CYST & CYST-LIKE LESIONS OF ORAL & MAXILLOFACIAL REGION

MAGED LOTFY

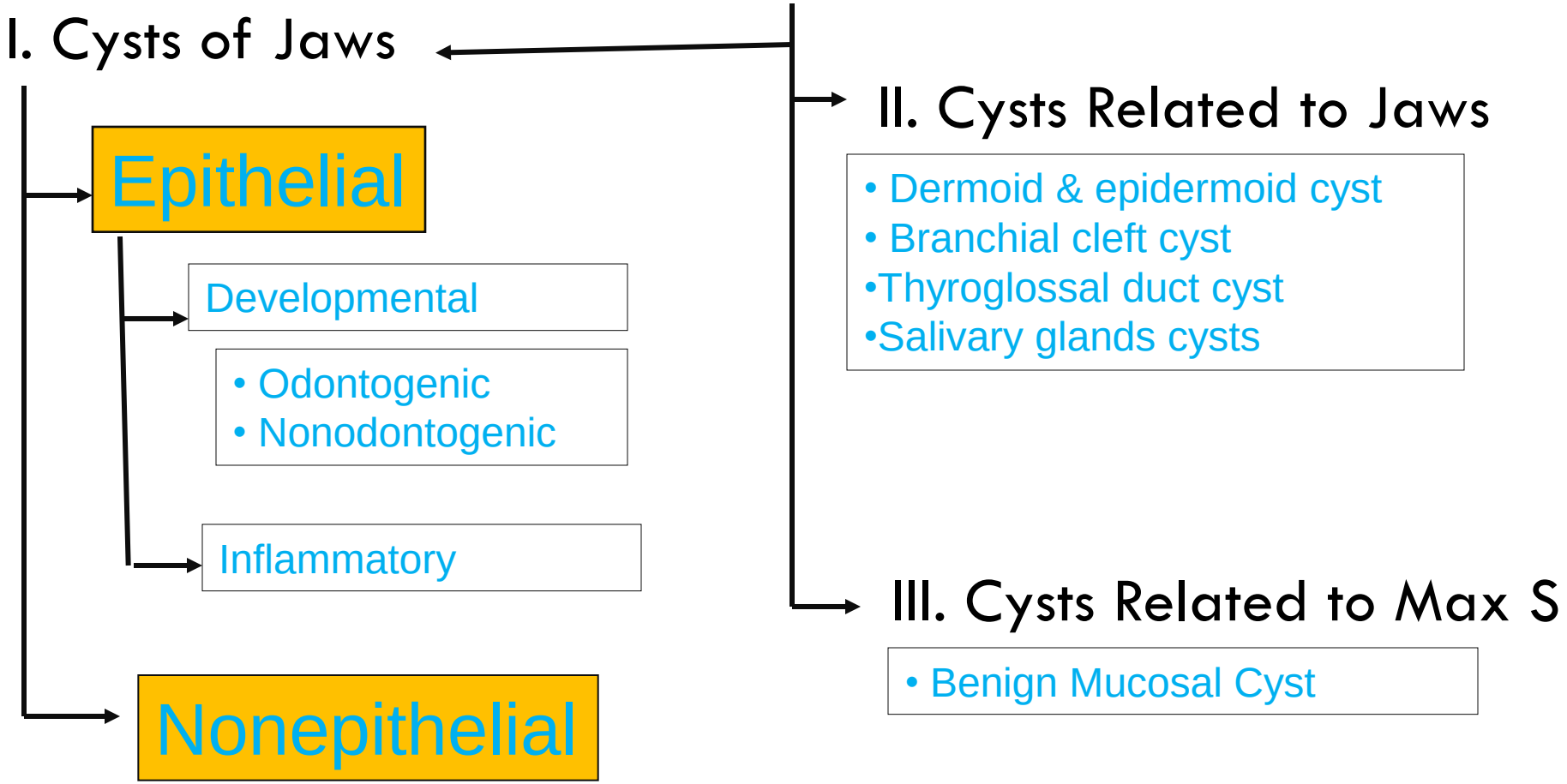
Class Name: Fifth Year Medical Srudents

Definition of Cyst

What is a CYST

Cyst is a pathological sac which contain fluid or semifluid material and usually, but not always, lined with epithelial lining

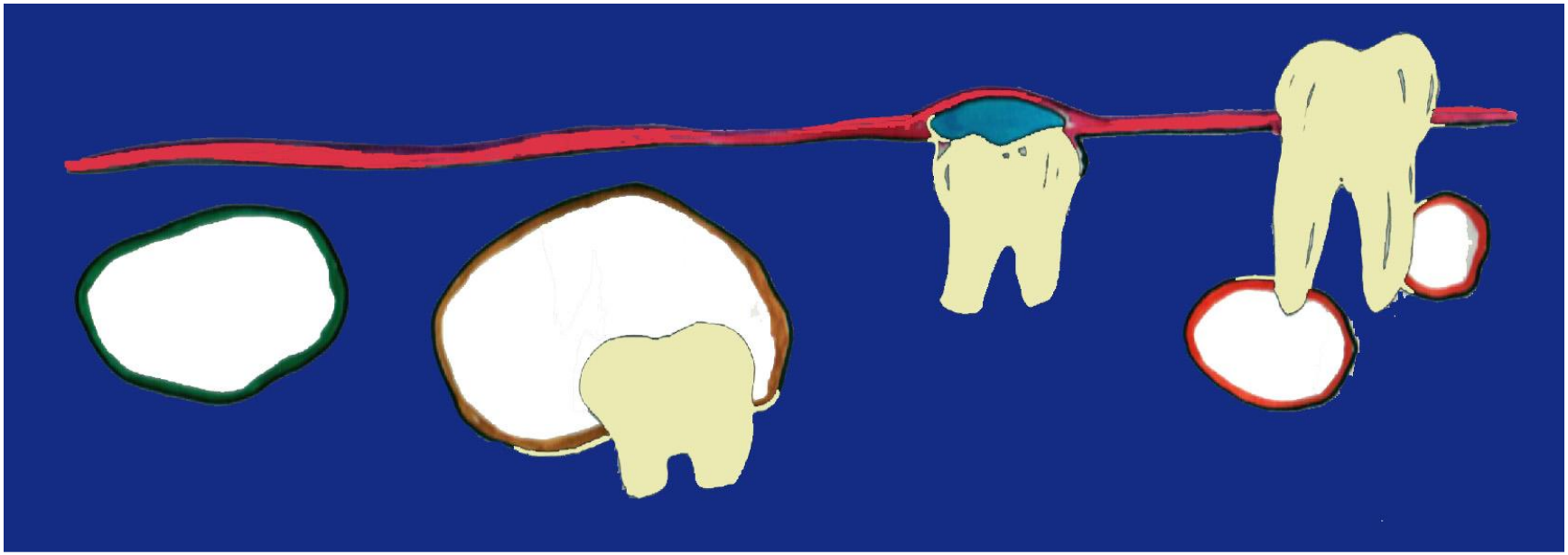
Classification of Cysts



Developmental Odontogenic Cysts

Dentigerous Cyst

Gingival Cyst



Primordial Cyst

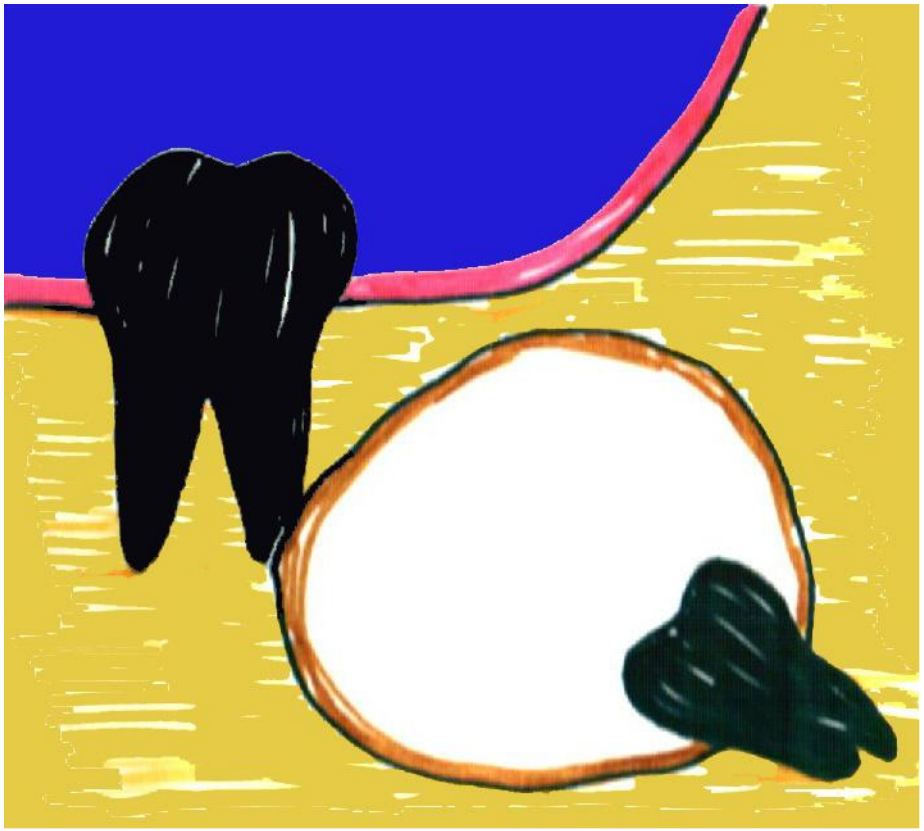
Periodontal Cyst

Dentigerous Cyst

Occur < 30

Common 3/8

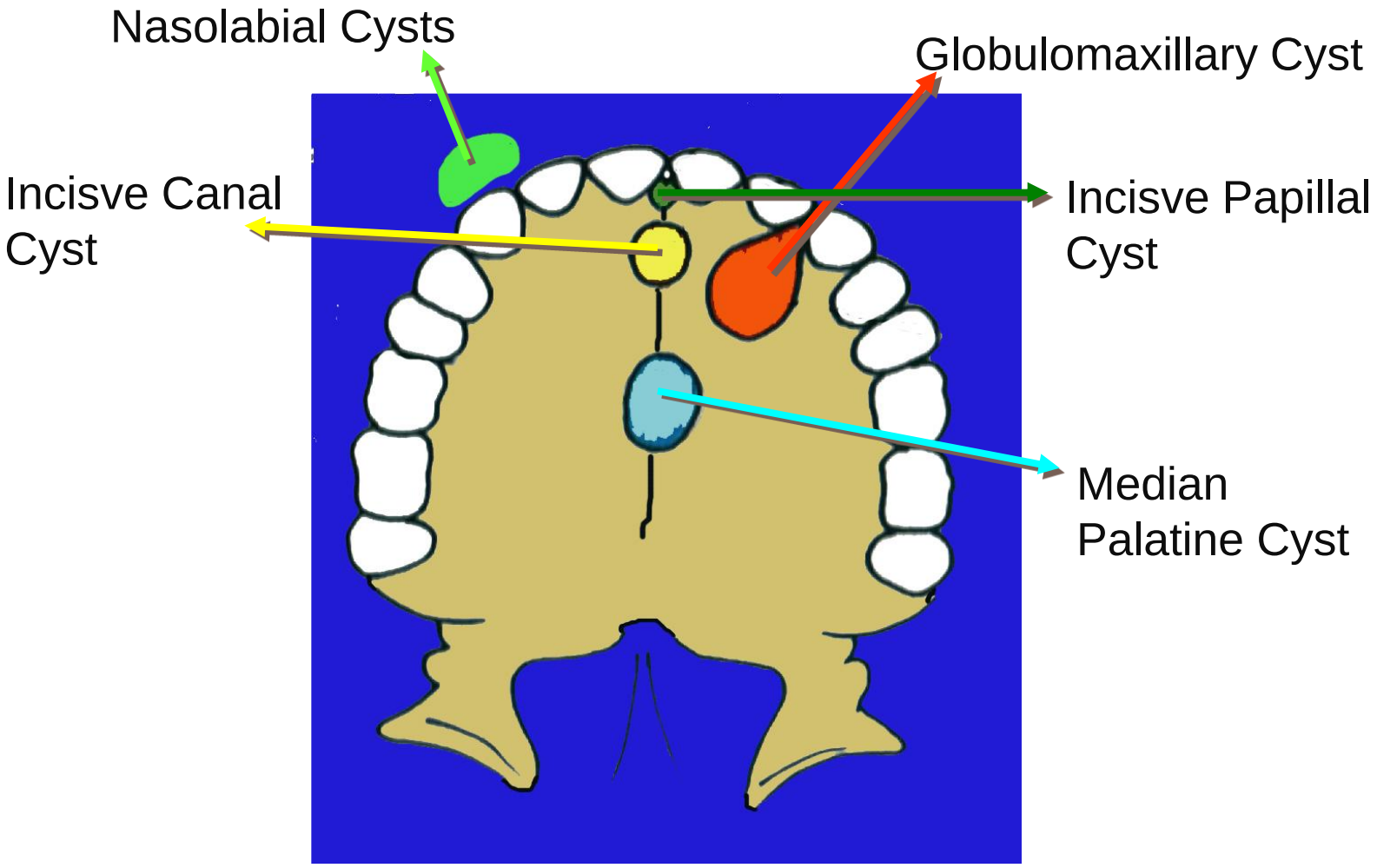
Ameloblastoma may develop in its lining



It envelops the whole crown of unerupted tooth or only part of it.

