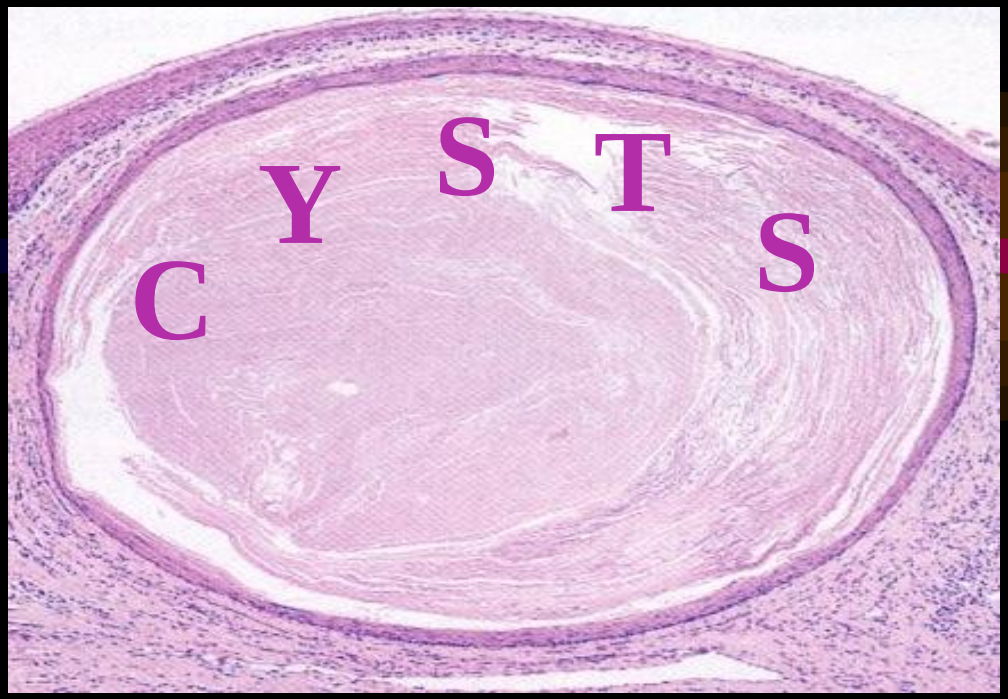
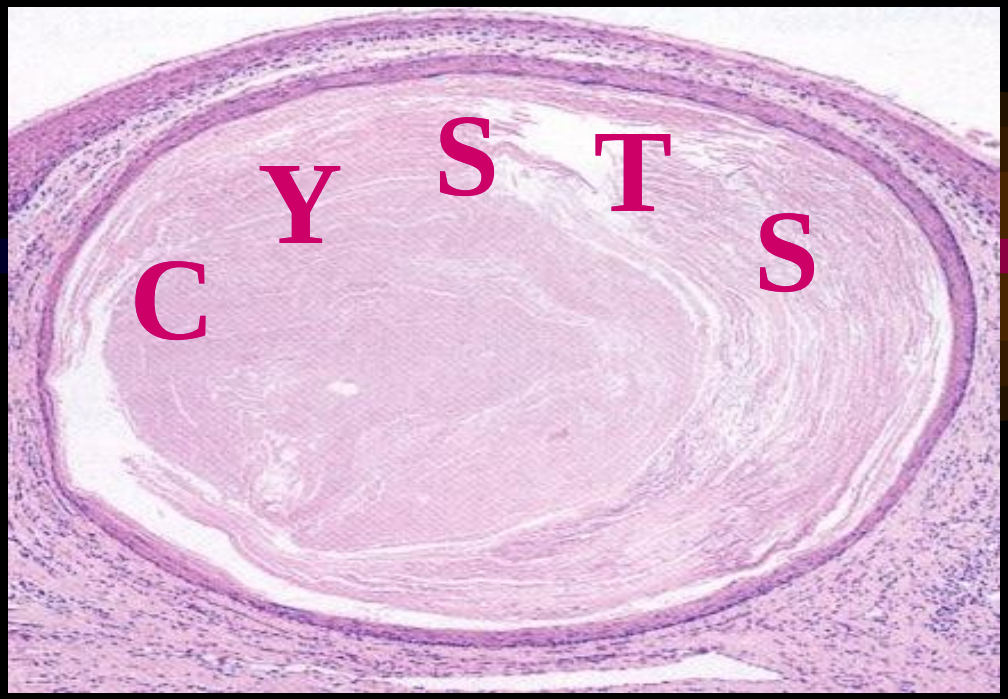

C Y S T S




# OF THE ORAL REGION

Pathologic Cavity containing fluid or semisolid material, but not pus, lined by an epithelial lining



## Cysts of the jaws

### Epithelial

Odontogenic origin

- *Developmental*
  - Primordial
  - Gingival cyst of infant
  - Gingival cyst of adult
  - Lat. Periodontal cyst
  - Dentigerous cyst
  - Eruption cyst
  - Calcifying odont. cyst
- *Inflammatory*
  - Radicular
  - Residual
  - Inflam. collateral
  - Paradental cyst



## Cysts of the jaws

### Epithelial

- Non-odontogenic
  - Nasopalatine ( incisive canal)
  - Median palatine, median alveolar, median mandibular
  - Globulomaxillary
  - Nasolabial



## Cysts of the jaws

### Non- Epithelial

- Simple bone cyst (traumatic,solitary hemorrhagic)
- Aneurysmal bone cyst



## Cysts associated with maxillary antrum

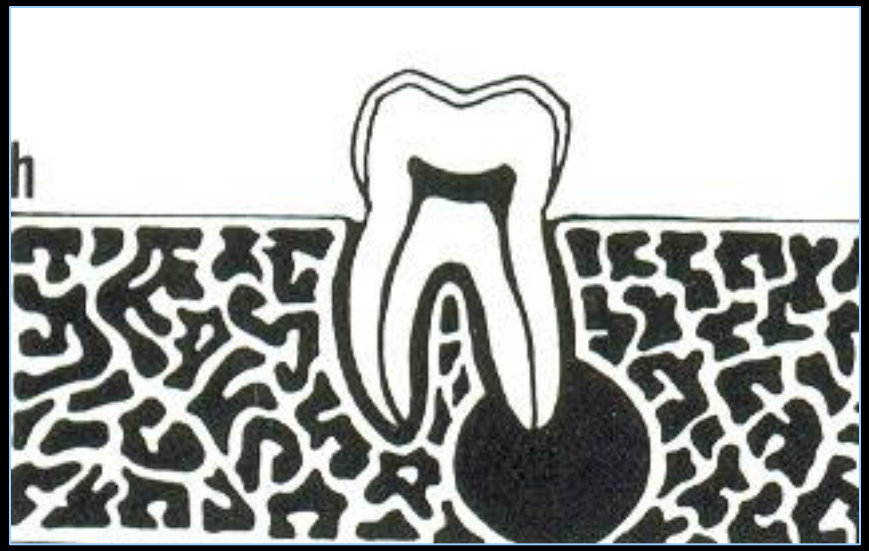
- Benign mucosal cyst of antrum
- Surgical ciliated cyst of maxilla

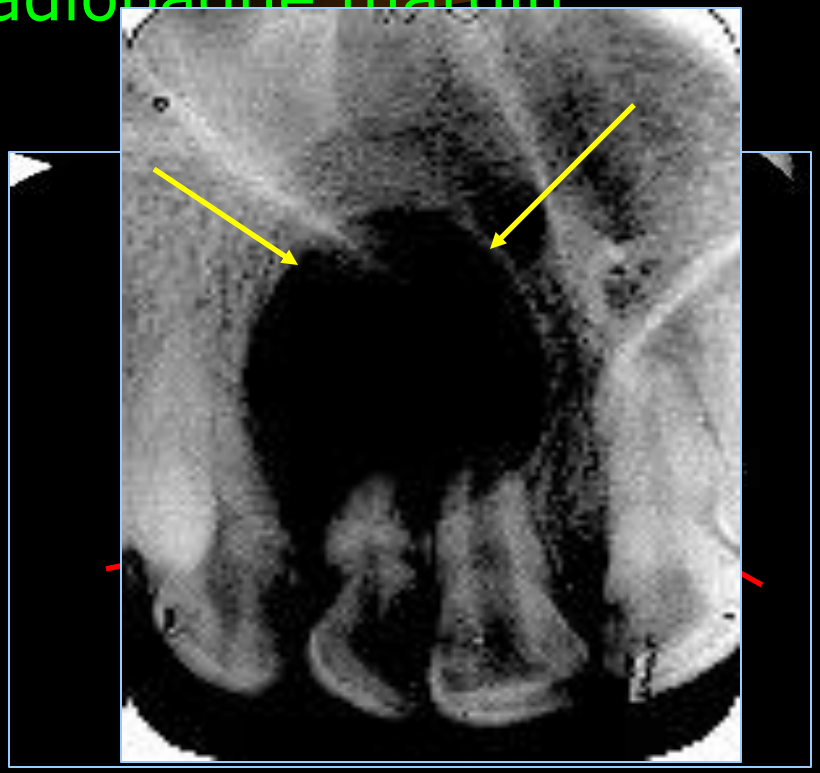


## Cysts of soft tissue of mouth,face & neck

## Radiographic appearance

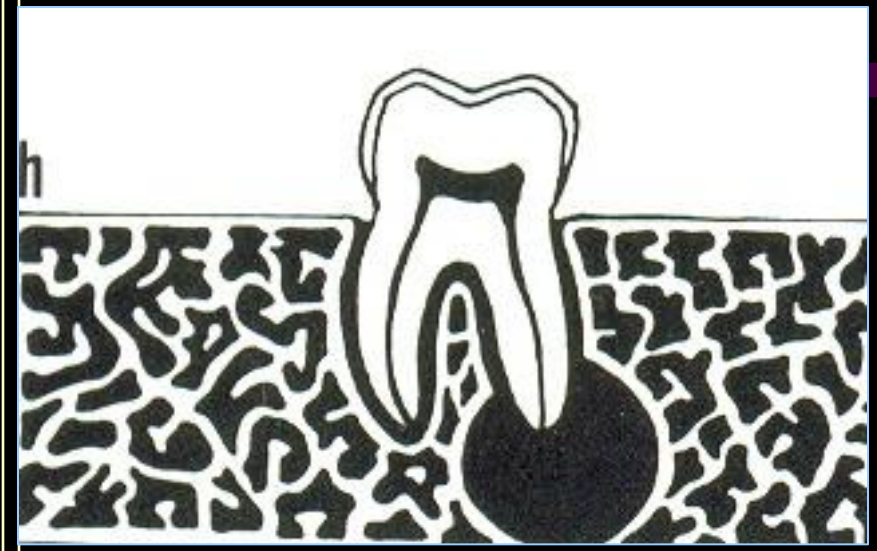
- Well defined round/ oval area of radiolucency
- Circumscribed by sharp radiopaque margin







