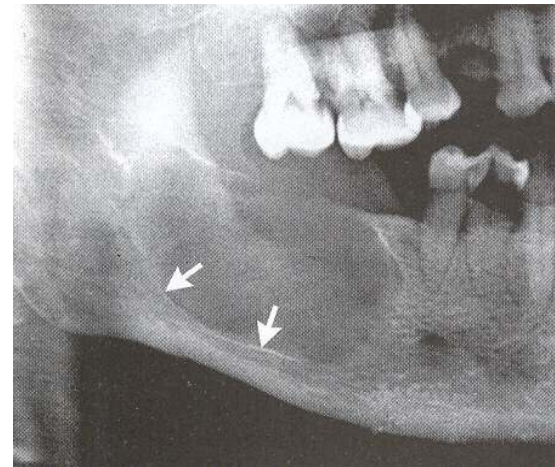
Cyst that remains after

- Incomplete removal of original cyst
- Extraction of the offending tooth

## RADIOGRAPHIC FEATURES

Mandible – Periapical Location

- Cortical Margins Present



# DENTIGEROUS CYST

- Forms around crown of an un erupted tooth
- Fluid accumulates in the layers of the REE
- Eruption cyst – Soft tissue counterpart

## CLINICAL FEATURES

- Missing tooth
- Hard swelling – Facial asymmetry

## 4 VARIANTS

- Eruption cyst
- Circumferential Dentigerous cyst
- Lateral Dentigerous cyst
- Inflammatory Dentigerous Cyst

Multiple Dentigerous cysts in

**MAROTEAUX-LAMY SYNDROME**

**CLEIDOCRANIAL DYSPLASIA**



## RADIOGRAPHIC FEATURES

**LOCATION** – Around the crown of the involved teeth

Max III Molar, Mand III molar, Max canine.