Facial asymmetry - Teeth displacement - Root Resorption - Painful if infected or presses on nerve

Fissural Cysts



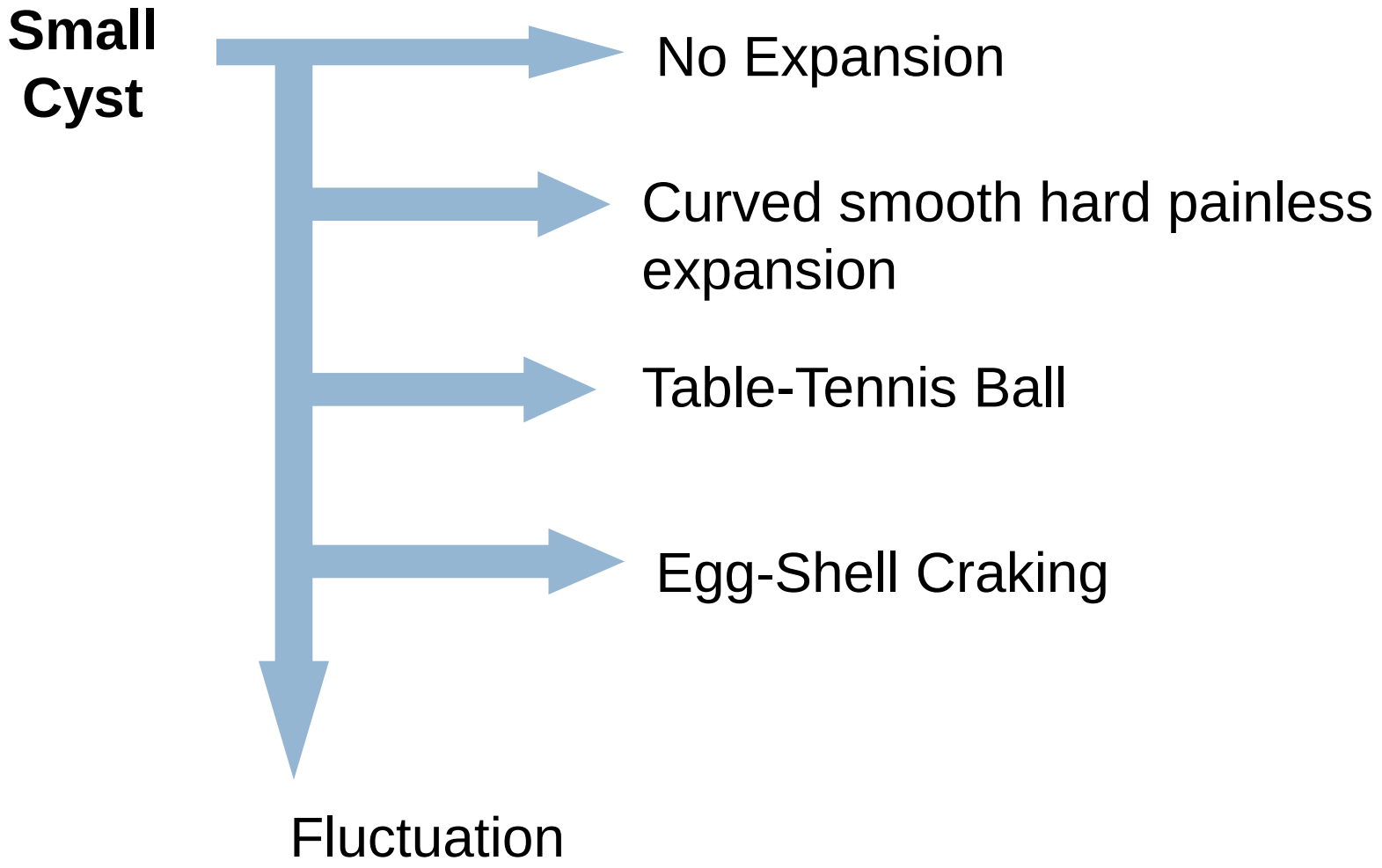
Diagnosis of Cysts

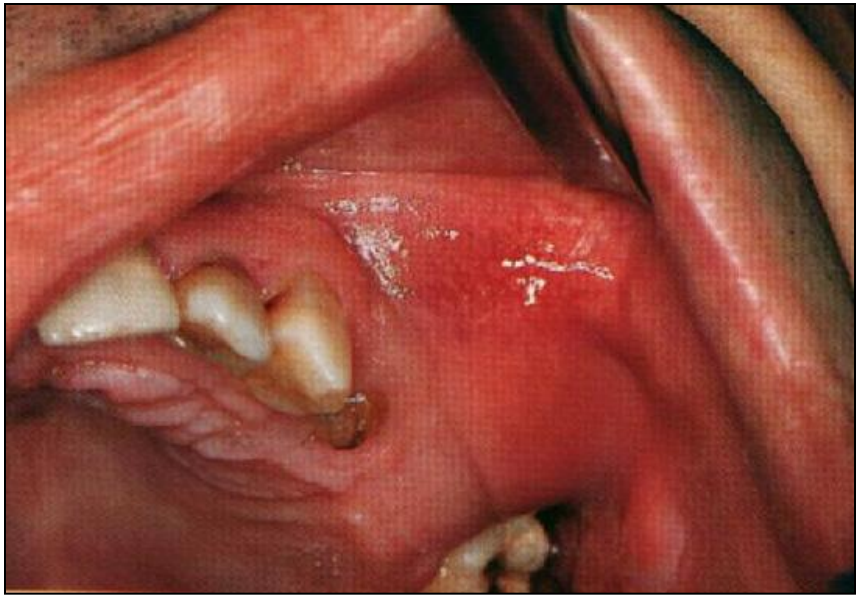
A. Signs & Symptoms
B. Radiographic Examination & imaging
C. Aspiration Biopsy

A. Signs & Symptoms

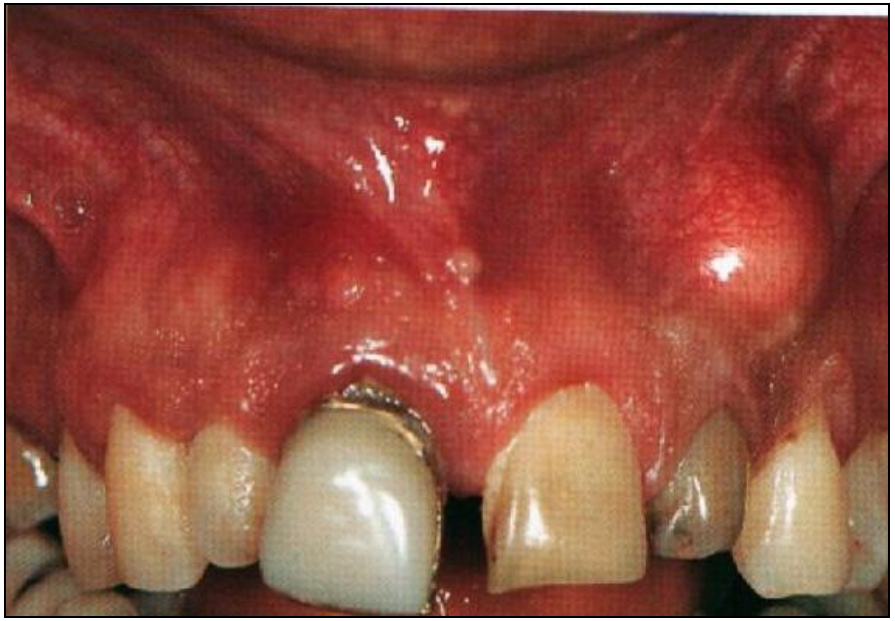
- Signs
  - Bony expansion
  - Fluctuation
  - Site predilection
  - Teeth related
- Symptoms
  - Pain and swelling
  - Bade Taste
  - Irregularities in dentition
  - Discomfort under denture

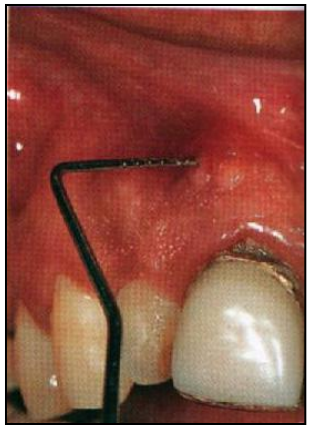
Bony Expansion (Swelling)





Slight swelling causing some expansion at the vestibule, no pain, teeth tilted





Chronically Infected cyst may develop a fistulous tract which some time open at some distance from the lesion and present some difficulties in diagnosis. Fine Pd probe is used to detect the orifice

Site of Predilection

- Cysts can occur in where on the oral cavity

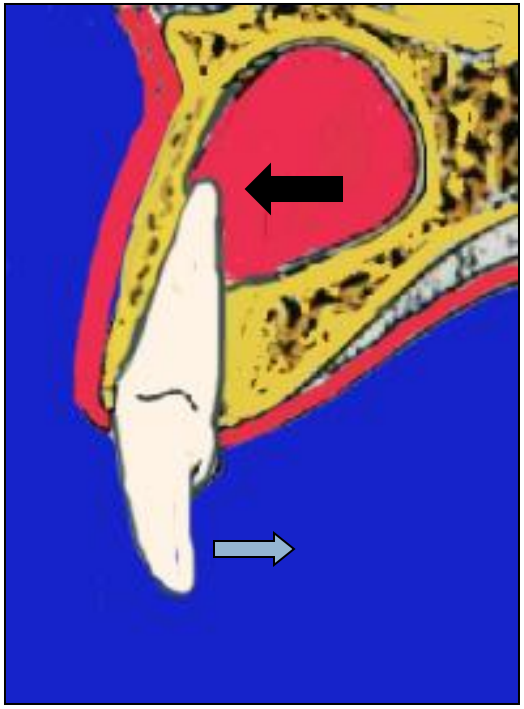
- **Periodontal cyst** → **Upper lateral incisor**
- **Dentigerous Cyst** → **Lower 8 & Upper 3**
- **Fissural Cysts** → **Almost confined to the Maxilla**
- **Soliatory Bone Cyst** → **Only in the mandible**
- **Odontogenic KeratoCyst** → **Usually lower 8 region**

Teeth Related to The Cyst

Associated Teeth

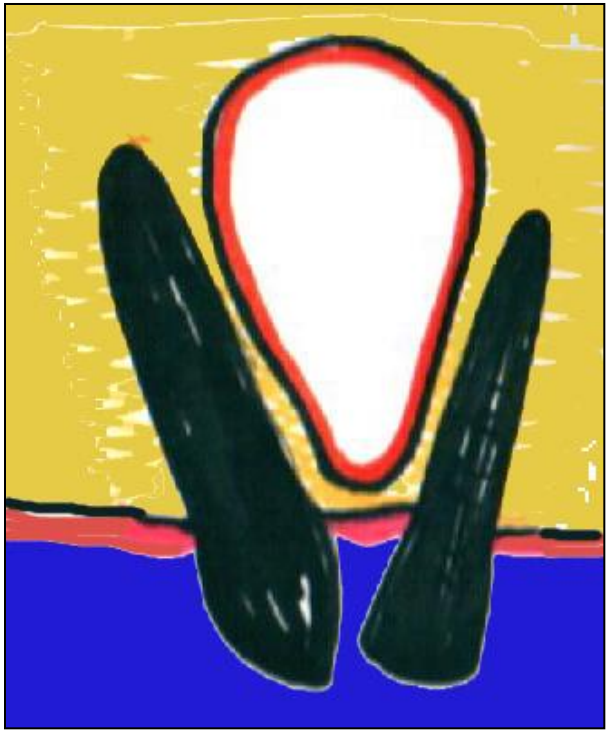
- **Periodontal cyst** → **Nonvital Tooth**
- **Dentigerous cyst** → **Vital Unerupted Tooth**
- **Fissural cysts** → **Vital Teeth**
- **Soliatory bone cyst**

Teeth Related



• Large maxillary cysts usually cause displacement of the roots of the adjacent teeth labially so that the crowns are inclined palatally

•Benign cyst rarely cause loosening of adjacent teeth until the cyst attain a very huge size