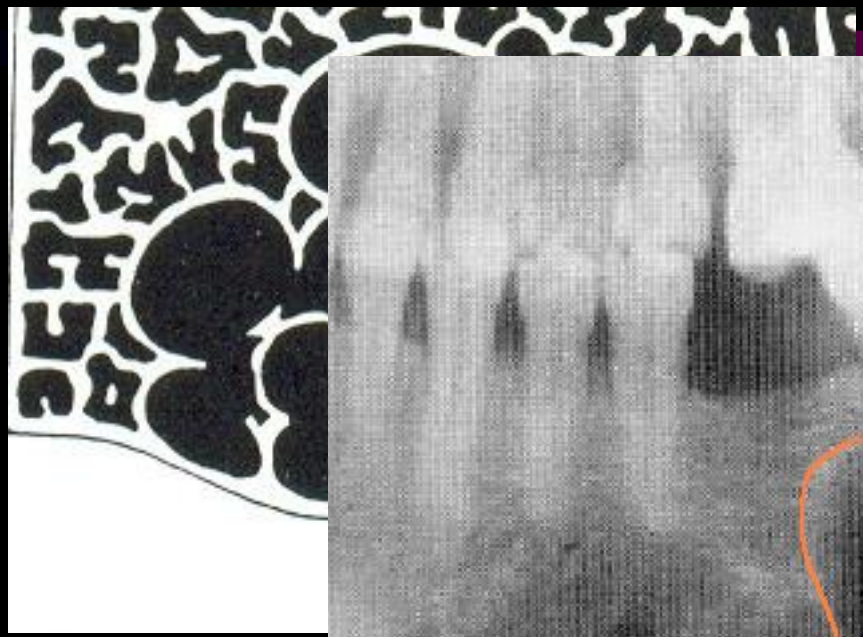
## Radiographic appearance



Monolocular – D.D

- *Cyst*
- *Central benign neoplasm*
- *Incisive fossa*
- *Mental foramen*
- *Maxillary sinus*

## Radiographic appearance





## Radiographic appearance

Intra oral views

- I O P A
- Standard occlusal
- Topographic occlusal



## Radiographic appearance

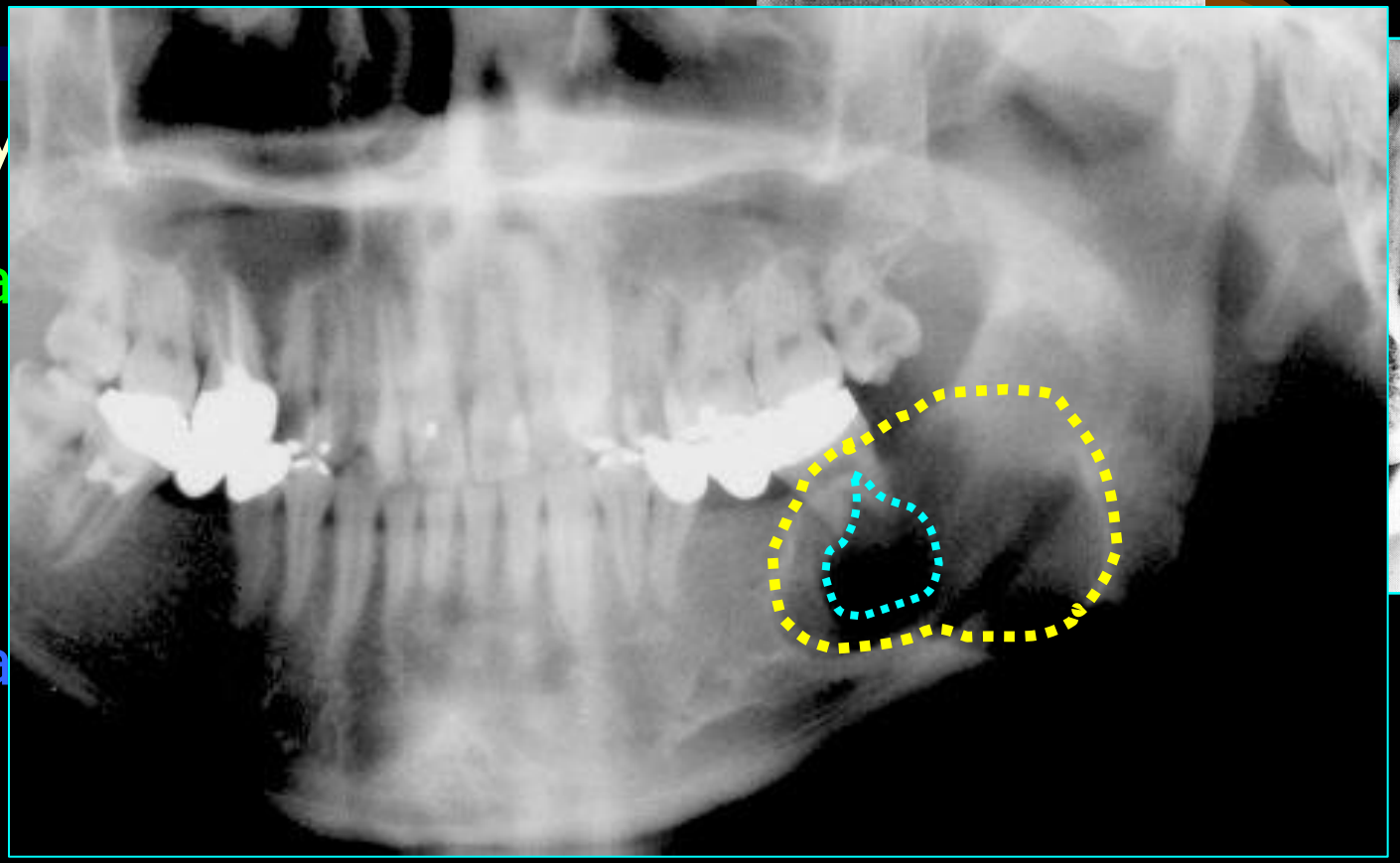
Extra oral views

- Lateral oblique
- PA Mandible
- PA Water's

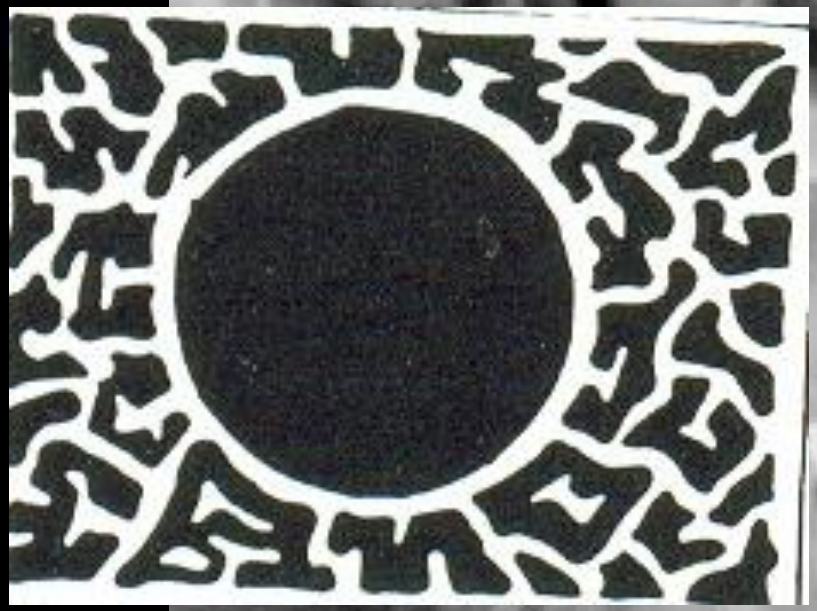


## Radiographic appearance

- Initially
- Elonga shaped
- Perfora shadow



## Radiographic appearance







- As cyst heals circum
line fades

## SIGNS AND SYMPTOMS

Physical signs

- Depends on size
- Small – no expansion

 in size + subperiosteal bone deposition → swelling

- Bone covering centre of convexity becomes thin - can be depressed like T.T ball



## SIGNS AND SYMPTOMS

Physical signs

- Depends on size
- Small – no expansion – no sign

 in size + subperiosteal bone deposition → swelling

- Bone covering centre of convexity becomes thin - can be depressed like T.T ball



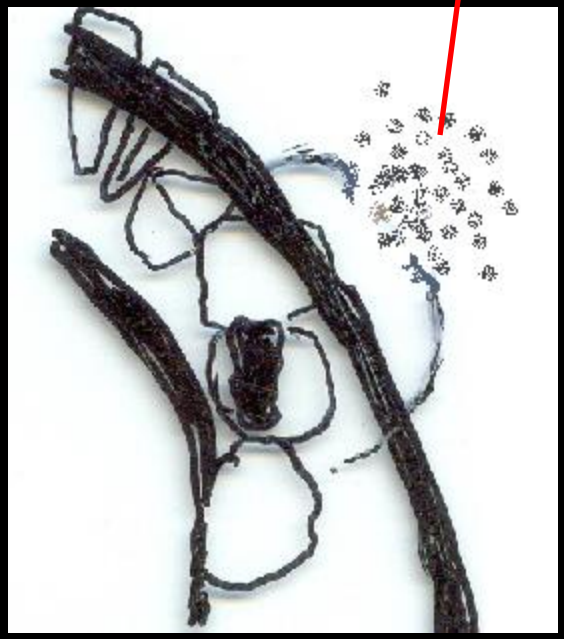
## SIGNS AND SYMPTOMS

Physical signs

- Depends on size
- Small – no expansion – no sign

 in size + subperiosteal bone deposition → swelling

- Bone covering centre of convexity becomes thin - can be depressed like T.T ball
- Greater distention