Attaches at CE junction

## PERIPHERY AND SHAPE:

- Well defined cortex
- Curved/circular outline

## INTERNAL STRUCTURE:

Completely radiolucent except for involved crown

Mostly Unilocular

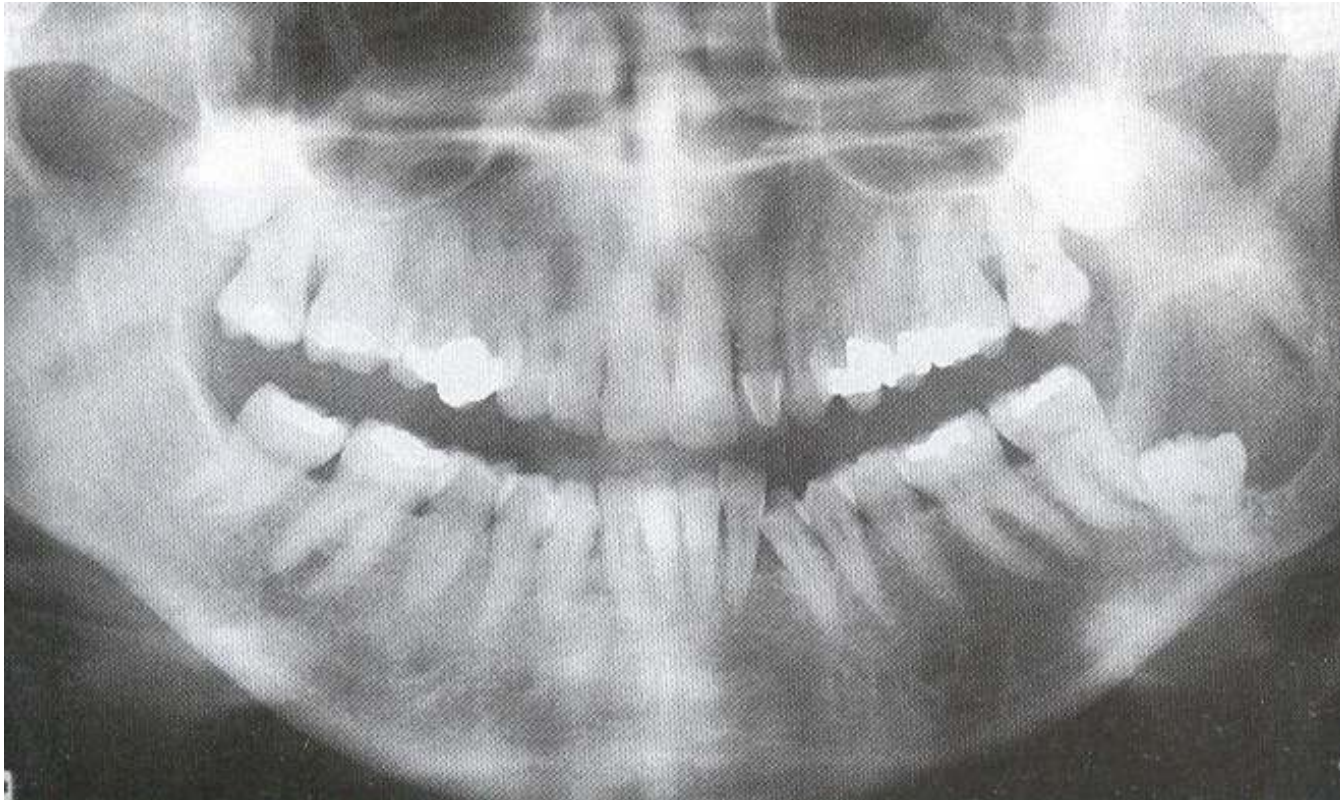
## EFFECT ON SURROUNDING STRUCTURES

- Great propensity to displace and resorb adj teeth
- Displacement of associated teeth in apical direction

## **DIFFERENTIAL DIAGNOSIS**

- 1. Difficult DD - Hyperplastic Follicle**
- 2. Odontogenic Keratocyst**
- 3. Cystic Ameloblastoma**

# DENTIGEROUS CYST



## MANAGEMENT

- Enucleation
- Marsupialisation

## COMPLICATIONS

1. Ameloblastoma
2. Squamous cell Carcinoma
3. Muco epidermoid Carcinoma

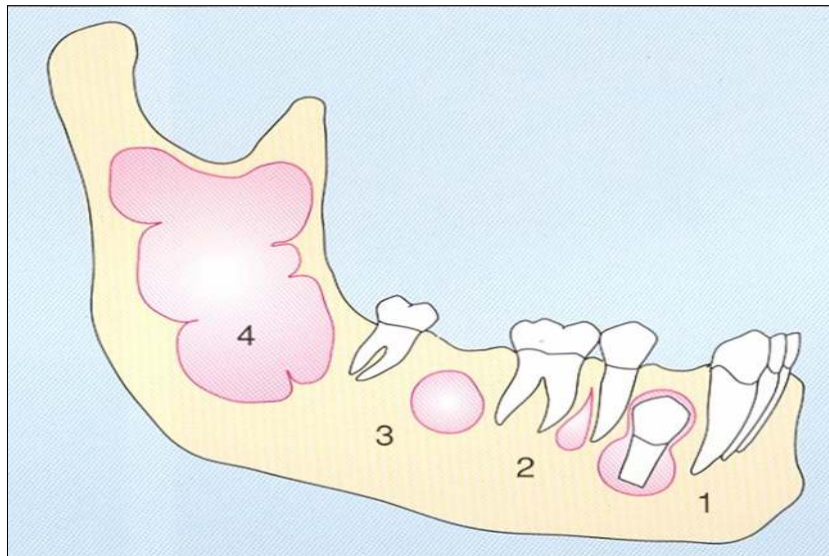
# ODONTOGENIC KERATOCYST KERATOCYSTIC ODONTOGENIC TUMOR

- Epithelium of OKC - innate growth potential
- High rate of Recurrence – satellite microcysts
- Distinctive Epithelial lining

## CLINICAL FEATURES

- Peak frequency – second and third decades
- Male to female ratio 1.7:1
- Initial Complaint - Painless swelling  
Intra oral drainage
- Aspiration – Thick yellow cheesy material





- Envelopmental.
- Collateral.
- Replacement.
- Extraneous.