Paraesthesia of Inferior Alveolar Nerve

Large Mandibular Cysts

↓

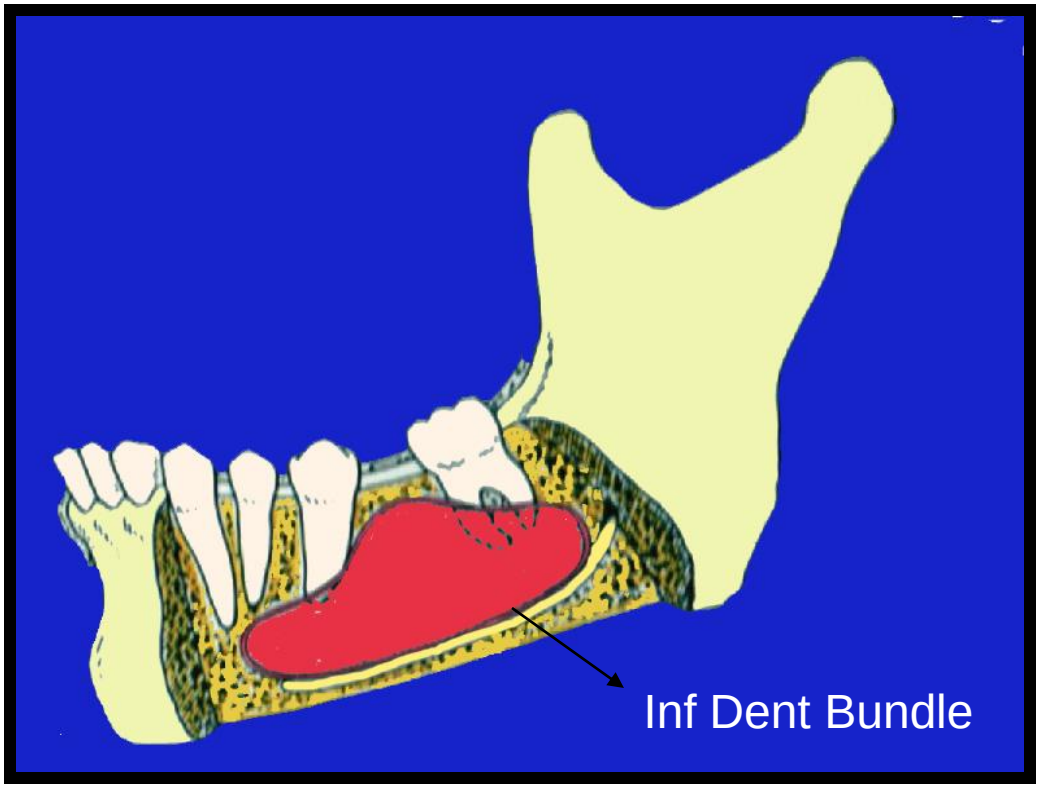
Deflect the NVB or involve it

↓

NO

↓

Paraesthesia Of Lower Lip



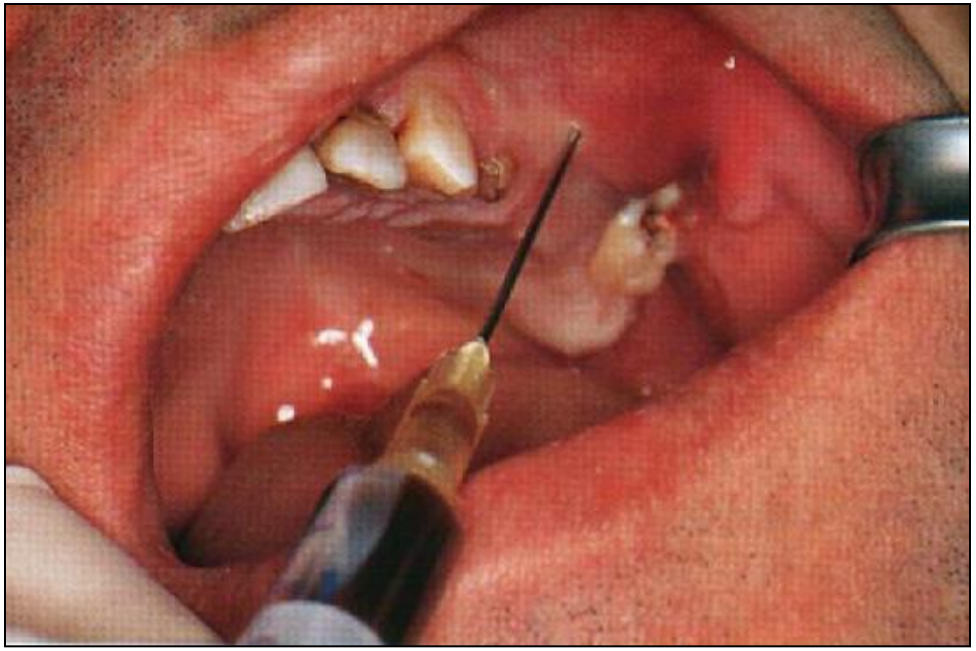
Inflammatory Exudate

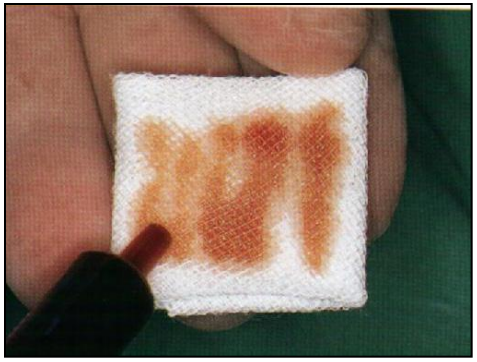
←

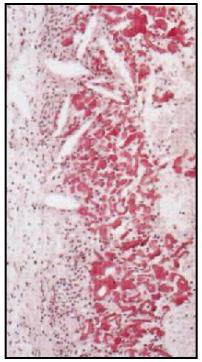
Increase Cystic Pressure

Cyst Becomes Infected

B. Aspiration Biopsy







Wide pore needle is used to aspirate the fluid in the lesion

Light straw-colored fluid + cholesterol crystals

Benign Cyst

Aspiration

Maxillary Sinus → **•Air**
•Inject saline which well run out the nostrils

Mucous Cyst → **•Pale straw colored fluid with very few CC**

Solid Lesion → **•Nothing will be aspirated**

C Haemangioma
Anurysmal Cyst → **•Blood**

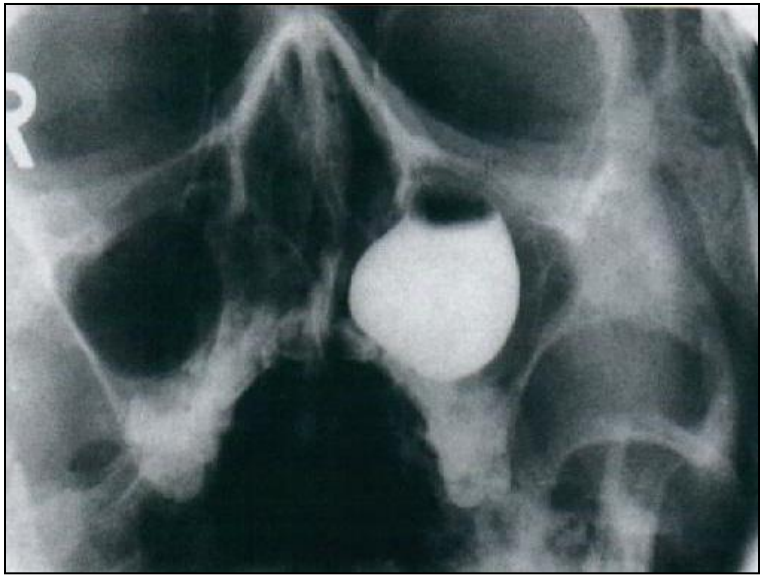
C. Radiographic & Imaging Examination

Periapical films → •Small cysts

Panoramic View → •Survey of the mandible and the maxilla

Extra-oral Films → •Extent of the lesion
•Displacement of the teeth
•Encroachment on vital structures

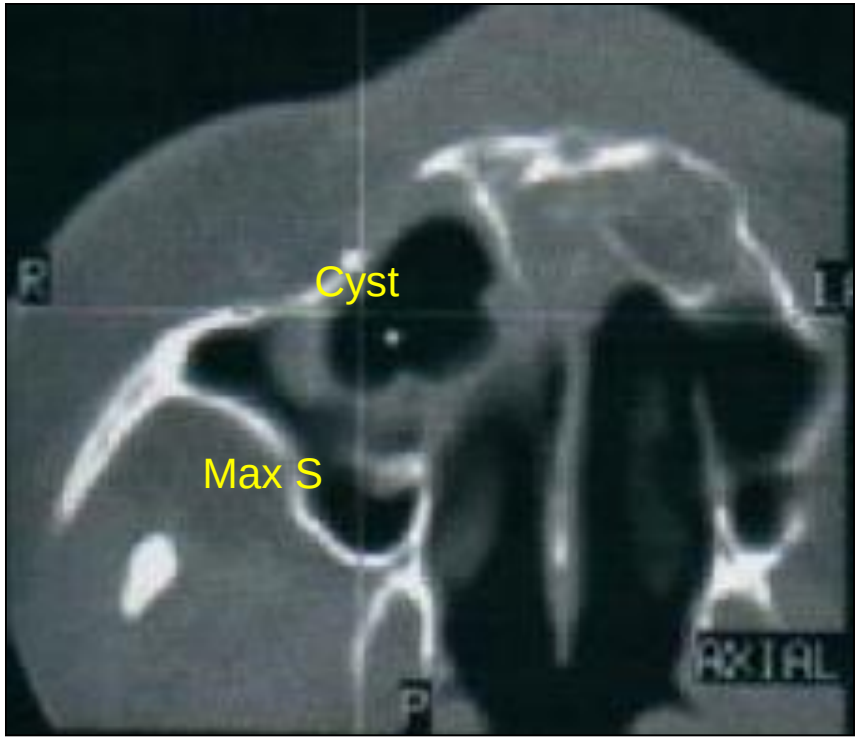
Imaging



- The use of radio-opaque media to demonstrate the extent and relation of the lesion has been diminished

- The extent of the cyst can be determined. A cyst within the maxillary sinus can be clearly demonstrated

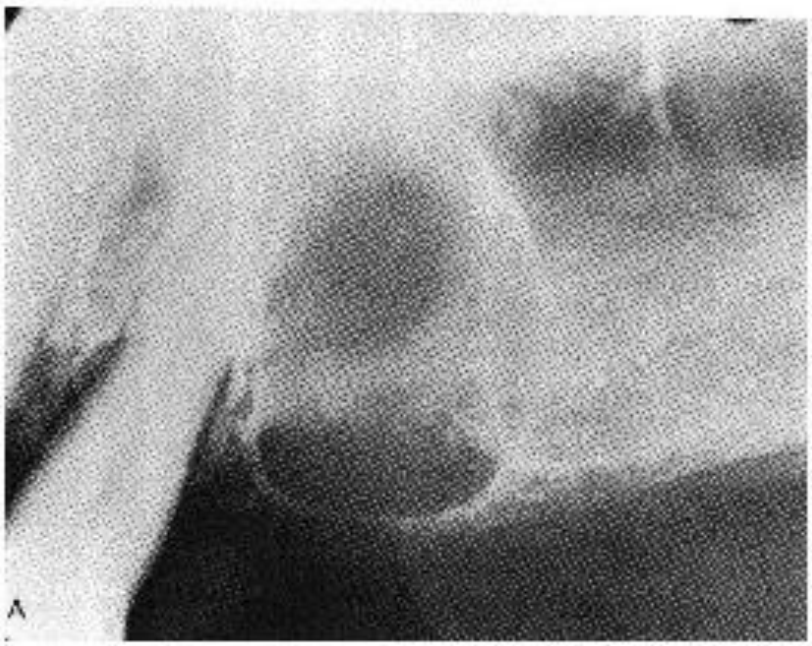
Precise information can be obtained from CT

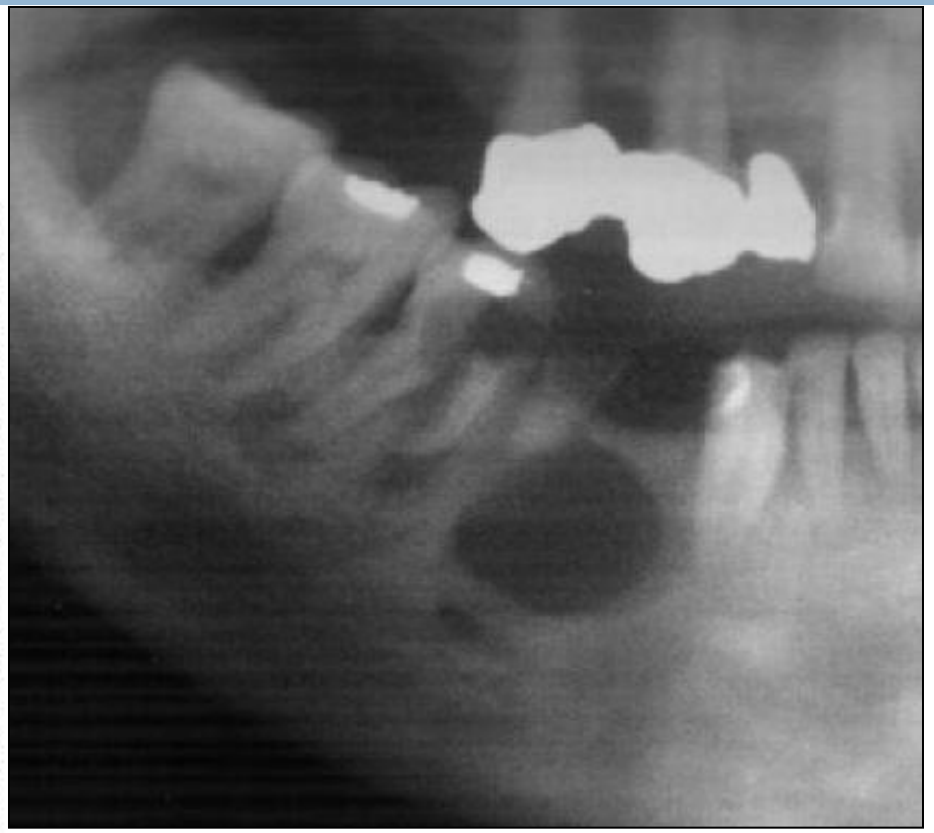


Interpretation

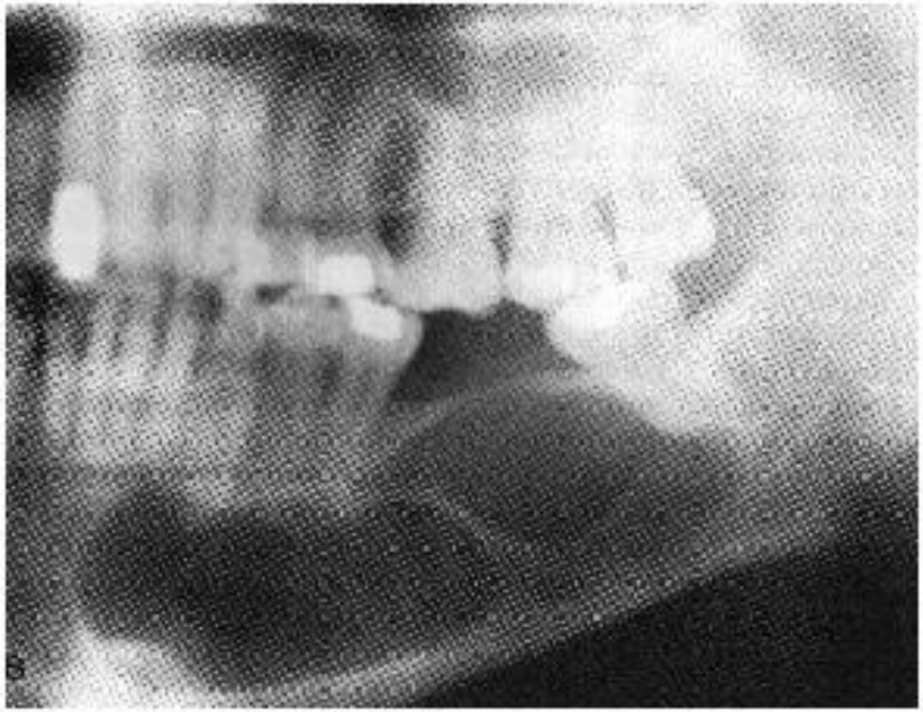
- Shape of the lesion
- Peroration of cortical plates
- Relation to mandibular canal
- Multilocularity