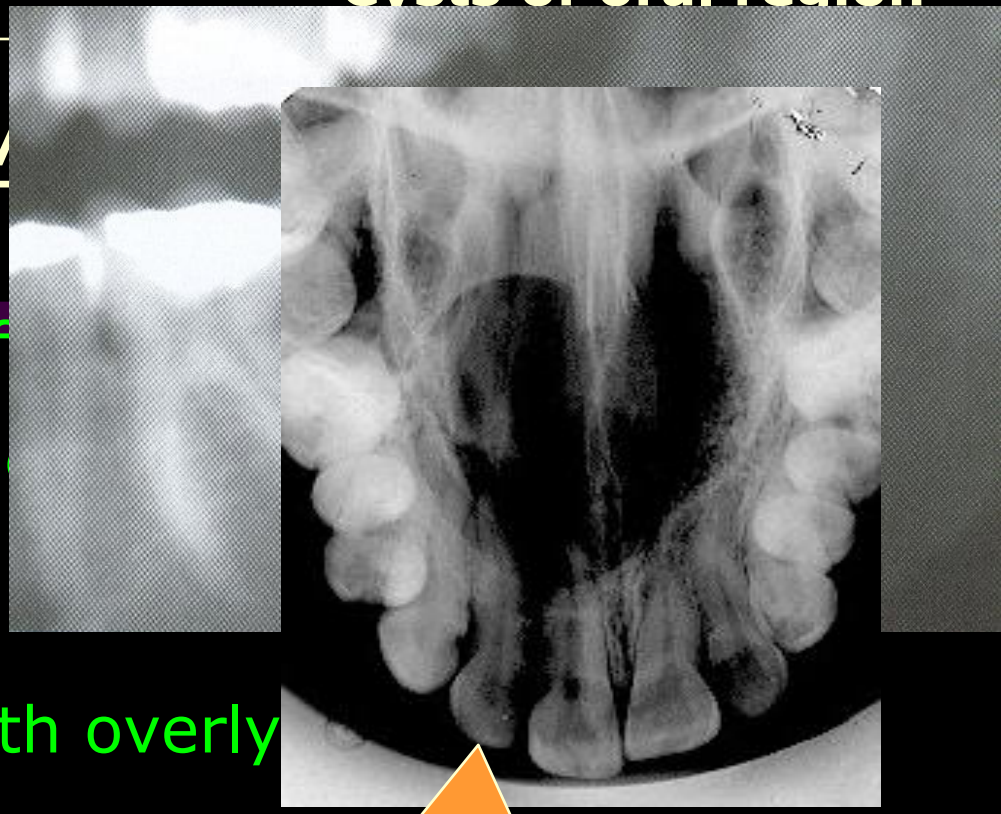


## SIGNS AND SYM

Physical signs

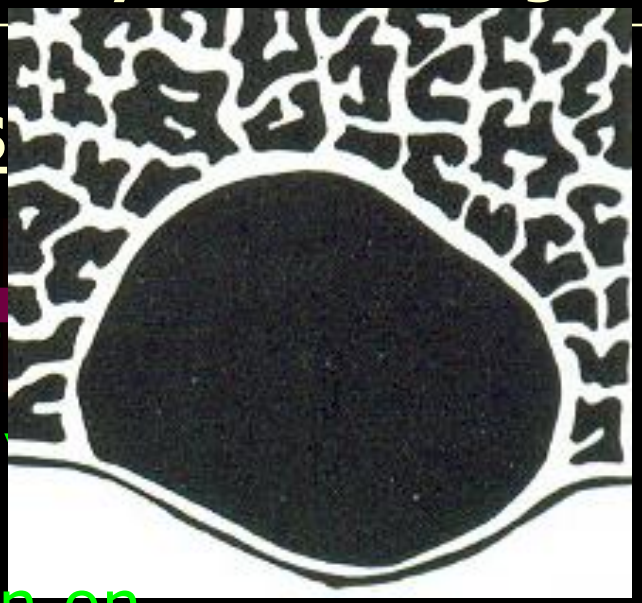
- Clinical absence of
  primordial/ dentig

- Percussion of teeth overly
  ' *dull'* or *'hollow'* sound
  ( normal – *high pitched* )





## SIGNS AND SYMPTOMS

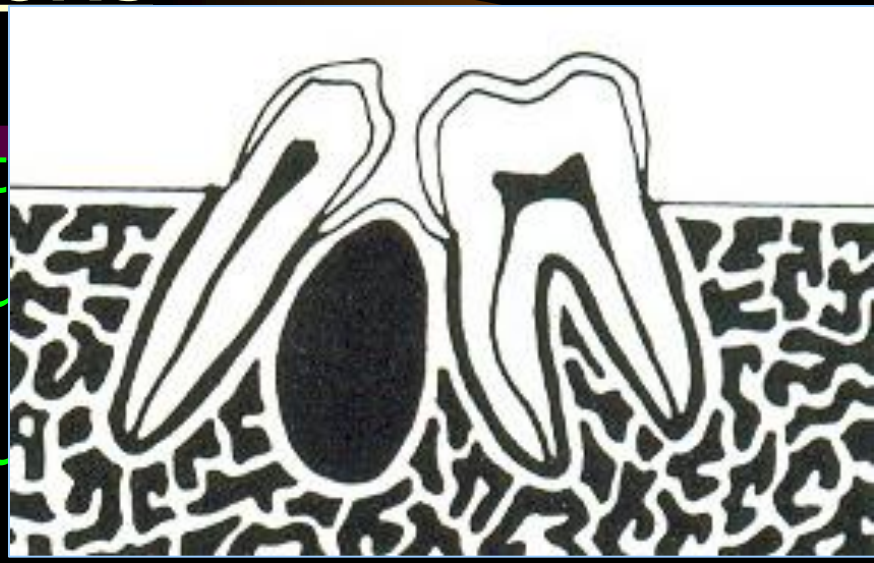


Physical signs

- Edentulous patient with de
  dislodgement of denture b
- Unilocular cyst – fluctuation on
  finger pressure



## SIGNS AND SYMPTOMS



Physical signs

- Edentulous patient wit

  dislodgement of dentu

- Unilocular cyst – fluctu

ne- roots displaced

rowns converge



## Symptoms

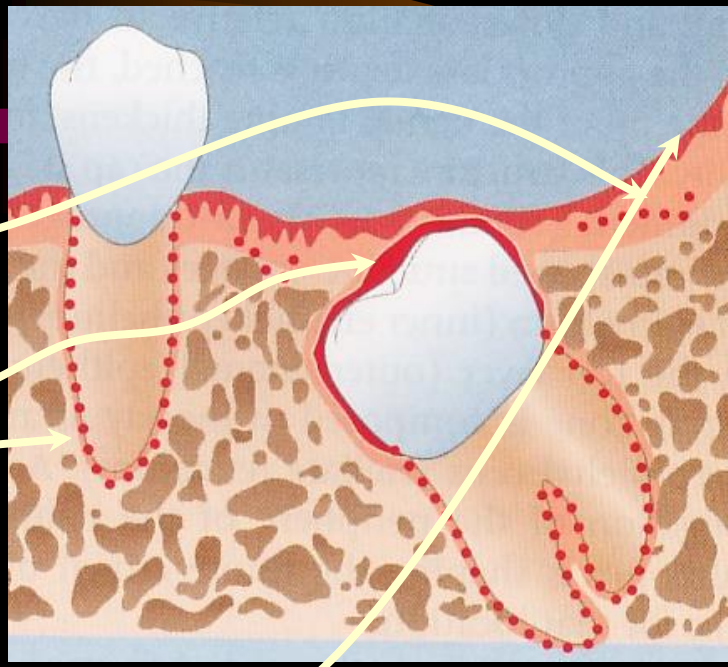
- Lump in sulcus
- If infected – pain & swelling
- in size- # jaw → disturbance in
- If sinus present- salty taste
- Edentulous patient – denture displaced
- Radicular cyst –Tooth discolored, slightly loosened



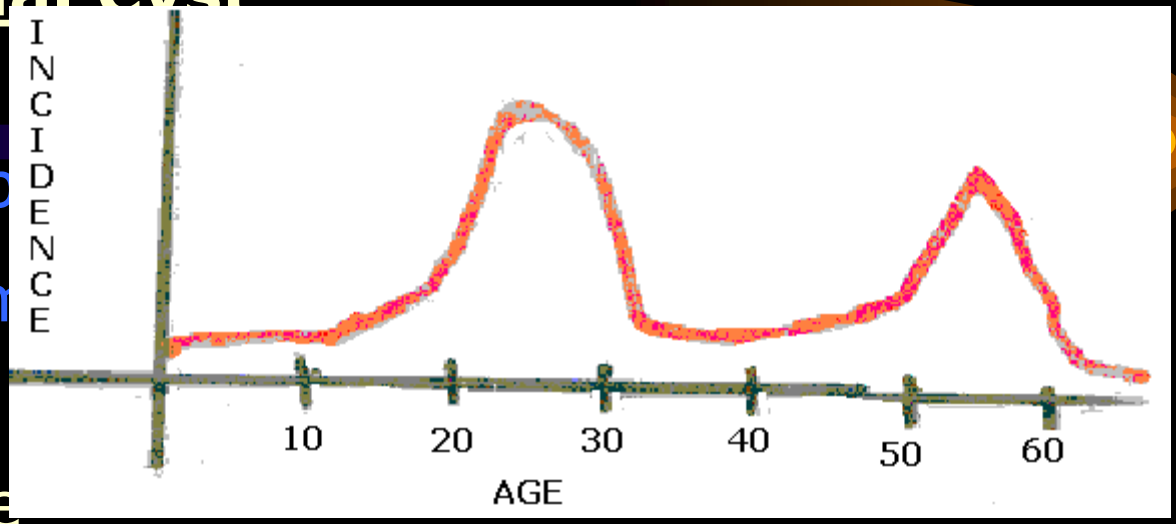
## Odontogenic Cysts

Sources of epithelium

- Tooth germ
- Reduced enamel epithelium
- Ep. Rests of Malassez
- Basal layer of oral epithelium