- Enlargement at the expense of medullary spaces
- Minimal expansion
- Multilocular radiolucency

## LOCATION

- Mandibular molar – premolar area
- Fill entire ramus

## PERIPHERY AND SHAPE

- Sclerotic margins
- Scalloped outlines

## INTERNAL STRUCTURE

- Radiolucency – Unilocular
- Multilocular
- Desquamated Keratin ----- ‘Milky way’ lumen
- Spiculation of internal margins on CT
- Perforation ---- Discontinuity



## EFFECTS ON SURROUNDING STRUCTURES

- Minimal expansion – late detection
- Displacement/Resorption of teeth

## DD

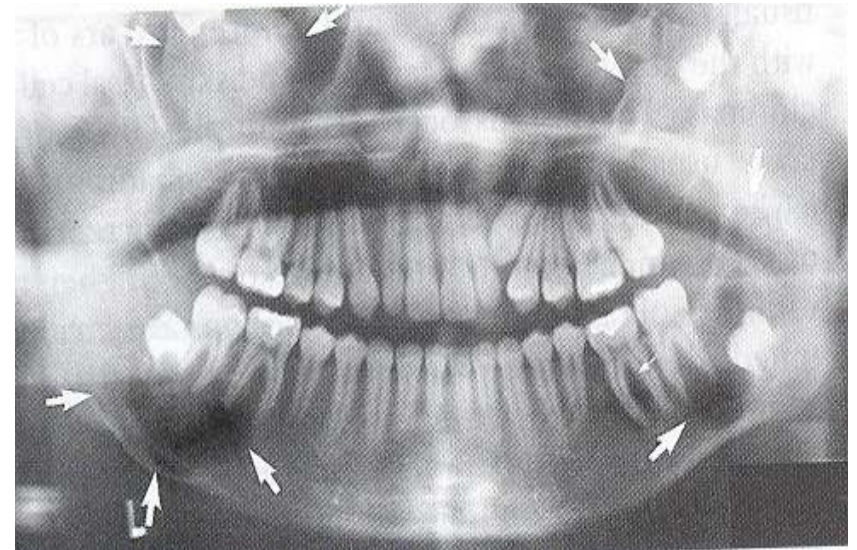
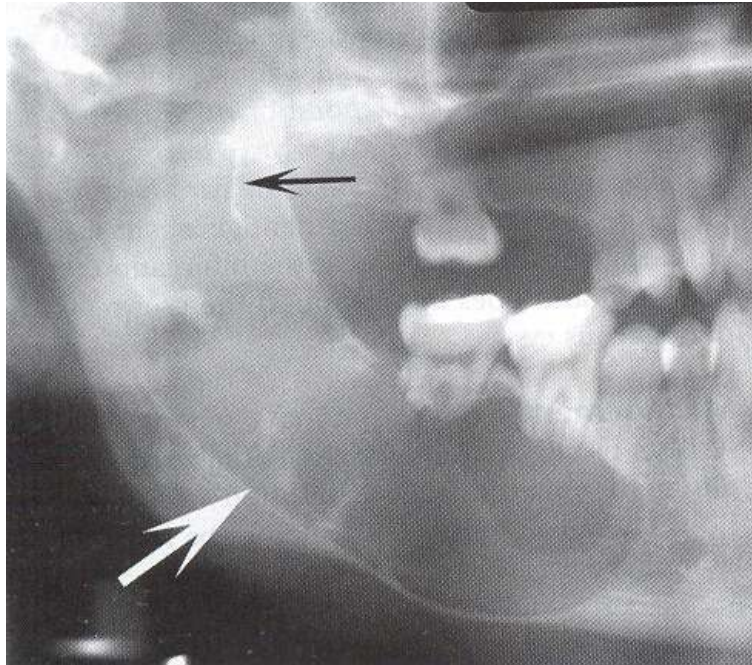
1. Dentigerous cyst
2. Ameloblastoma
3. Odontogenic Myxoma

## MANAGEMENT

Enucleation/Resorption  
High Recurrence rate

## BASAL CELL NAEVUS SYNDROME

- Autosomal dominant transmission
- Nevroid basal cell carcinomas
- Multiple OKC's – more aggressive than solitary ones
- Rib abnormalities
- Palmar/plantar pits
- Hypertelorism
- Vertebral anomalies
- Calcification of falx cerebri