Shape of the lesion

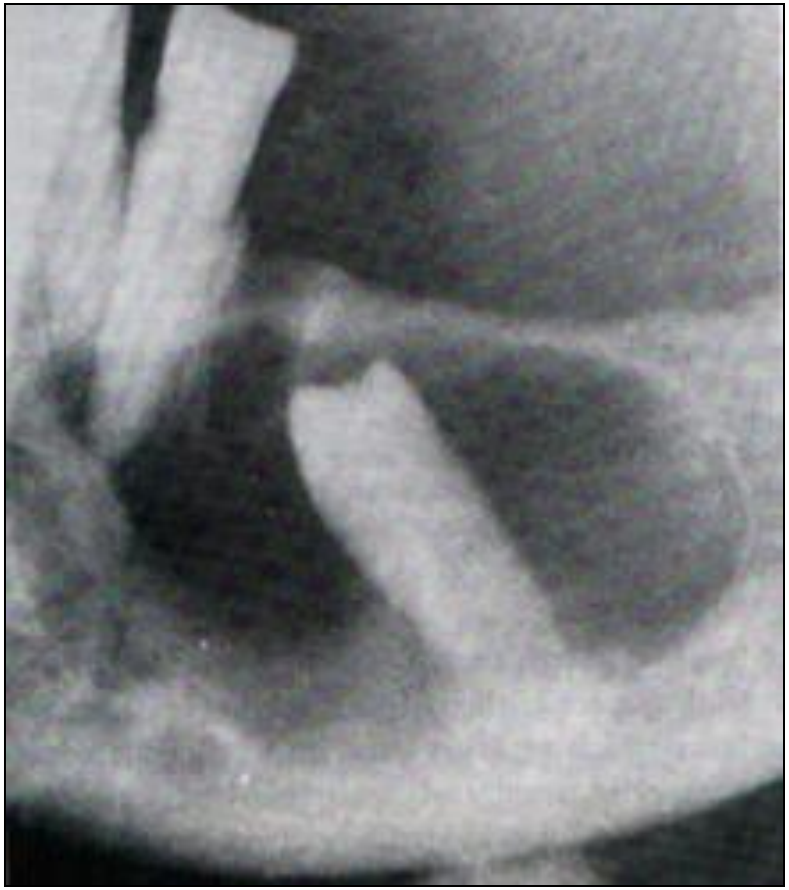




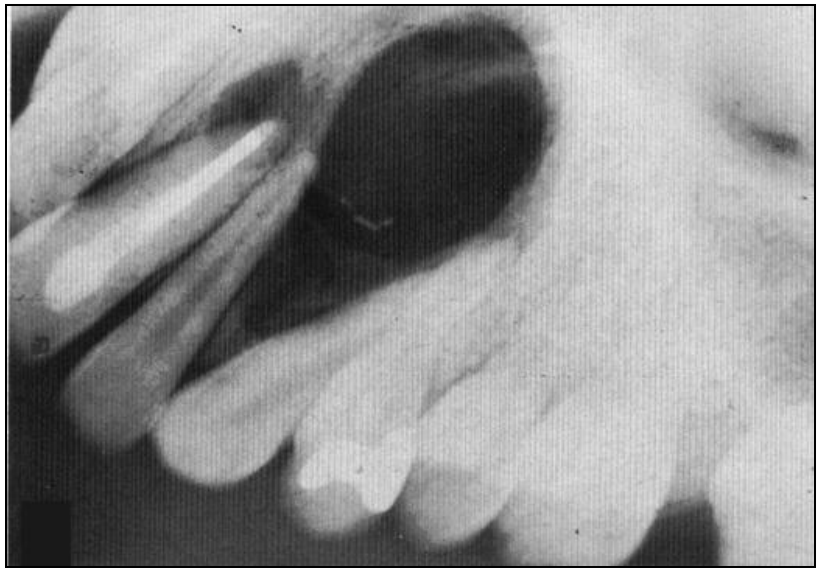
Radiolucent With Radio-opaque margin
When infected no radio-opaque margin is seen



Multilocularity

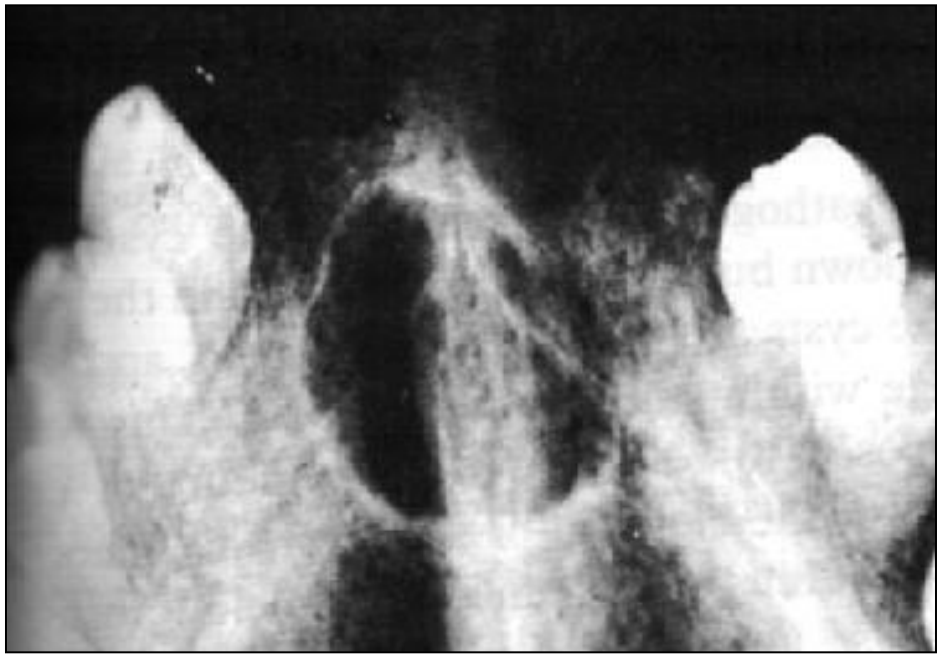


The presence of unerupted tooth



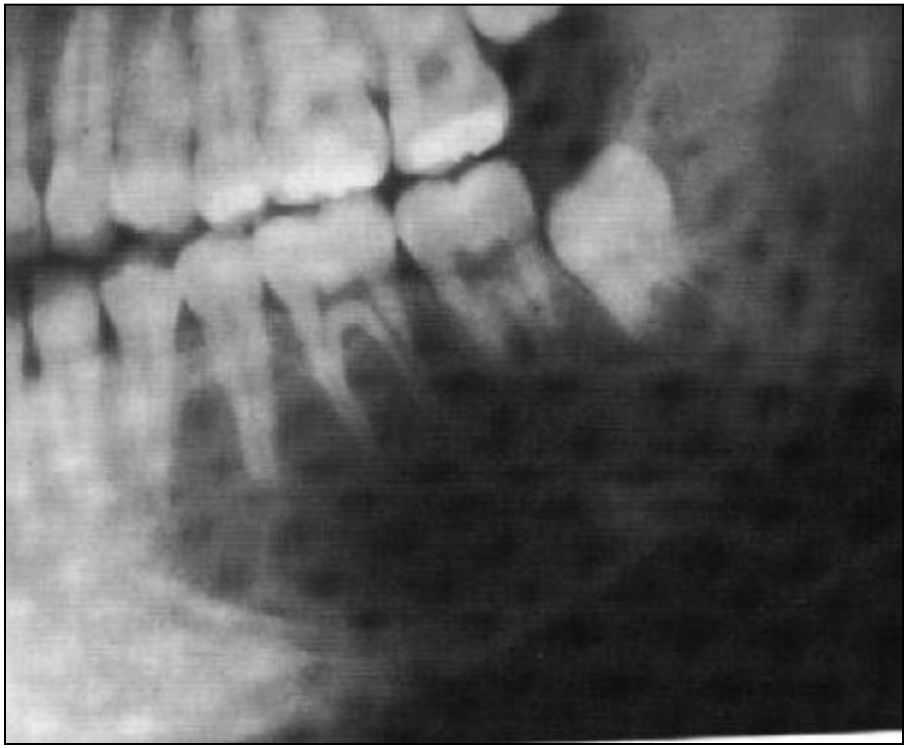
Globulomaxillary Cyst

Inverted bear shape



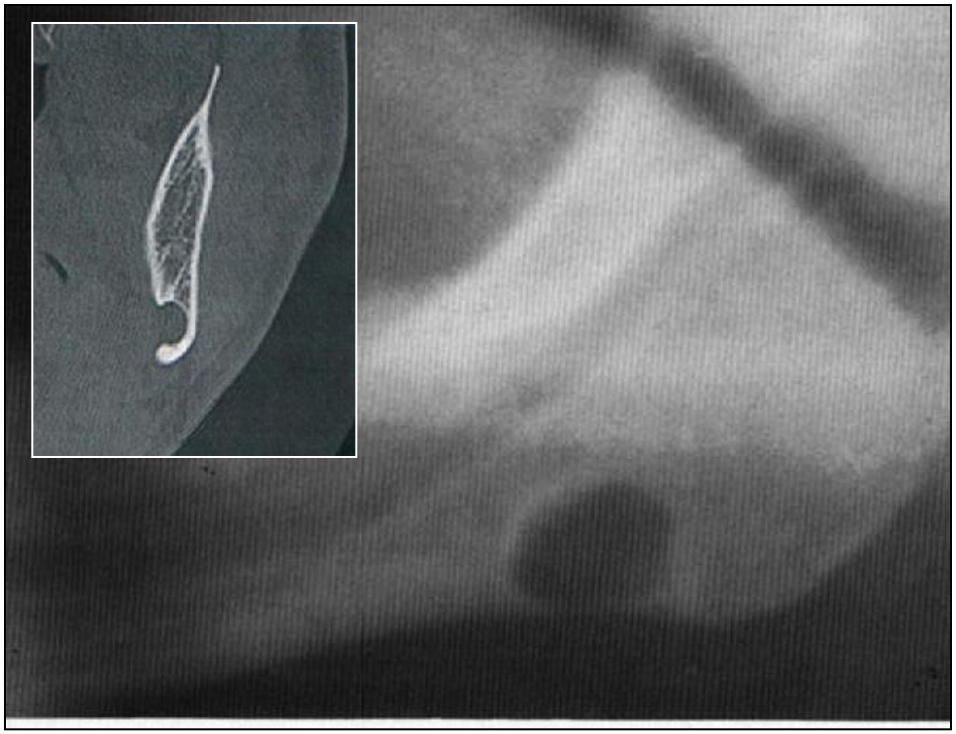
Nasoplatine Cyst

Heart Shape Appearance



Traumatic Bone Cyst

Scalloped margin between the roots of the teeth



Static Bone Cyst

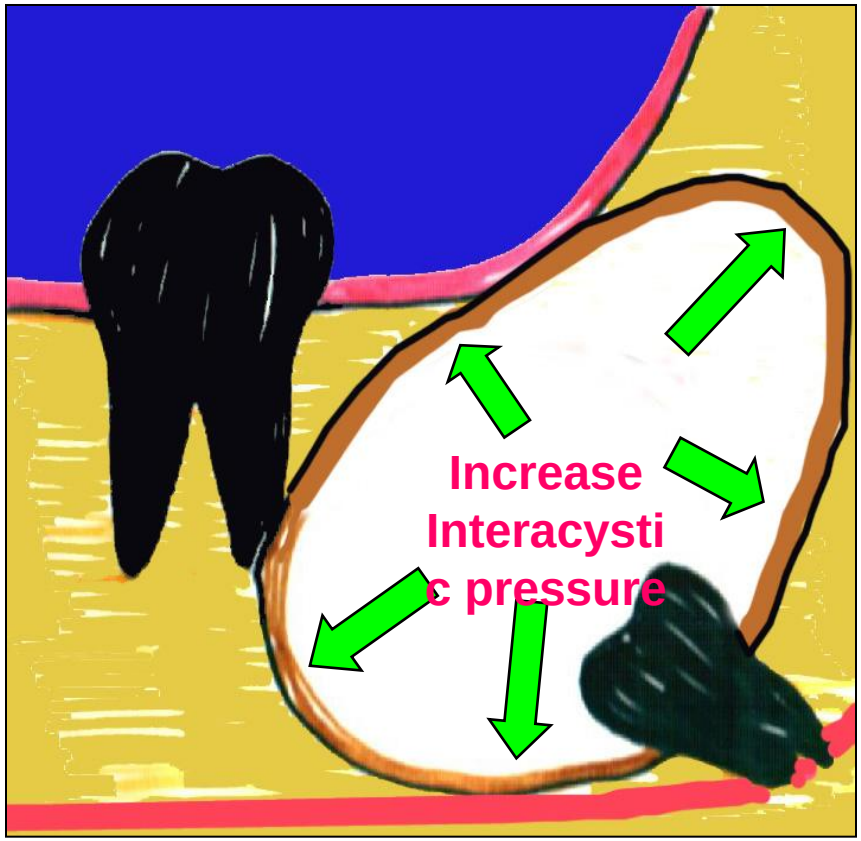
Small Round Radiolucency That Do Not Change Shape or Position