## Primordial Cyst




- Cyst in p
- Synonym

Incidence

- M=F, M > F,Blacks > Whites
- 20 –30, 50- 60, are peak age range

- Mandible > Maxilla

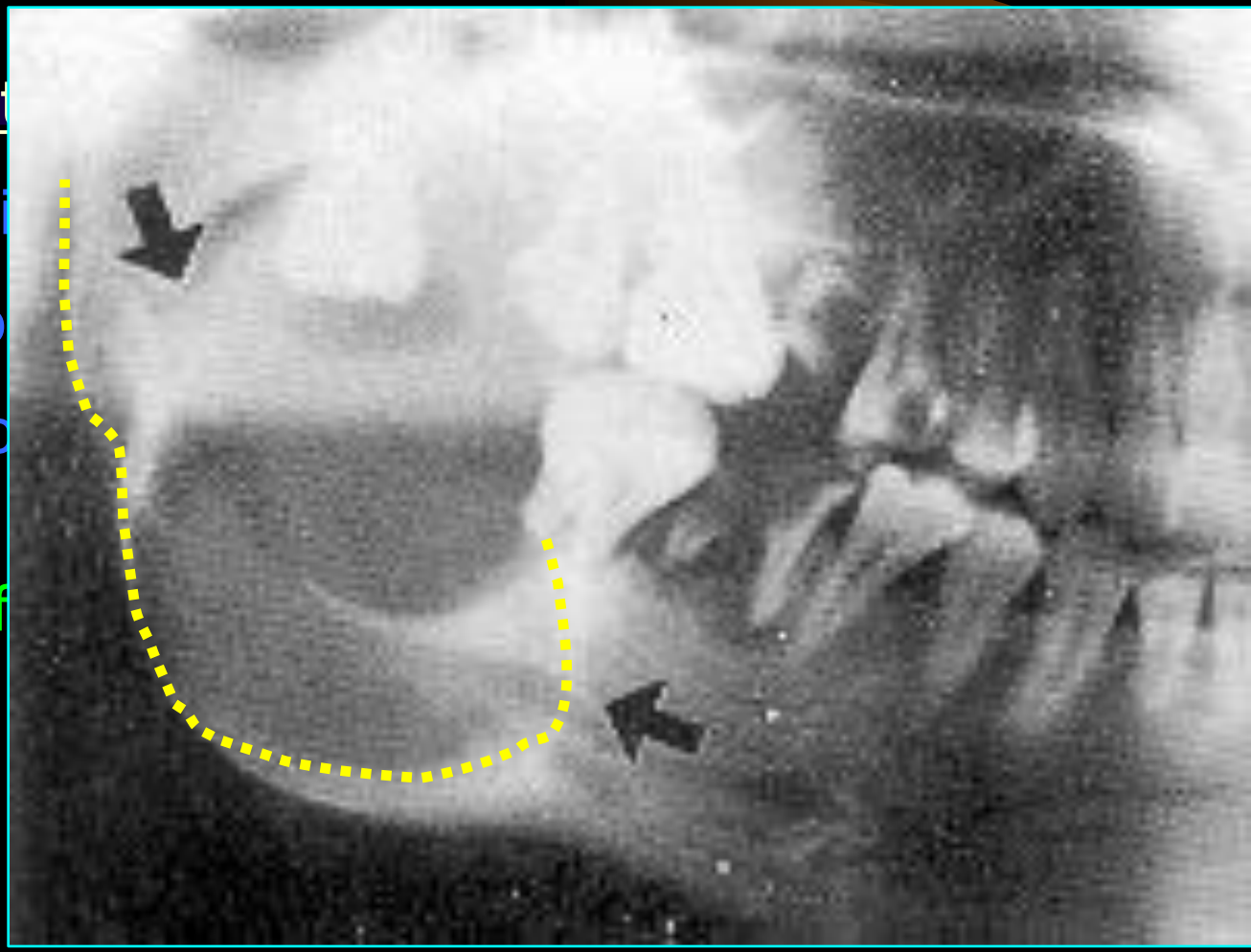


## Primordial Cyst

Clinical Feat

- Occur at si
  absent fro
- Distal to lo

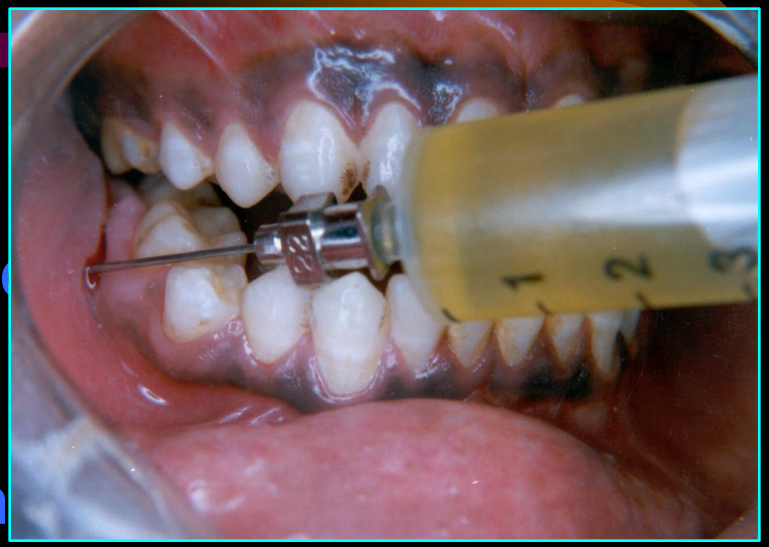
- Potential f
  displacing





## Primordial Cyst

Clinical Features



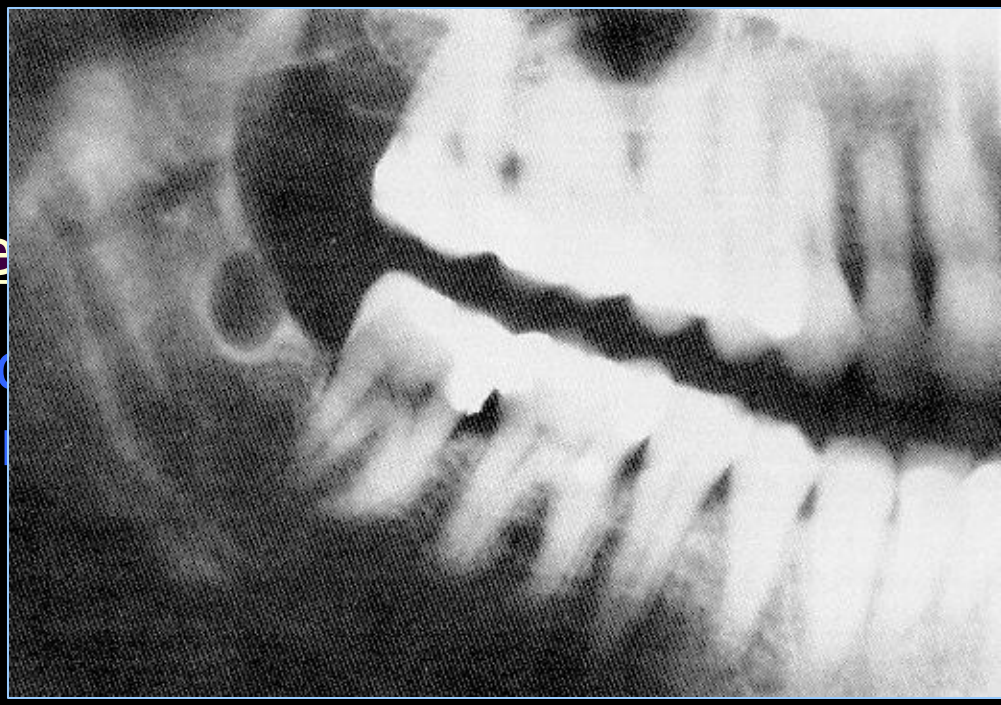
- Not painful till infected
- Expansion at cost of me
- Pathological #
- Maxillary cyst expansion
- Aspiration – thick, granular, yellowish material

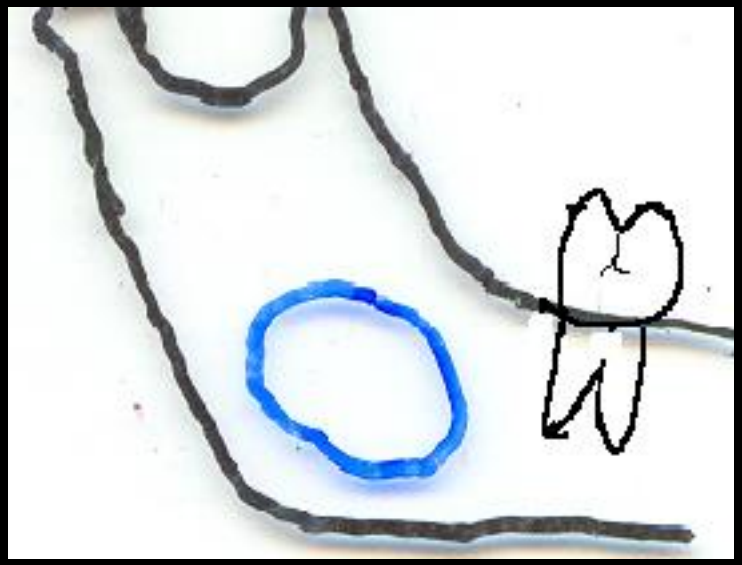
- Multiple primordial - part of Naevoid basal Cell Ca. syndrome