## CALCIFYING ODONTOGENIC CYST

### CALCIFYING CYSTIC ODONTOGENIC TUMOR

- Gorlin cyst
- Spectrum ranging from cyst to odontogenic tumor
- Location : Anterior to I molar
- Periphery and shape – Well defined corticated/ variable
- Internal structure - Uni/Multilocular radiolucency
  - Scattered radio opaque foci
- Effect on surrounding structures
  - Impedes tooth eruption – mostly a cuspid
  - Displacement/ resorption of roots

# COC



# BUCCAL BIFURCATION CYST

- Mandibular infected buccal cyst/ Paradental cyst
- Pathogenesis: Epithelial cell rests in PDL of buccal bifurcation of mandibular molars  
?Inflammatory stimulus
- C/F – Lack or delay in eruption of mand I/II molars  
Abnormally protruding lingual cusps – higher than buccal  
Vital teeth – second decade







# LATERAL PERIODONTAL CYST

- Epithelial rests of periodontium lateral to the tooth root
- Cluster – Botyroid odontogenic cyst
- Intrabony counterpart of Gingival cyst
- C/F – less than 1 cm – asymptomatic
- Location – mandible – lateral incisor to II premolar
- Periphery – well defined – round/oval
- Internal structure – radiolucent
- Effect on surrounding structure – displacement of teeth/  
minimal expansion





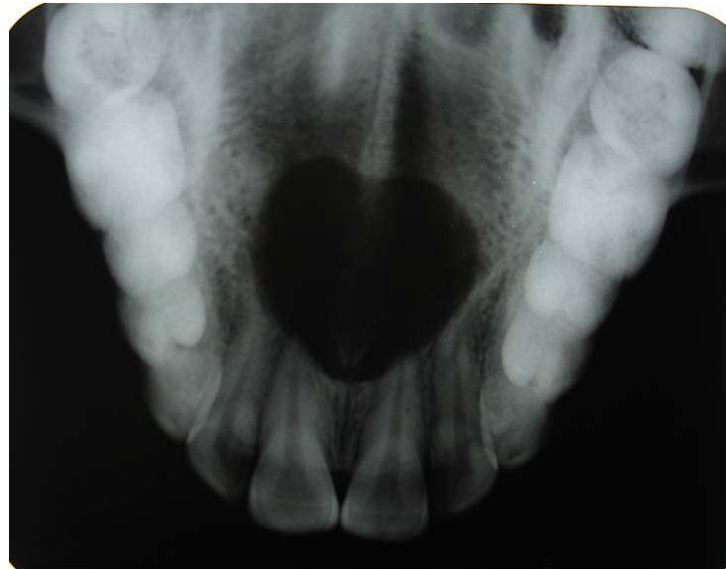
# Glandular Odontogenic cyst

- Sialo-odontogenic cyst
- Salivary gland features/ mucus producing cells
- ?Relationship to mucoepidermoid carcinoma

# NASOPALATINE CYST

- Incisive canal cyst
- Eppithelial remnants of nasopalatine canal – cystic degeneration
- Small, well defined swelling behind incisive papilla
- Burning, numbness, salty taste

- Location – nasopalatine canal – maxillary midline usually
- Periphery and shape – well defined – circular/ oval/ heart shaped
- Internal structure- radiolucent
- Effects on surrounding structures – divergence of central incisor roots
- DD- large incisive foramen
- Treatment - enucleation



# NASOLABIAL CYST

- Fissural cyst –from epithelial rests in fusion lines of lateral nasal and maxillary processes
- Swelling over nasolabial fold
- Soft tissue cyst – no radiographic change

# PSEUDO CYSTS

- SIMPLE BONE CYST
  - Mandible – inter radicular scalloping
  - Open and induce bleeding
- ANEURYSMAL BONE CYST
  - Blood filled cavity – multilocular soap bubble appearance



# What you need to know...

- Definition of cyst
- Classification of cysts
- Radicular cyst
- Dentigerous cyst
- Odontogenic keratocyst
- COC
- Nasopalatine cyst
- Pseudocysts