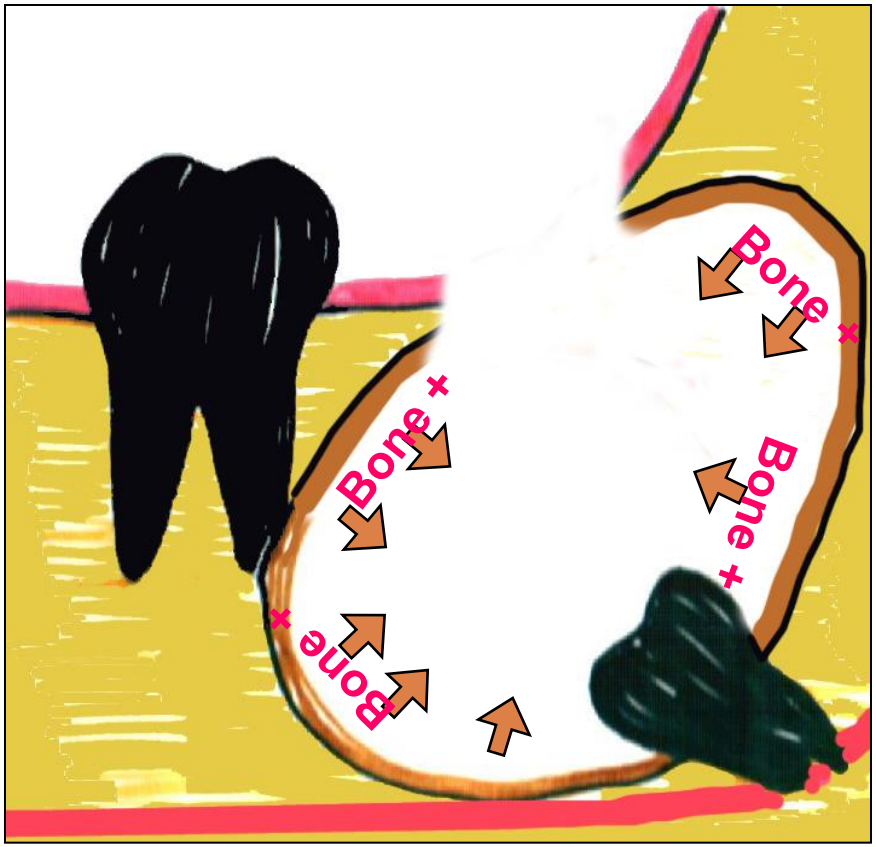
Basic Surgical Treatment

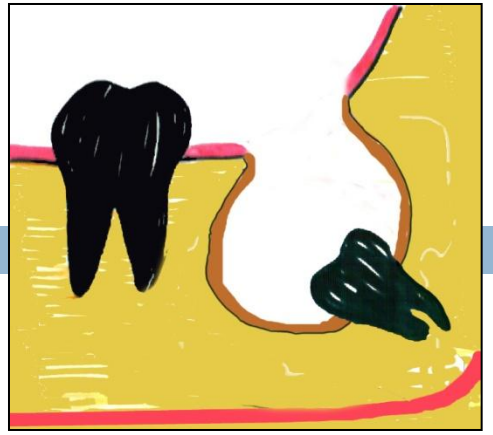
AIMS

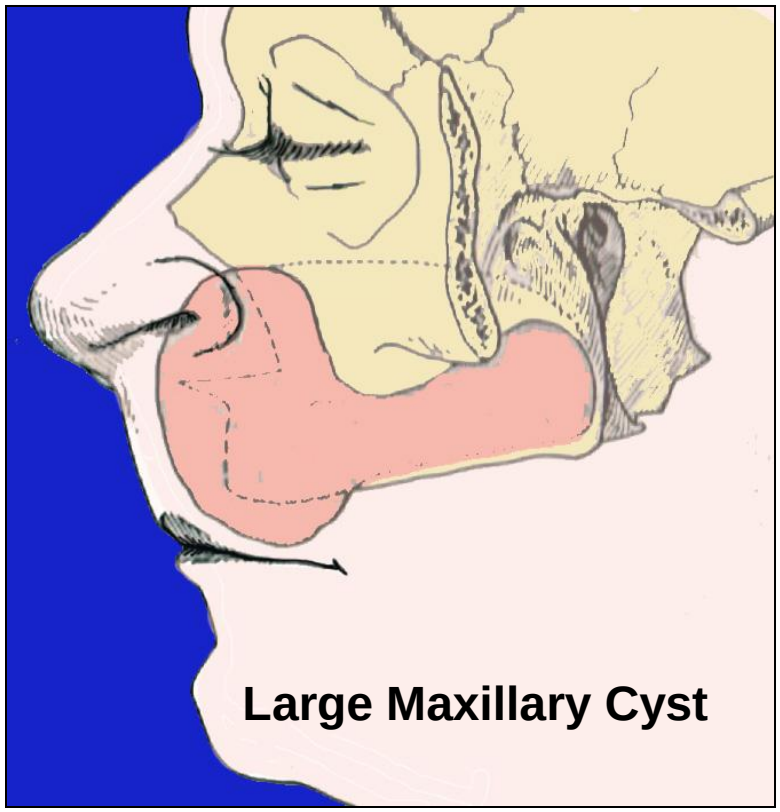
1. Remove the lining to enable the body to rearrange the position of the abnormal tissues
2. Restoration of normal form and function
3. Preservation of the adjacent teeth and other important structures
4. Minimal trauma to the surrounding tissue
5. Rapid healing

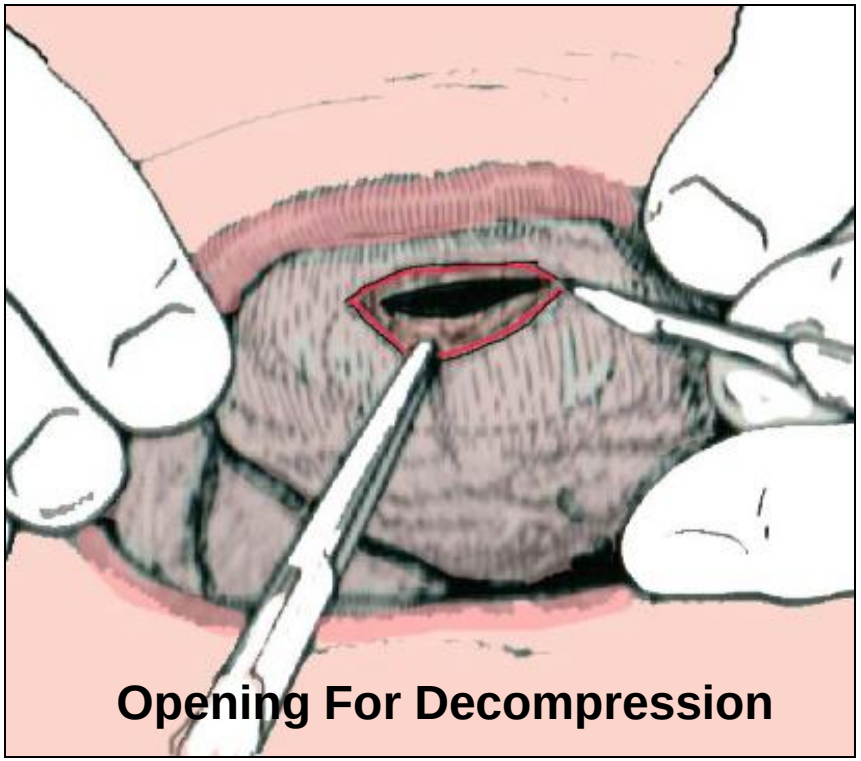
Marsupilization (Cyst Decompression)








Large Maxillary Cyst


Opening For Decompression

Indications of Marsupilization

- When general condition of Pt limit the extent of surgery
- Cysts with friable lining difficult to remove
- When primary closure is not recommended (Large size - Gross infection)
- When surgery endanger a nearby important structure.
- When surgery carry the risk of pathological fracture

Advantages & Disadvantages

Advantages

- Preservation of tissues and teeth
- No risk for pathological fracture or injury to important structure
- In maxilla no risk of OAF

Disadvantages

- Pathological tissue is left behind
- Healing is slow and take very long time
- A cyst plug may be needed

Enucleation

Enucleation

Indications

- Accessible cysts
- Cyst which don not extensively involve vital important stracture or large number of teeth
- Cysts with little or no soft tissue involvement

Contraindications

- Large cysts in the mandible which carry the risk of pathological fracture
- Cysts which involve the roots of healthy teeth that must be preserved

Enucleation

Advantages

- No pathological tissue is left behind
- Healing is more rapid

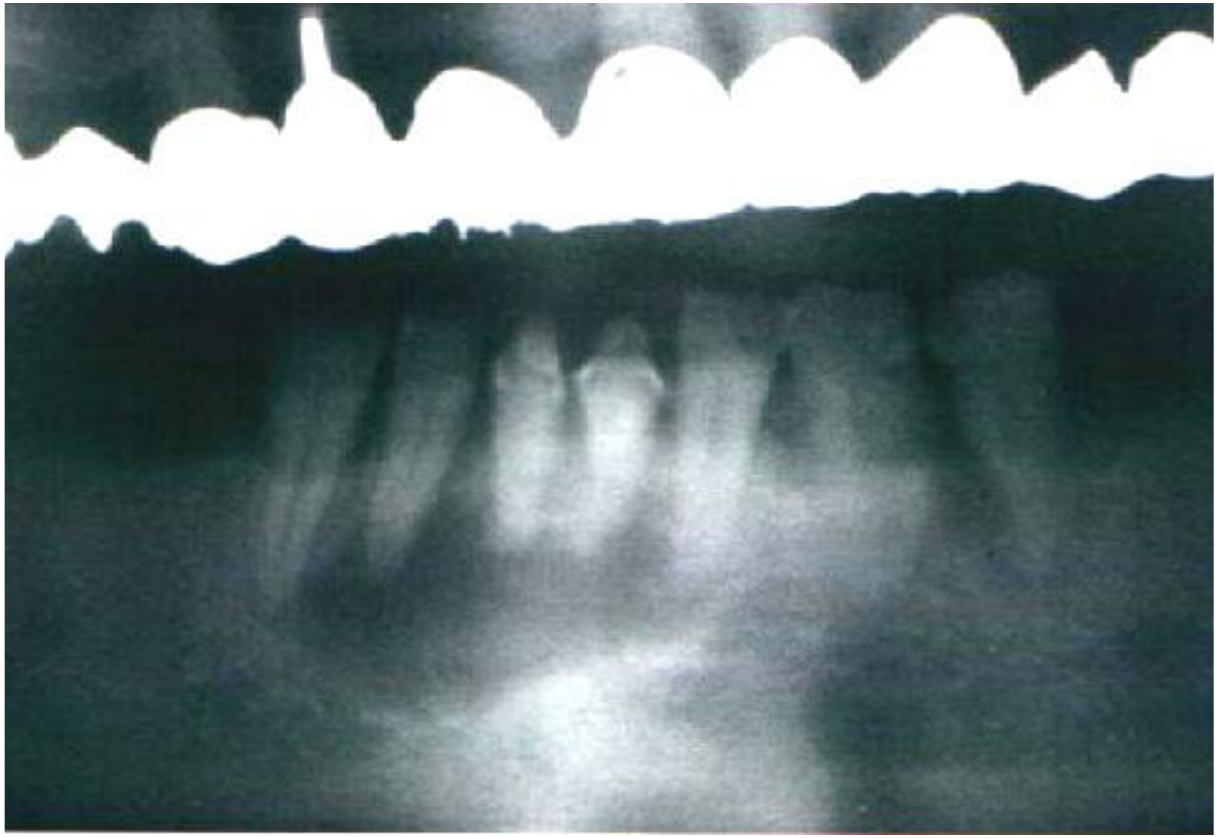
Disadvantages

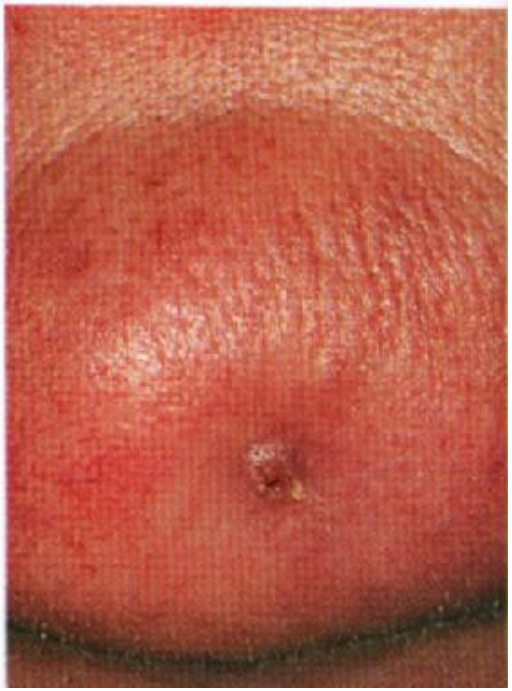
- May cause damage to vital structure
- Not suitable for very large cysts
- Difficult when the cyst extend to the soft tissue

Clinical Applications

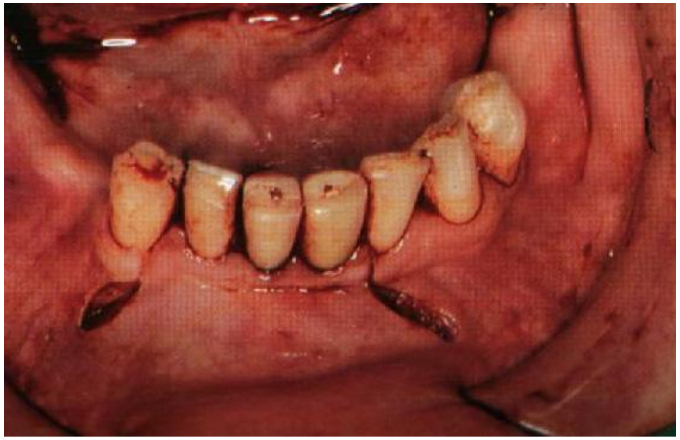
A. Periapical cyst with Skin Fistula
B. Maxillary periapical cyst
C. Dentigerous cyst (marsupializtion)
D. Nasopalatine (Incisive canal) cyst