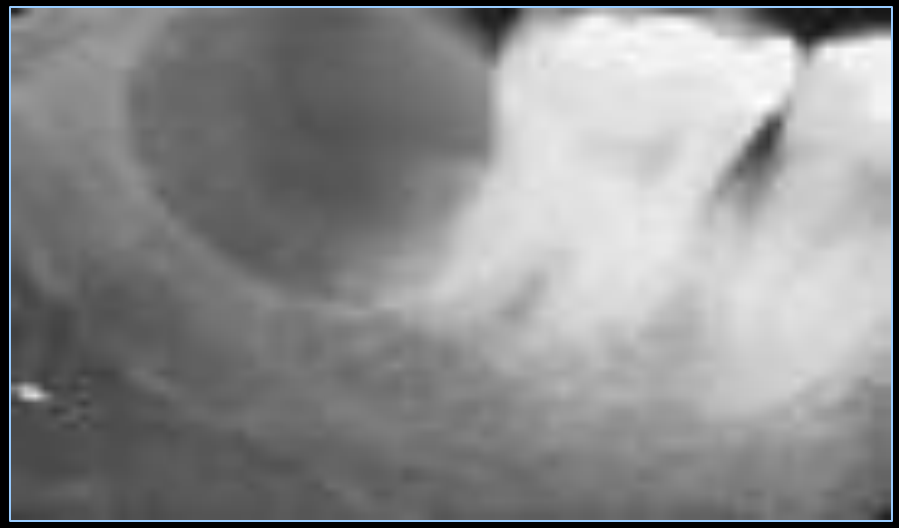
## Primordial Cyst

Radiographic Feature

- Well demarcated ra
hyperostototic borde
- Round or oval





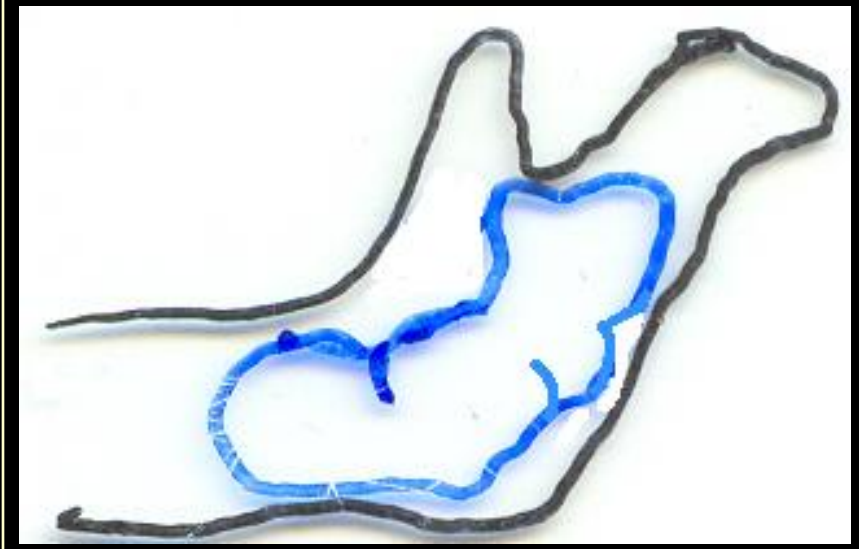


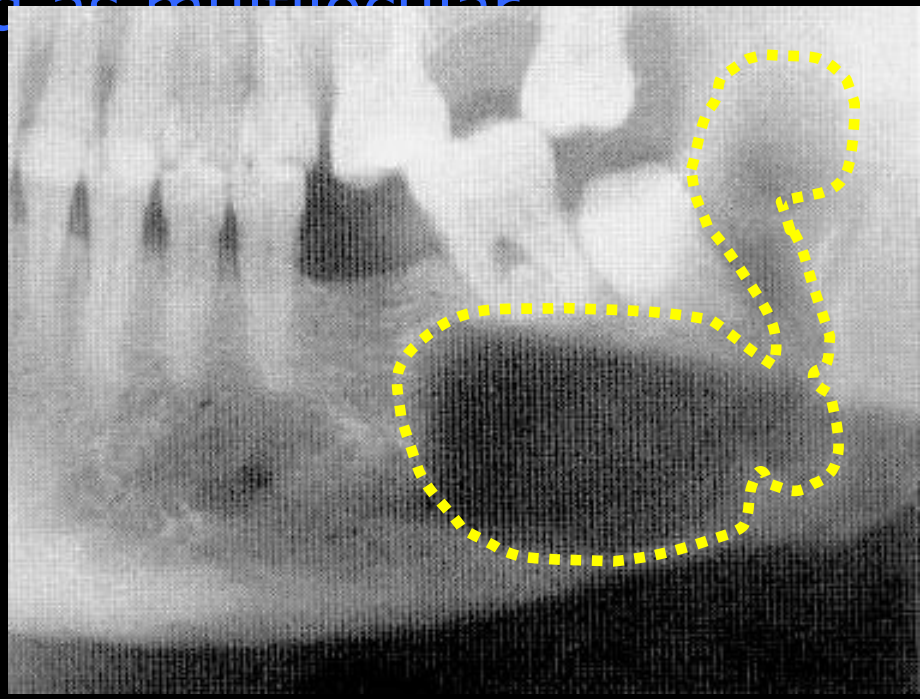


## Primordial Cyst

Radiographic Features

- Some unilocular lesions have scalloped margins, misinterpreted as multilocular







## Primordial Cyst

### Radiographic Features

- Some unilocular lesions have scalloped margins, misinterpreted as multilocular
- Deflection of adjacent tooth roots, but seldom root resorption

## Primordial Cyst

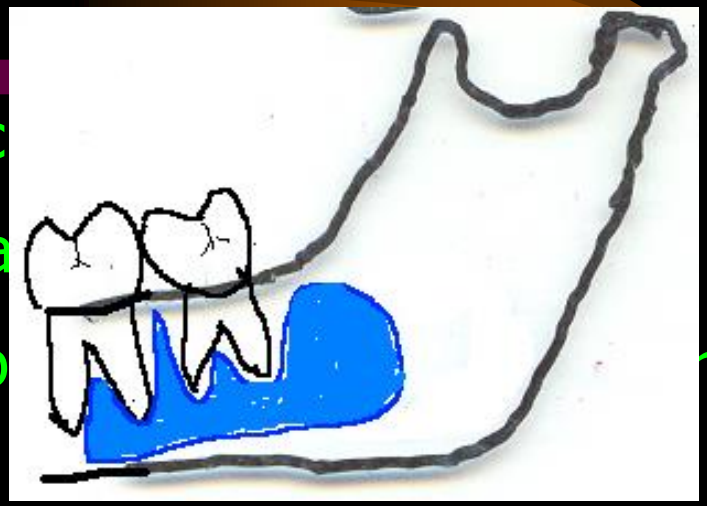
### Radiographic Features

- Per
- Wit
- cyst



## Primordial Cyst

Differential Diagnosis



- Dentigerous Cyst – assoc
- Residual cyst – H/O extra
- Traumatic bone cyst- sup
- Early ameloblastomas
- Odontogenic myxoma – rare lesion
- Completely radiolucent ossifyng fibroma
- Giant cell granuloma
- Benign non-odontogenic tumors

Absence of tooth + no H/O extn. → **primordial**



## Primordial Cyst

Management

- Since 50% microscopically keratocyst - high recurrence → aggressive Rx –removal with lining & currettment.
- Regularly re – examined for recurrence



## Odontogenic Keratocyst

- Distinctive epithelial lining
- Innate growth potential
- Budlike proliferation of ep.
- Satellite microcysts
- Viscous or cheesy material inside

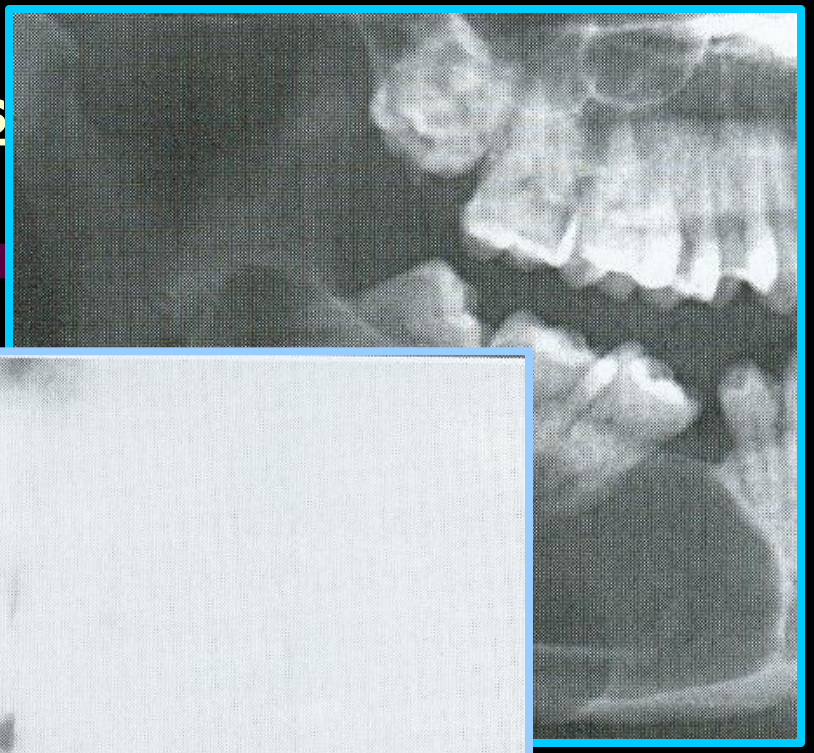
## Odontogenic Keratocyst

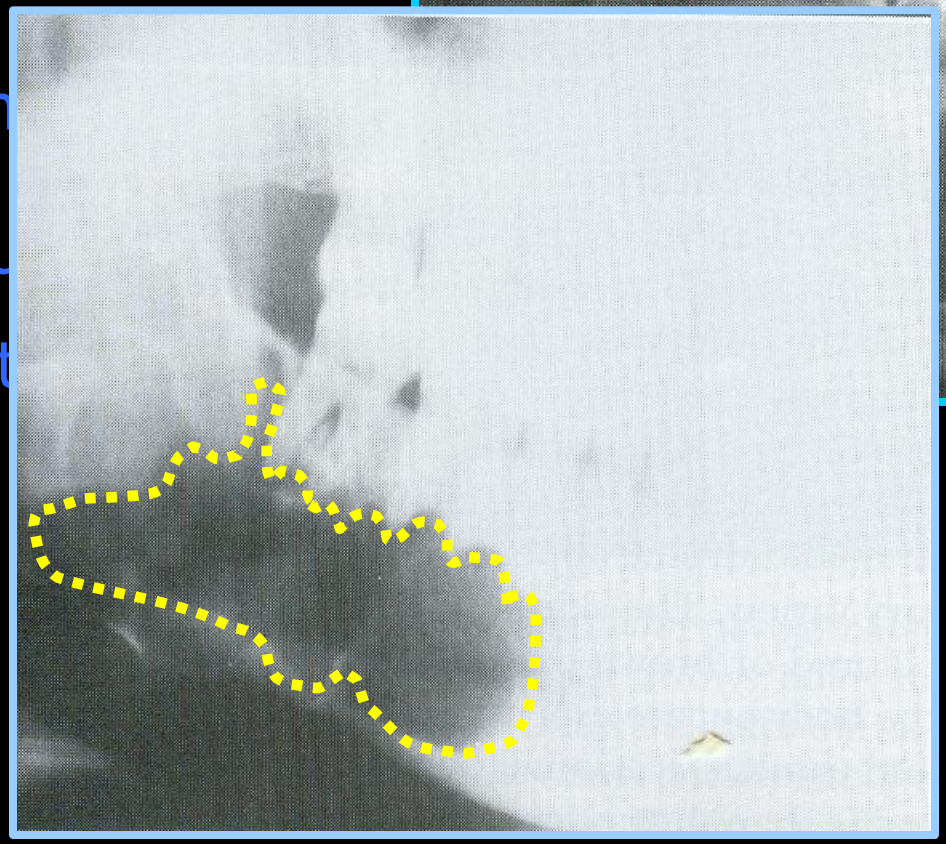
### Clinical Features

- 2nd or 3rd decade
- No symptoms
- Pain with secondary infection
- Aspiration- thick yellow,cheesy material ( keratin)

## Odontogenic Keratocys

### Radiographic Features



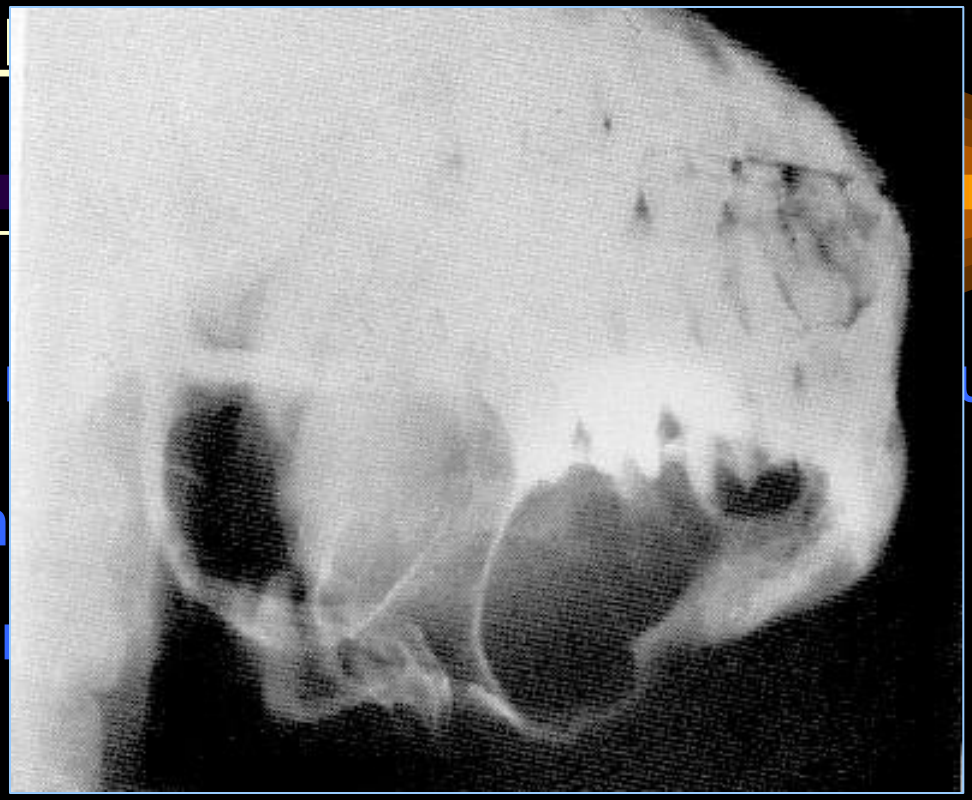


- Most comm
- Smooth rou

  border, out

## Odontogenic

Radiographic



- Most commo us
- Smooth roun
  border, outli
- Aggressive growth



## Odontogenic Keratocyst

### Differential Diagnosis

- When pericoronal – Dentigerous cyst
- Ameloblastoma
- Odontogenic myxoma
- Simple bone cyst
- When multiple – part of basal cell nevus syn.

## Gingival Cyst of adult & L

Extra-osseous & intra-osse
same lesion

- Asymptomatic dome shaped fluctuant swelling of interdental papilla
- 50-75% - lat. Incisor & lower p.m
- Elevation mostly on buccal side
- If secondary infection- mimic lat perio. abscess



## Gingival Cyst of adult & Lat. Periodontal Cyst

Radiographic features

Intrabony lat. Perio cyst- well defined R.L round to oval, corticated, bet. cervical margin and apex of adjacent root(s)

D.D

- Lat perio abscess
- Lat. Dent. Cyst
- Residual rad. Cyst from prim. Dent.
- Rad. Cyst- foramen of lat. canal



## Dentigerous Cyst

- Originates after crown of tooth has formed
- Accumulation of fluid bet. R.E.E and crown
- If cyst originates before crown complete

Primordial cyst

Cyst involving tooth exhibiting enamel hypoplasia

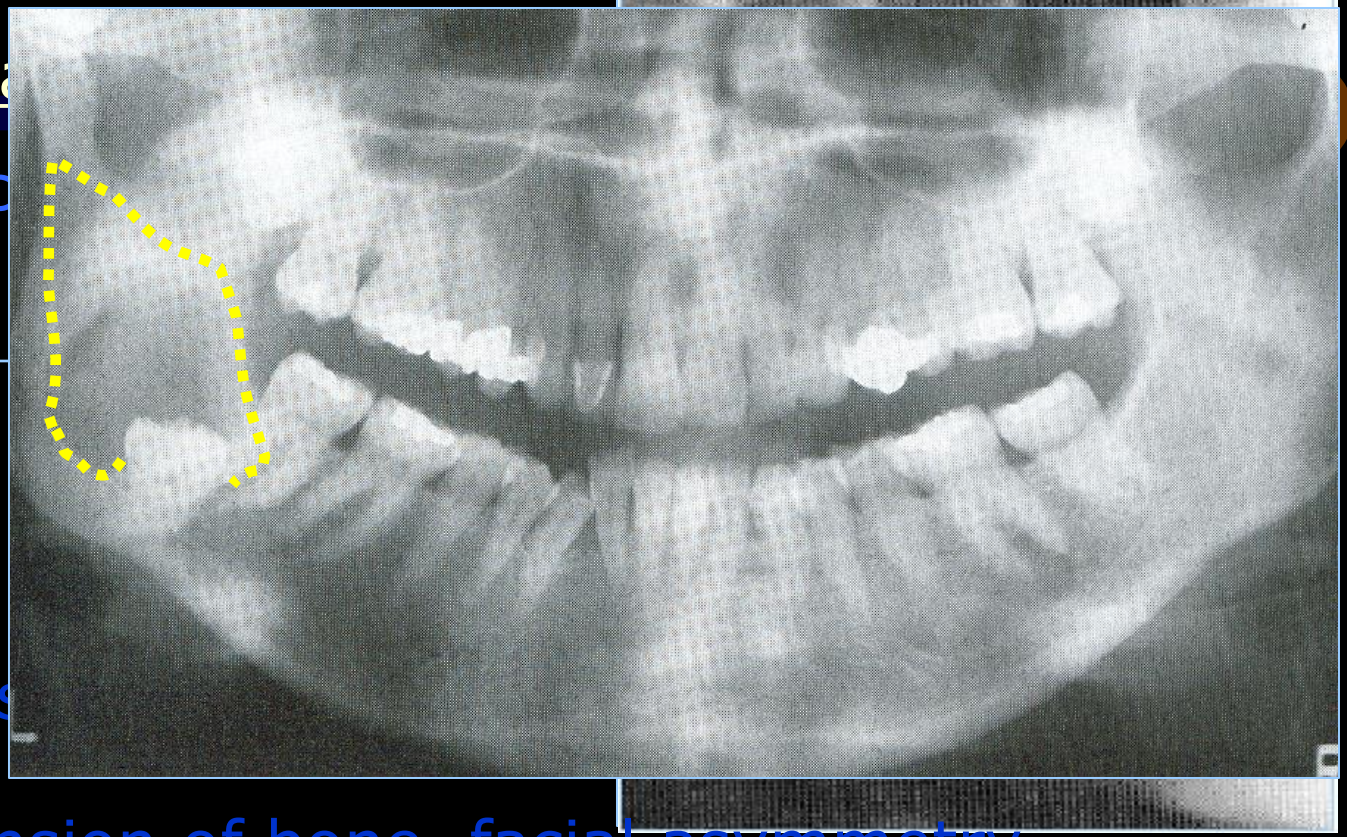
- Usually perm. dentition, seldom dec.

## Dentigerous Cyst

Clinica

- Assoc

8
8



- Cyst
aggres

- Expansion of bone, facial asymmetry
- Displacement of teeth,against inf. border
- Hollowing out of ramus,extending to C & C



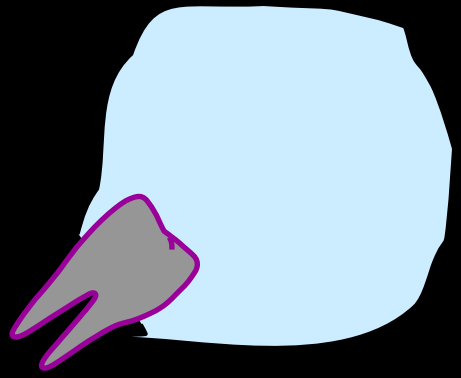
## Dentigerous Cyst

### Radiographic Features

- Well-defined radioluce
  border around crown c
- Almost always unilocul
- Occasionally multilocular app. due to ridges in bony wall rather than septae
- When R.L small – enlarged follicle ??