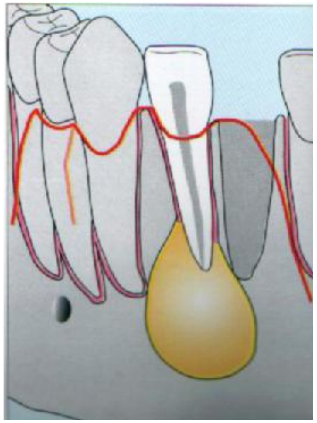
A. Periapical Cyst with Skin Fistula

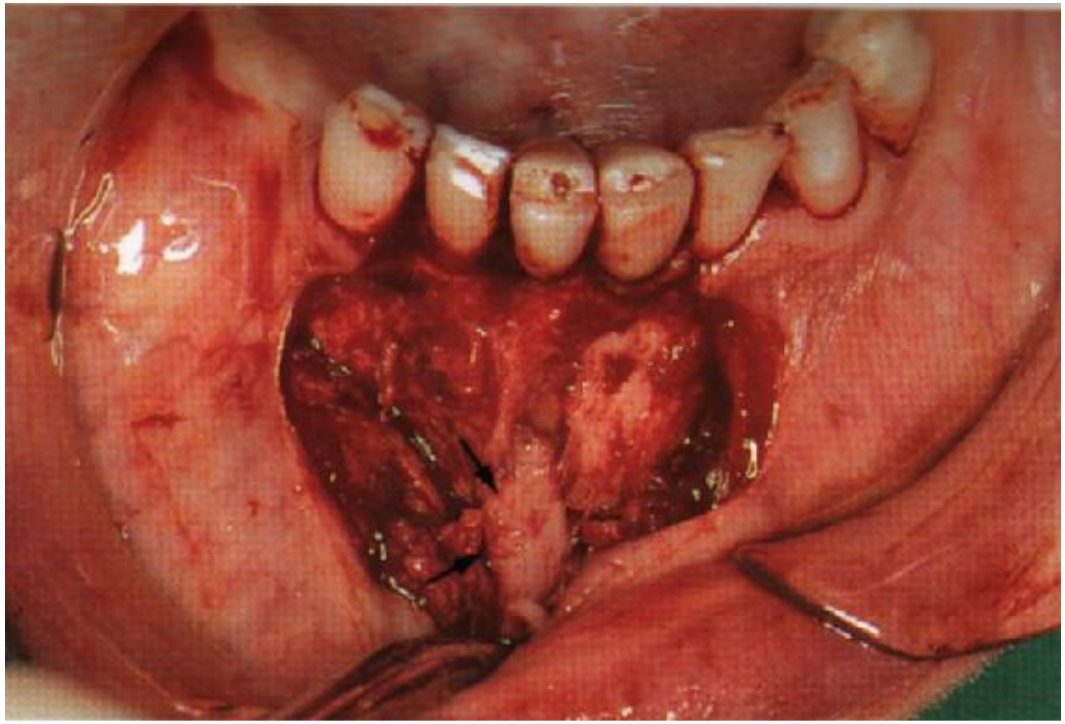




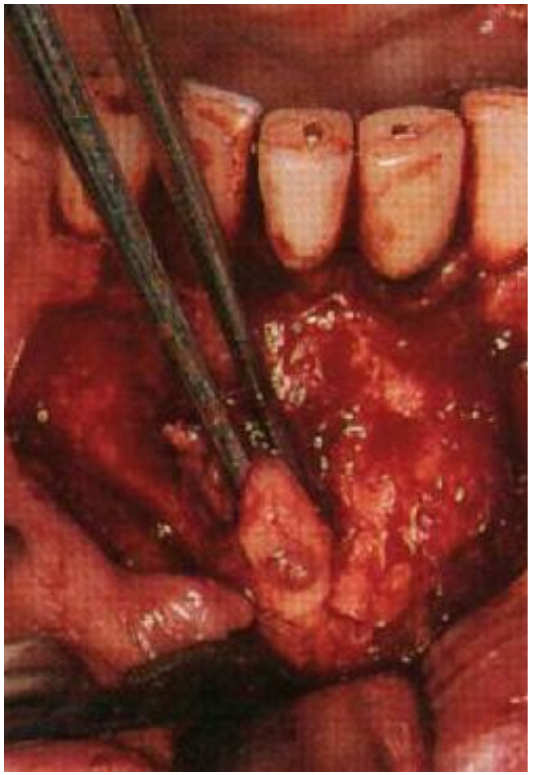
Gaining Access (The Flap) – Exposing the Cyst



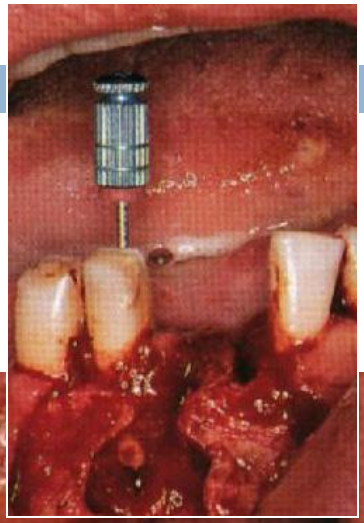


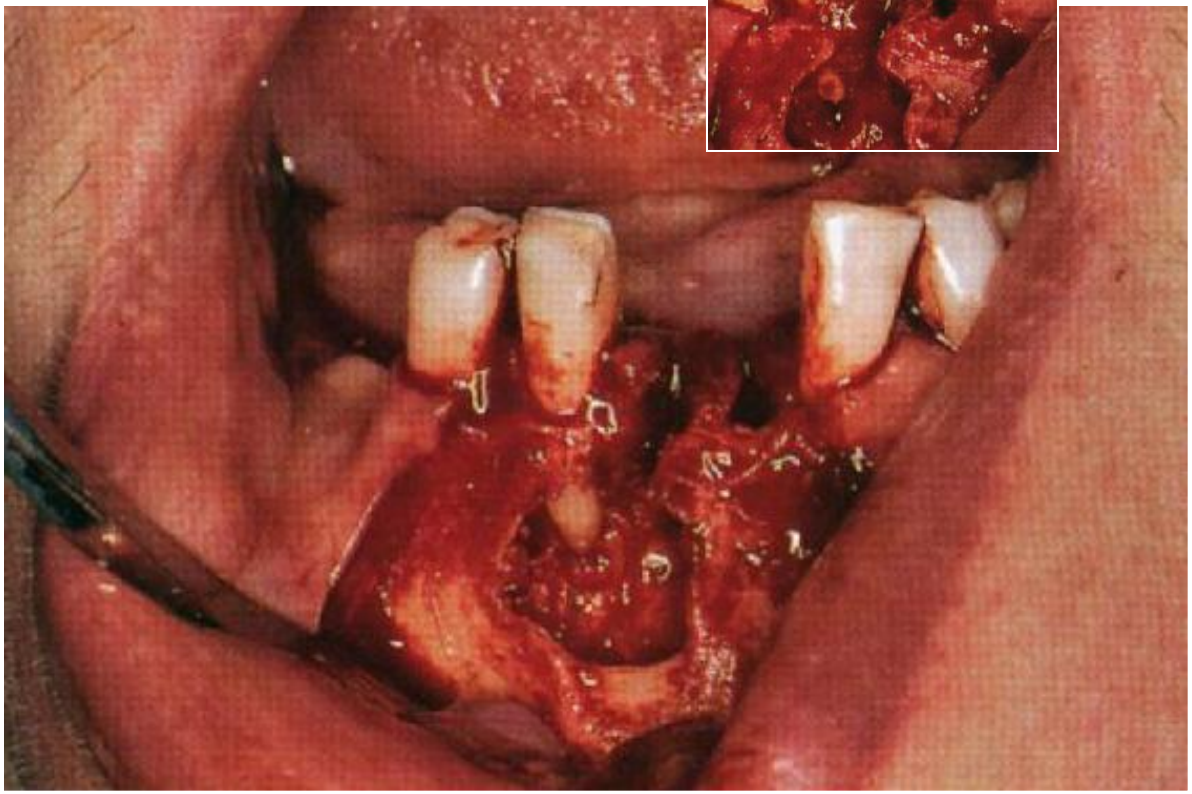


Removal of lining

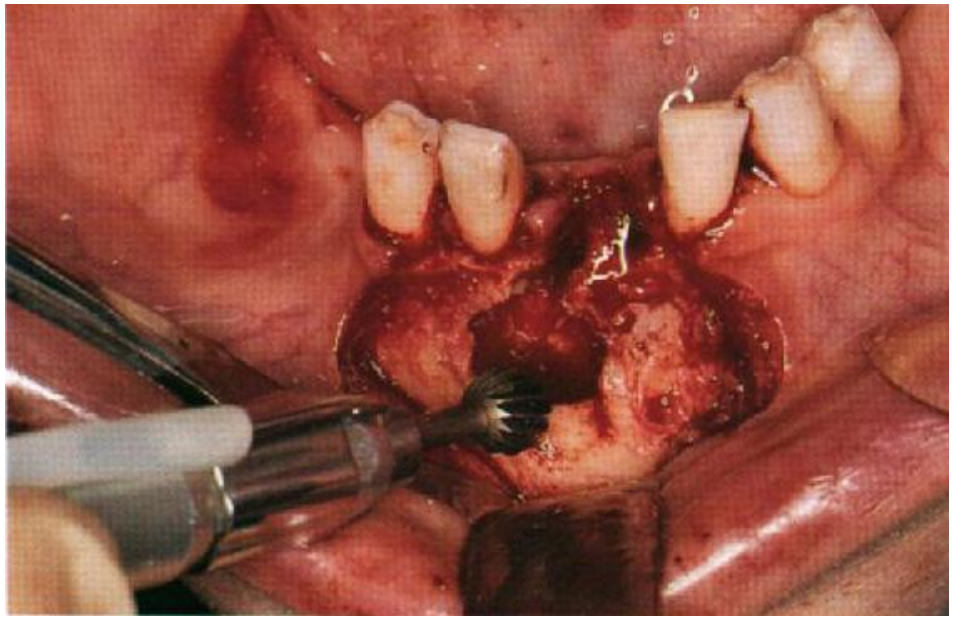


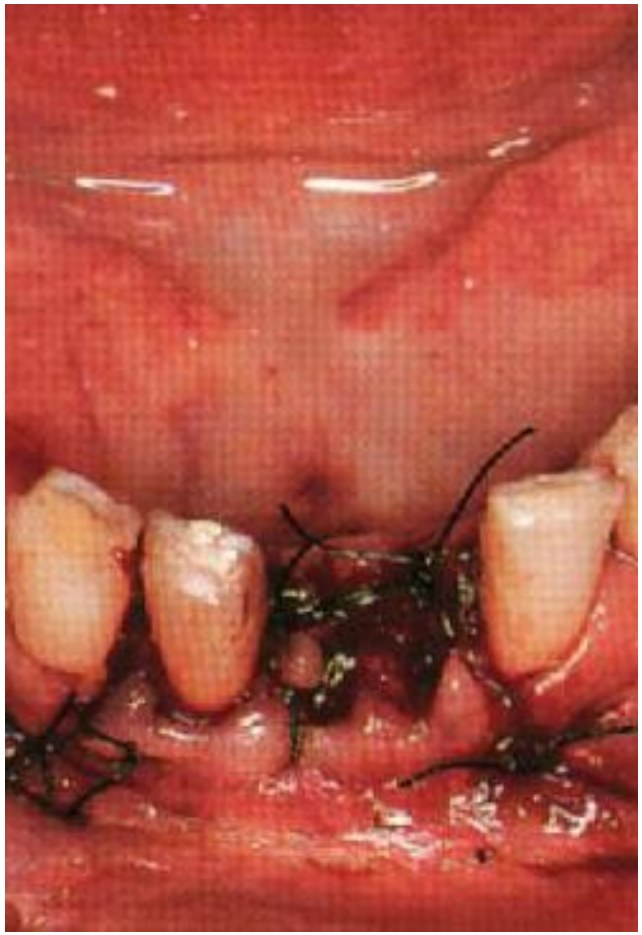
Treatment of causative teeth



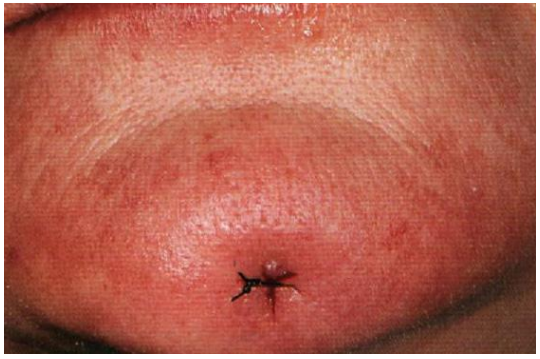


Wound Management & Closure

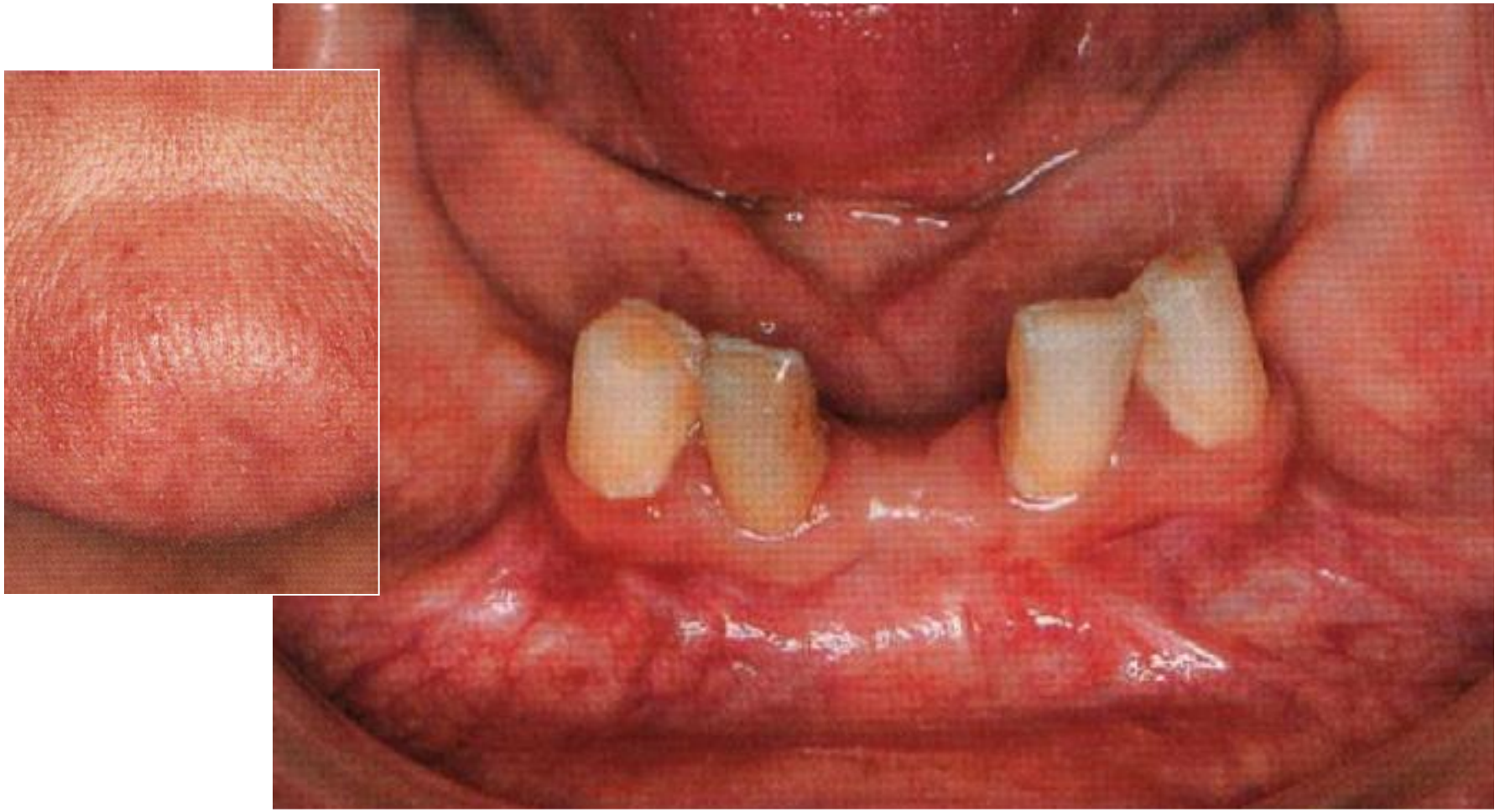




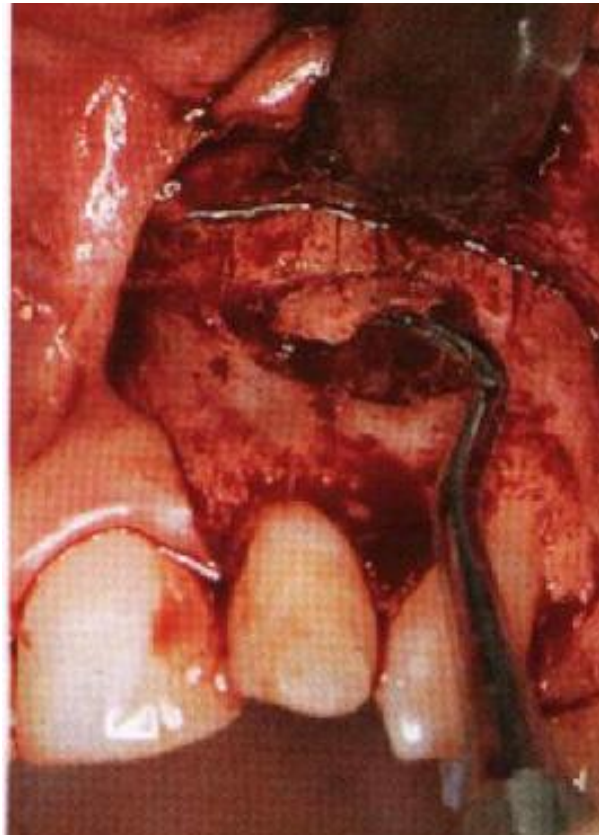
Treatment of Fistula

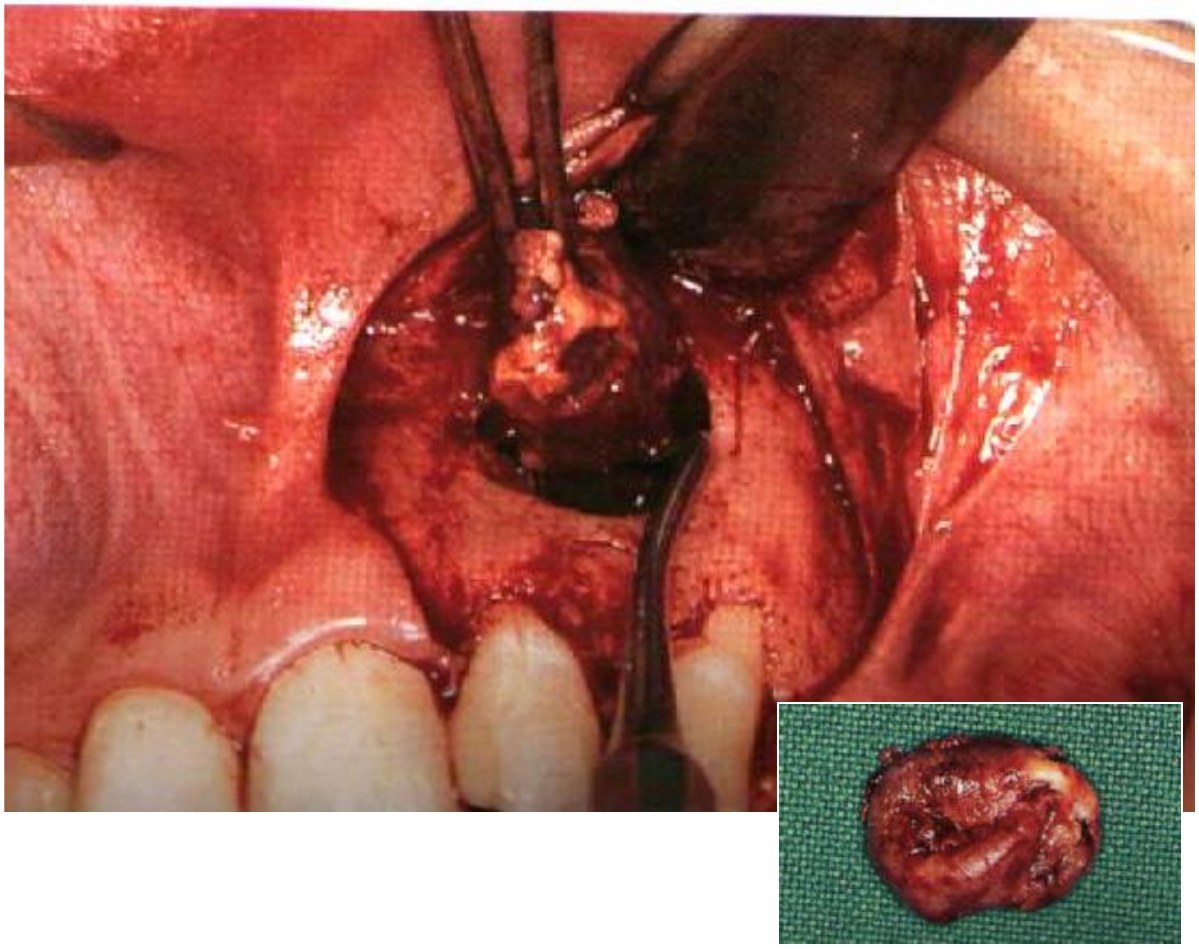


Follow-Up

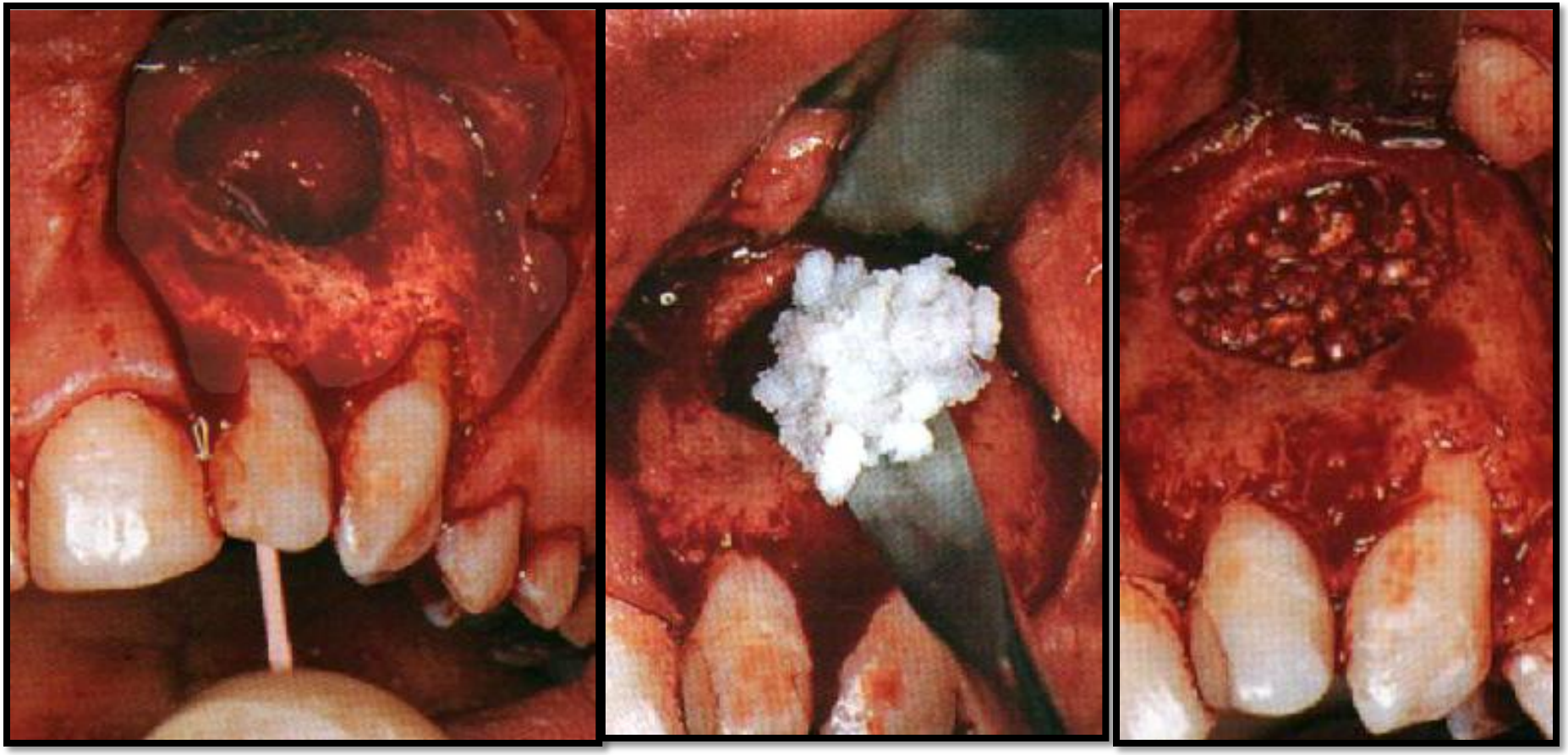


B. Maxillary Periapical Cyst

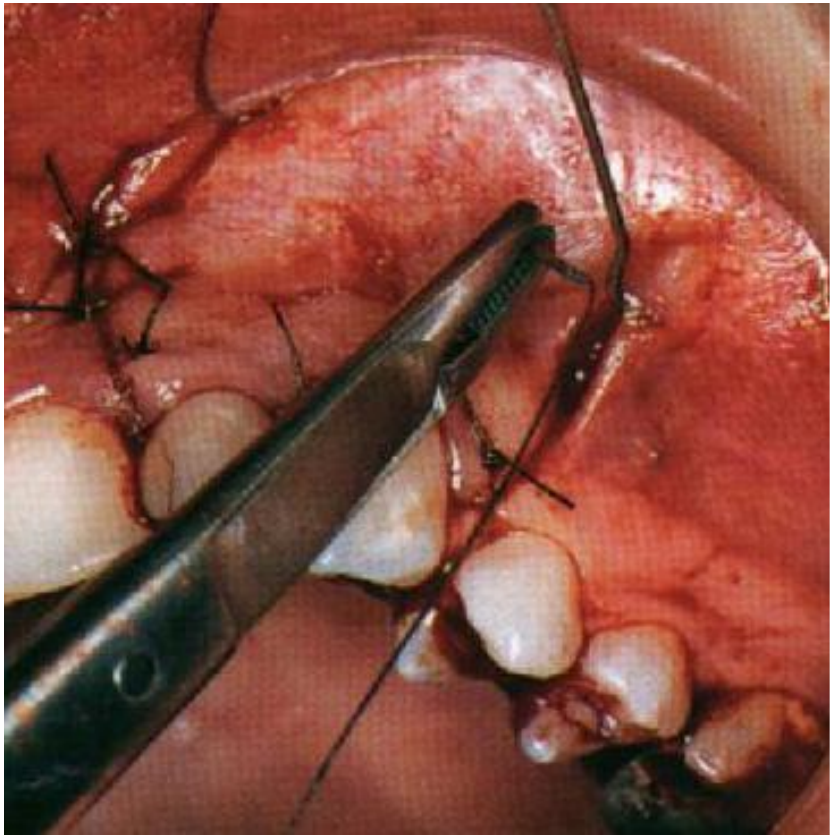