## Dentigerous Cyst

### Radiographic Features

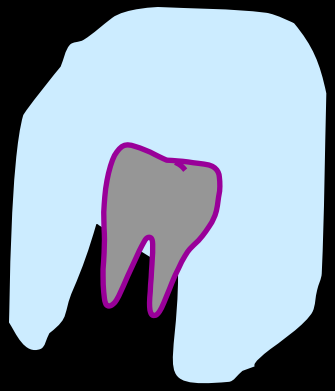




# Dentigerous Cyst

## Radiographic Features

**envelopmental**

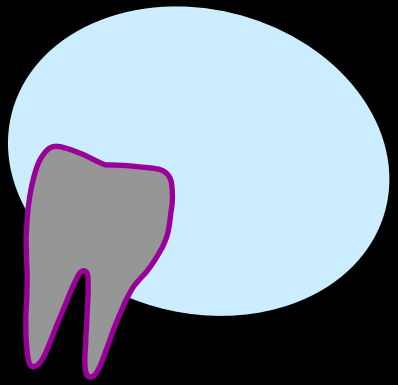


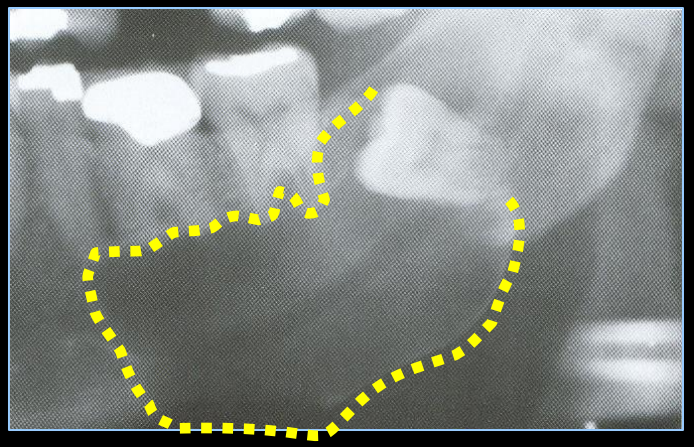


# Dentigerous Cyst

## Radiographic Features

**lateral**







## Dentigerous Cyst

### Radiographic Features

- Extension – ramus, condoyle,coronoid

involved- extension to max. sinus

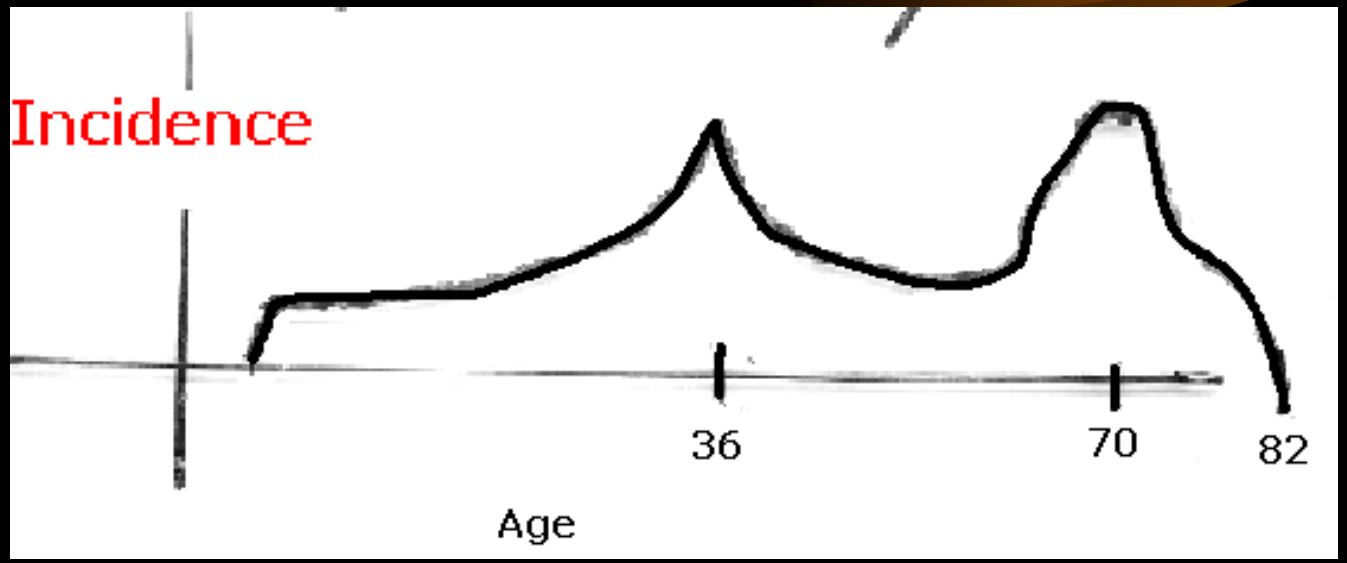
nasal fossae, orbital floor



# Calcifying Epithelial Odontogenic Cyst

Characteristics of both cyst & neoplasm

*Age*




*Site*

- Max = Mand., Common in ant. May cross midline in anterior



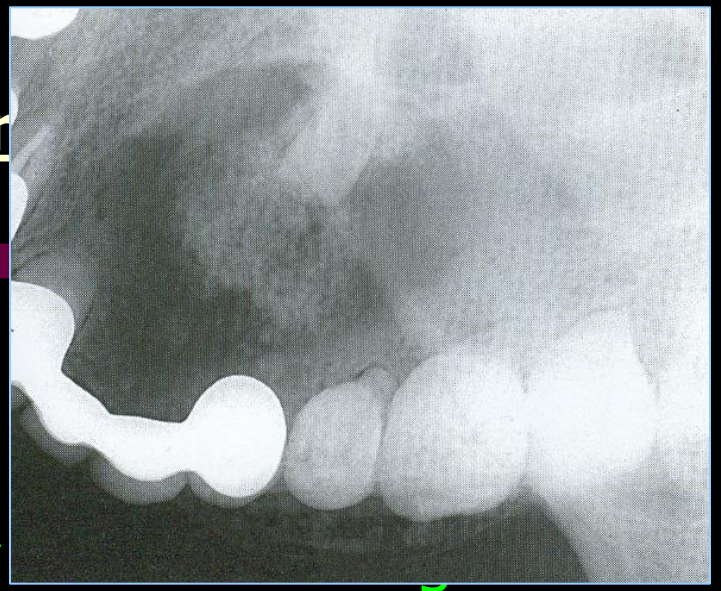
# Calcifying Epithelial Odontogenic Cyst

## Clinical Features

- Swelling, rarely pain
- Intraosseous – bony hard lesion
- Occasionally cortical plate perforated
- Displacement of teeth



## Calcifying Epithelial Odor



### Radiographic Features

- Cyst like radiolucency
  -well defined margin
  -irregular shape with poorly
- Calcified foci- may/ may
- Rarely pericoronal & une

  present



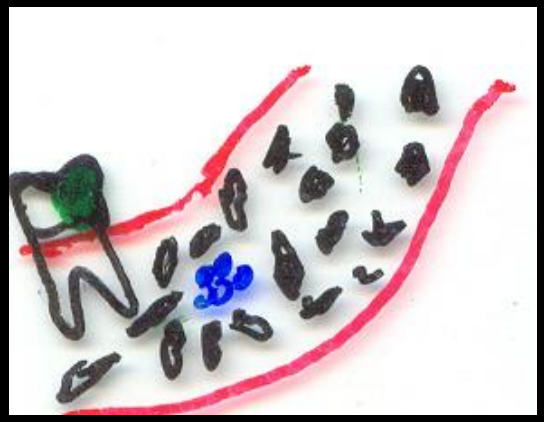
# Calcifying Epithelial Odontogenic Cyst

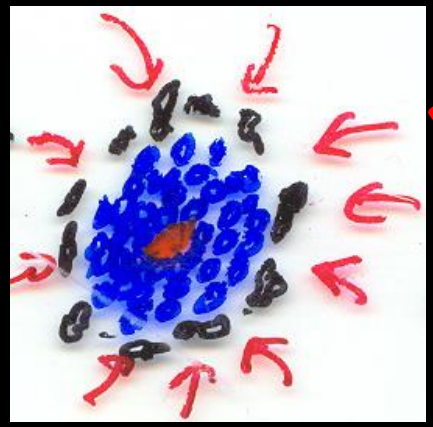
Differential Diagnosis

- Partially calcified odontome
- A O T
- Ossifying fibroma
- Odontogenic fibroma

# Radicular Cyst

## Pathogenesis







## Radicular Cyst

### Clinical Features

- Non vital tooth – trauma, caries
- Discovered usually on rad. Examination
- Complications – Ameloblastoma
  Epidermoid Ca.
  Mucoepidermoid Ca.



# Radicular Cyst

## Radiographic Features

- Round or pear-shaped R.L at tooth apex
- Corticated border continous with L.D of tooth
- > 1.5 cms in diameter (cyst v/s granuloma)



# Radicular Cyst

## Radiographic Features

### D.D

- Periapical granuloma
- Periapical cyst
- Periapical scar
- Periapical abscess
- Periapical surgical defect



## Radicular Cyst

Management

- Small size
  - Tooth extracted
  - R C T
- Large size
  - Enucleation
  - Marsupialization



## Residual Cyst

-Remained when assoc toothj

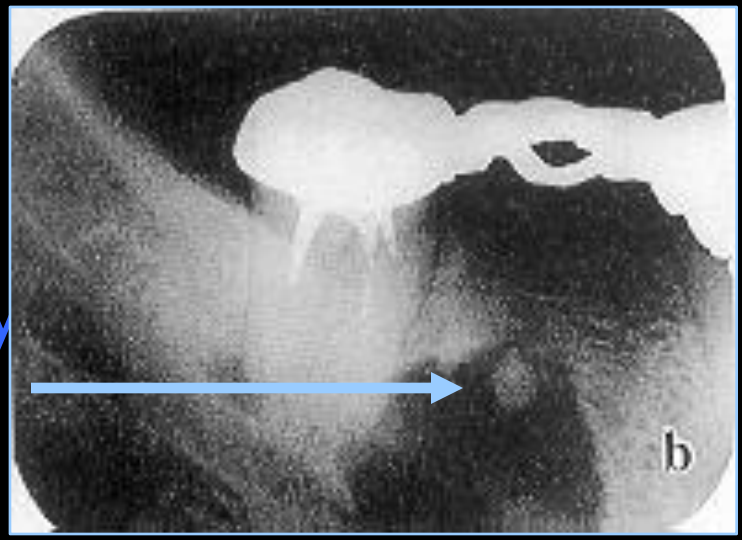
-Formed in residual epithelial

Clinical Features

- Incidental finding on r.g

Radiographic features

- Round to oval R.L
- Not contacting teeth usually



## Traumatic Bone Cyst

Trauma

Intramedullary haematoma

Bone resorption

Haematoma resolves

Cavity left behind

**Cyst**



## Traumatic Bone Cyst

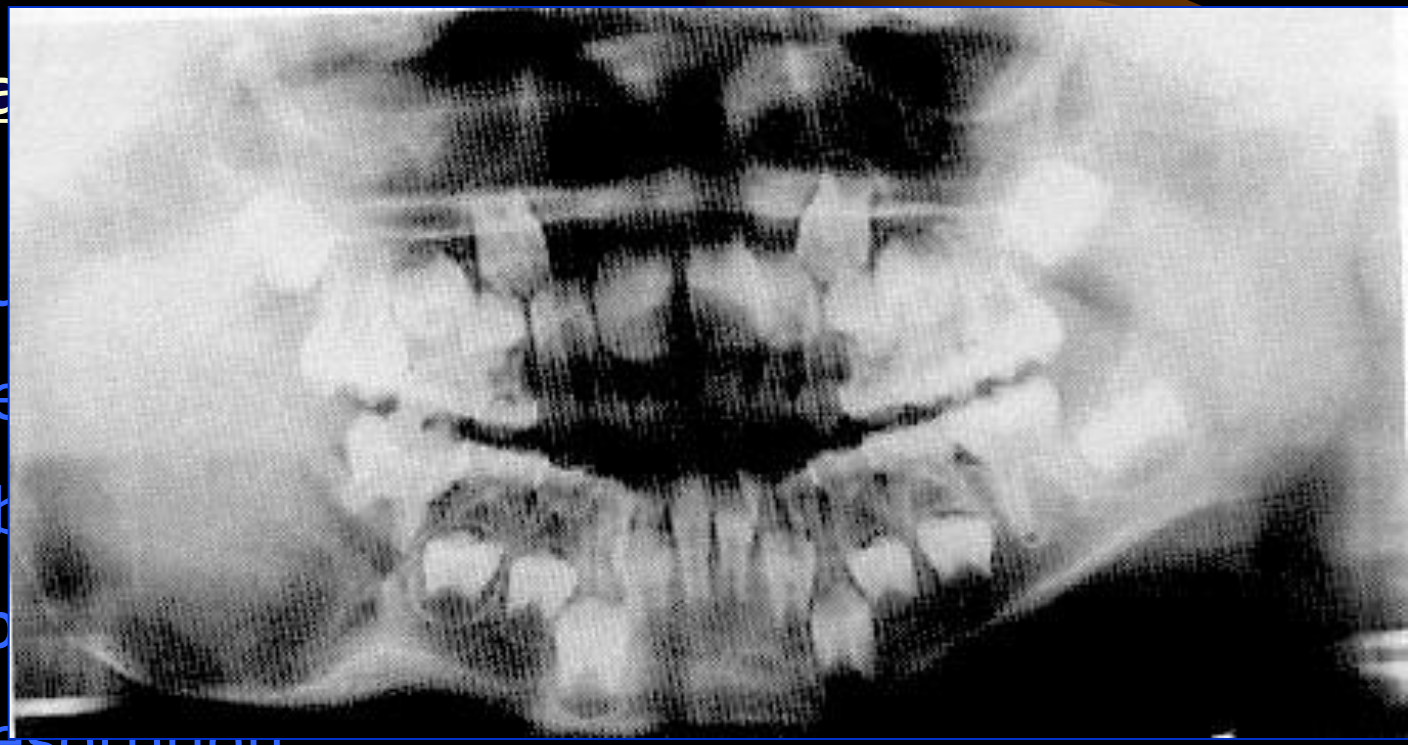
### Clinical Features

- Young patient, 6-20 years
- Mandible > maxilla
- Discovered by chance on radio. examination



## Traumatic Bone Cyst

Radiogra



- Radiolu
- Well de
- No trab
- Scallop
- Root resorption



## Aneurysmal Bone Cyst

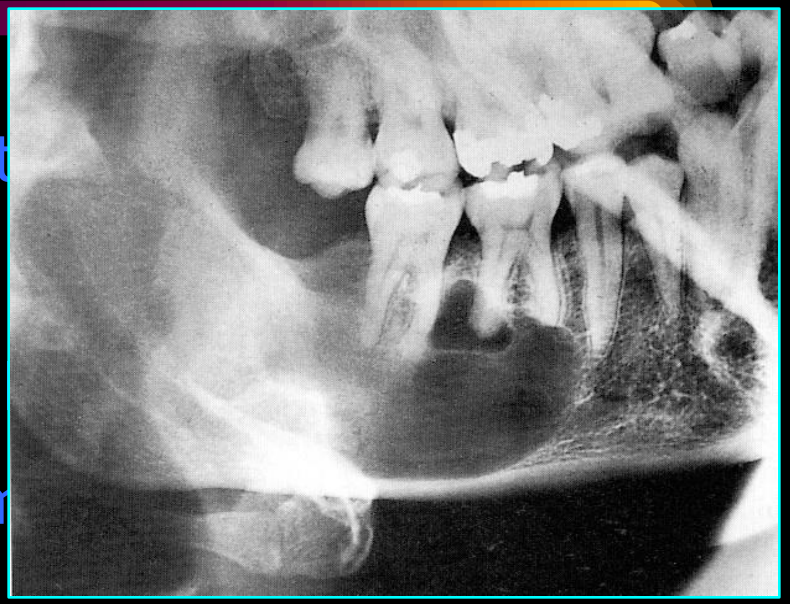
Exaggerated, localized proliferative response of vascular tissue

Clinical Features

- Older children & adolescents
- Mandible > Maxilla
- Fairly rapid bony swelling
- Bruits not auscultated in contrast to haemangioma



# Aneurysmal Bone Cyst

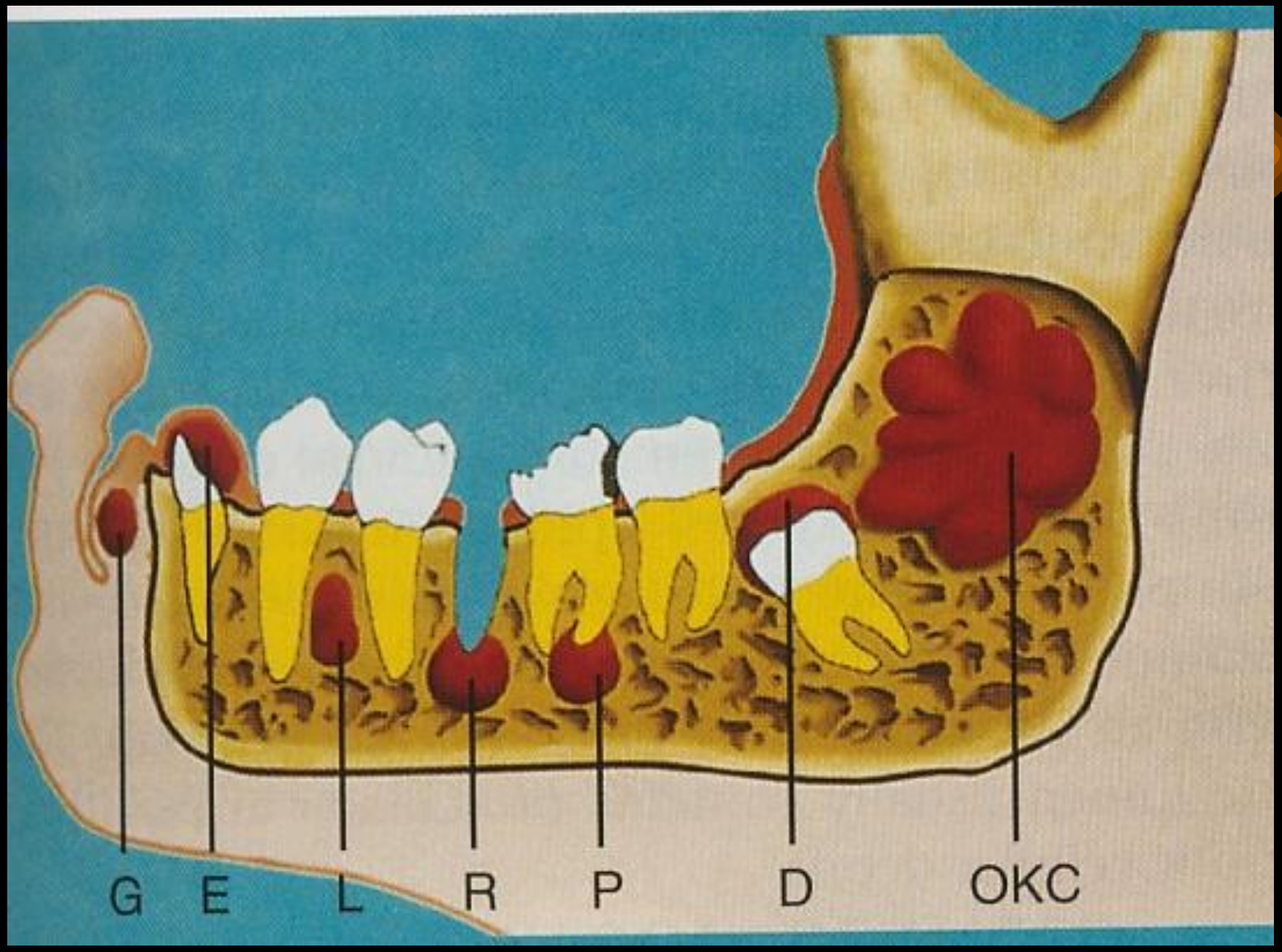


Radiographic Features

- Radiolucency – faint sept
- More often unilocular
- Multilocular- 'soap bubb
- Tilting & bodily displacem
- External root resorption

D.D - *Ameloblastoma
* C G C G
* Central Hemangioma

# Cysts of oral region



# CYST v/s ANTRUM

## How to Know ??

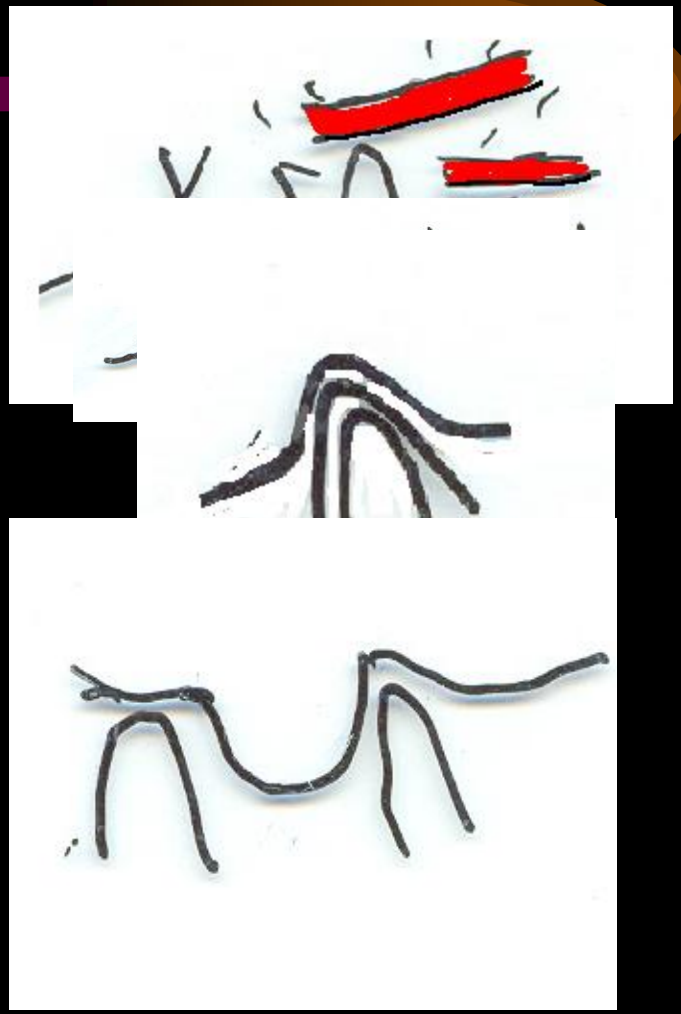
Both are **radiolucent** with

**radiopaque** borders ??



## CYST

## ANTRUM





## LABORATORY DIAGNOSIS

- Aspiration Biopsy
- Excisional Biopsy



## Aspiration Biopsy

- Cyst v/s solid tumor
- Cyst v/s Max. sinus
- Assess fluid aspirated
  - $ Keratin squames
  - $ Osmolality of fluid
  - $ Soluble protein content
  - $ Pus in infected cyst
  - $ Blood- Haemangioma,ABC ?
  - $ A- G ratio



## Excisional Biopsy

- Assess lining
- Keratocyst – definite histologic criteria
- Molecular weight of lining



## Management

### Rationale for Rx

- Chance of  size & infection
- Pathological #
- Adjacent erupted/ unerupted teeth may be displaced, tilted etc.
- Max. sinus or nose encroached on



## Management

### Aims of Rx

- Eliminate abnormality
- Minimize trauma
- Tooth nerves
- Rapid healing
- Form and function



## Management

Lining removed entirely along with cystic contents & surgical wound primarily repaired

**ENUCLEATION**

Cyst decompressed by making opening in wall, later enucleation

**MARSUPIALIZATION**

THE END