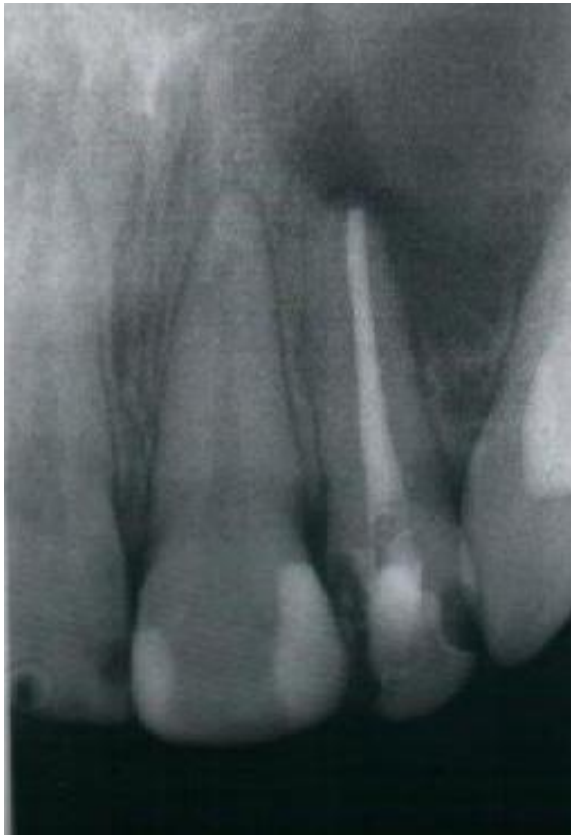


Treatment of the causative teeth and cavity obliteration

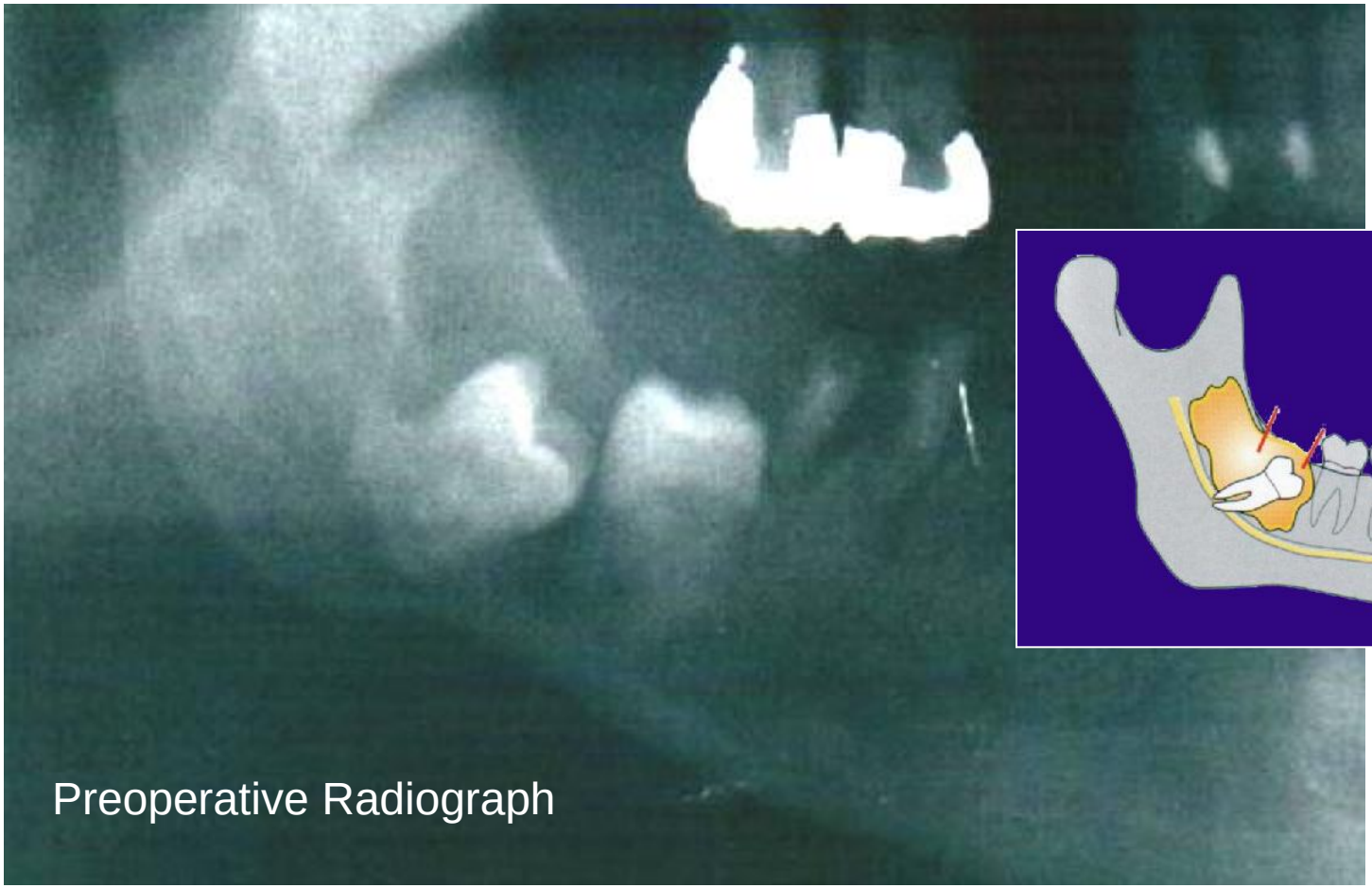


Wound Closure & Follow-Up

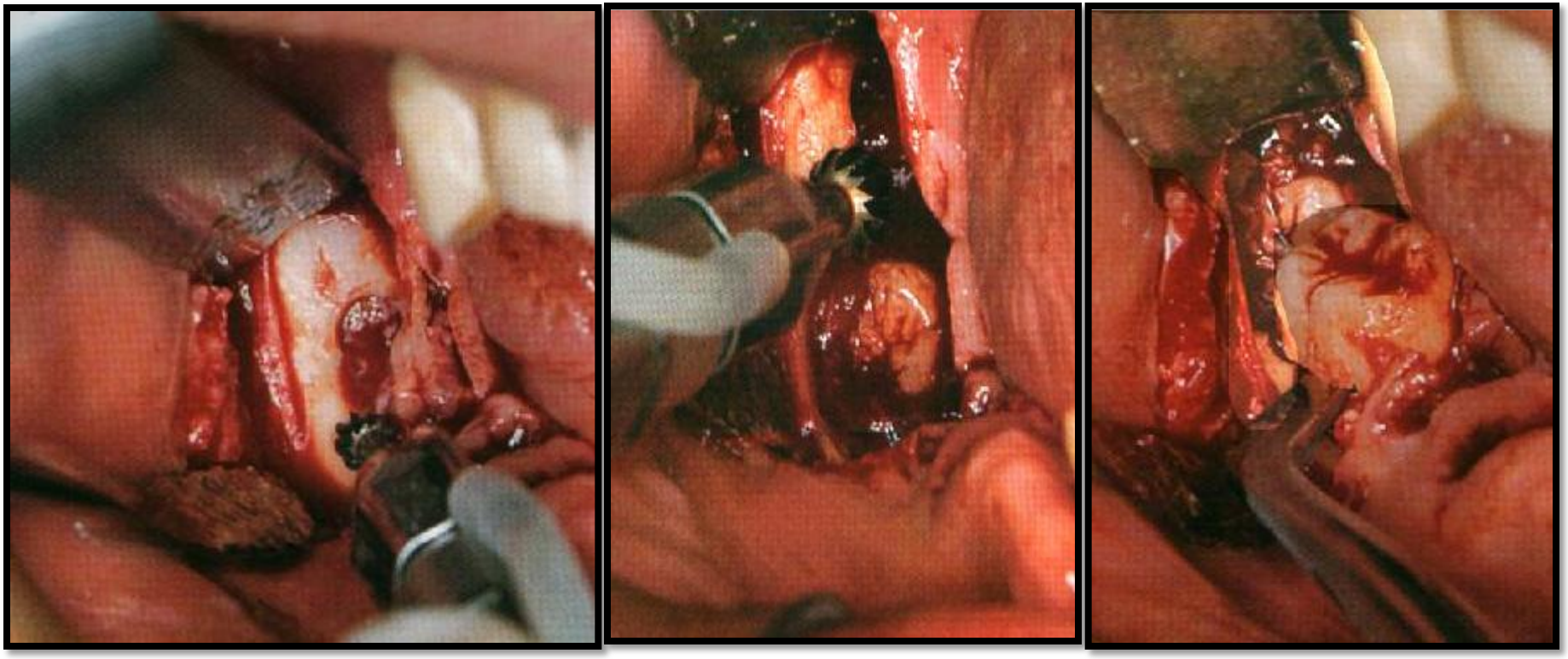




C. Dentigerous Cyst (Marsupialization)

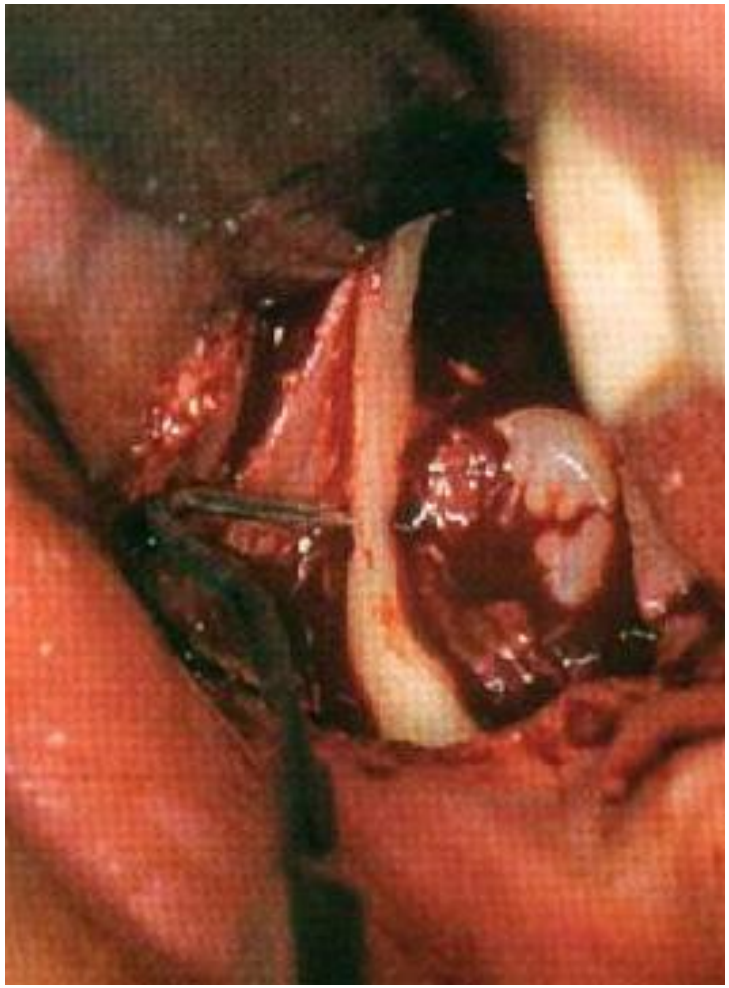


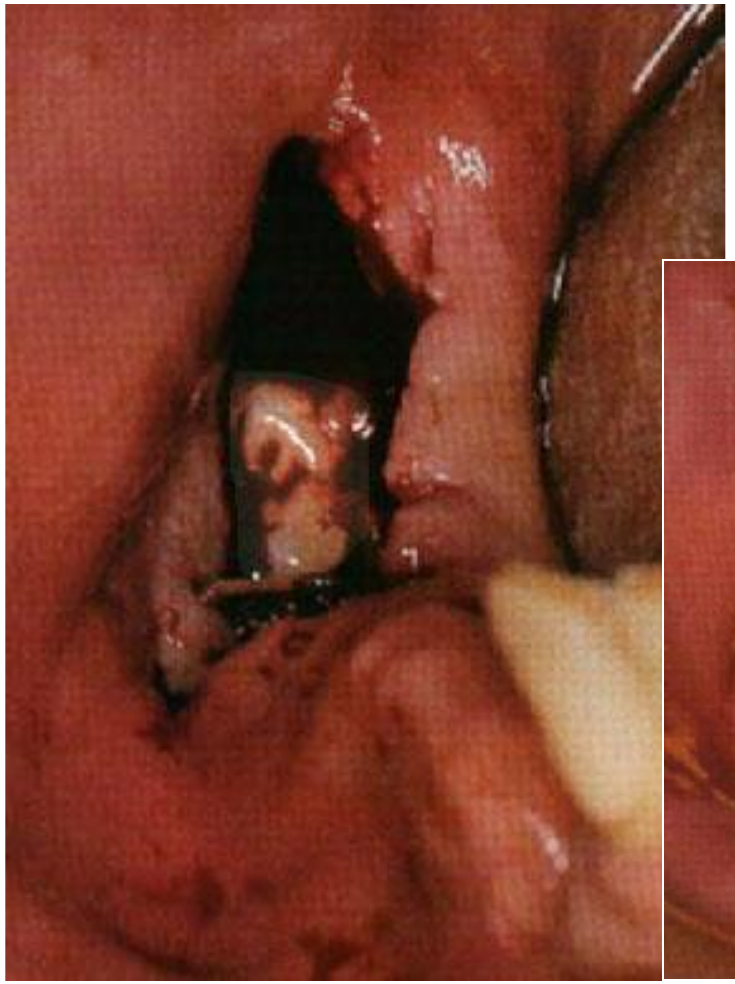
Exposing the Cyst

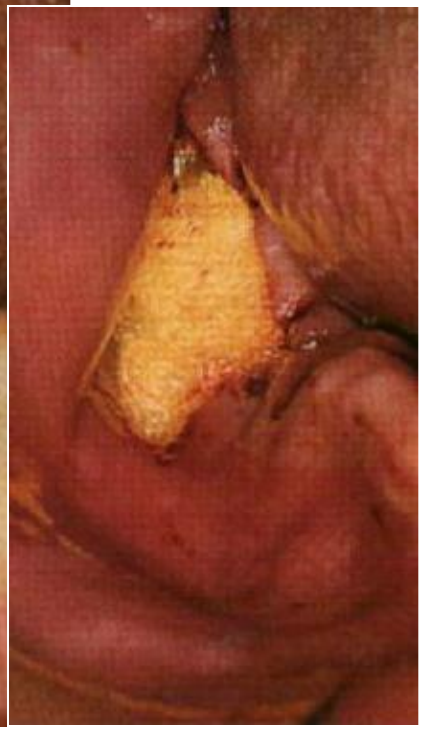


Exposing the Teeth and Removal of tooth

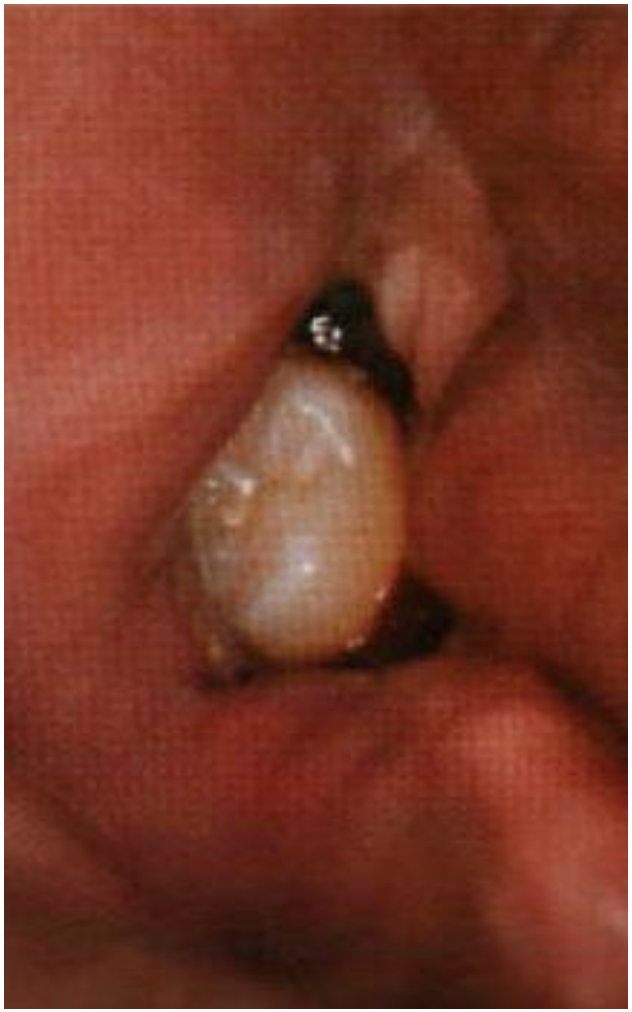
Maintaining open site, wound management & Packing

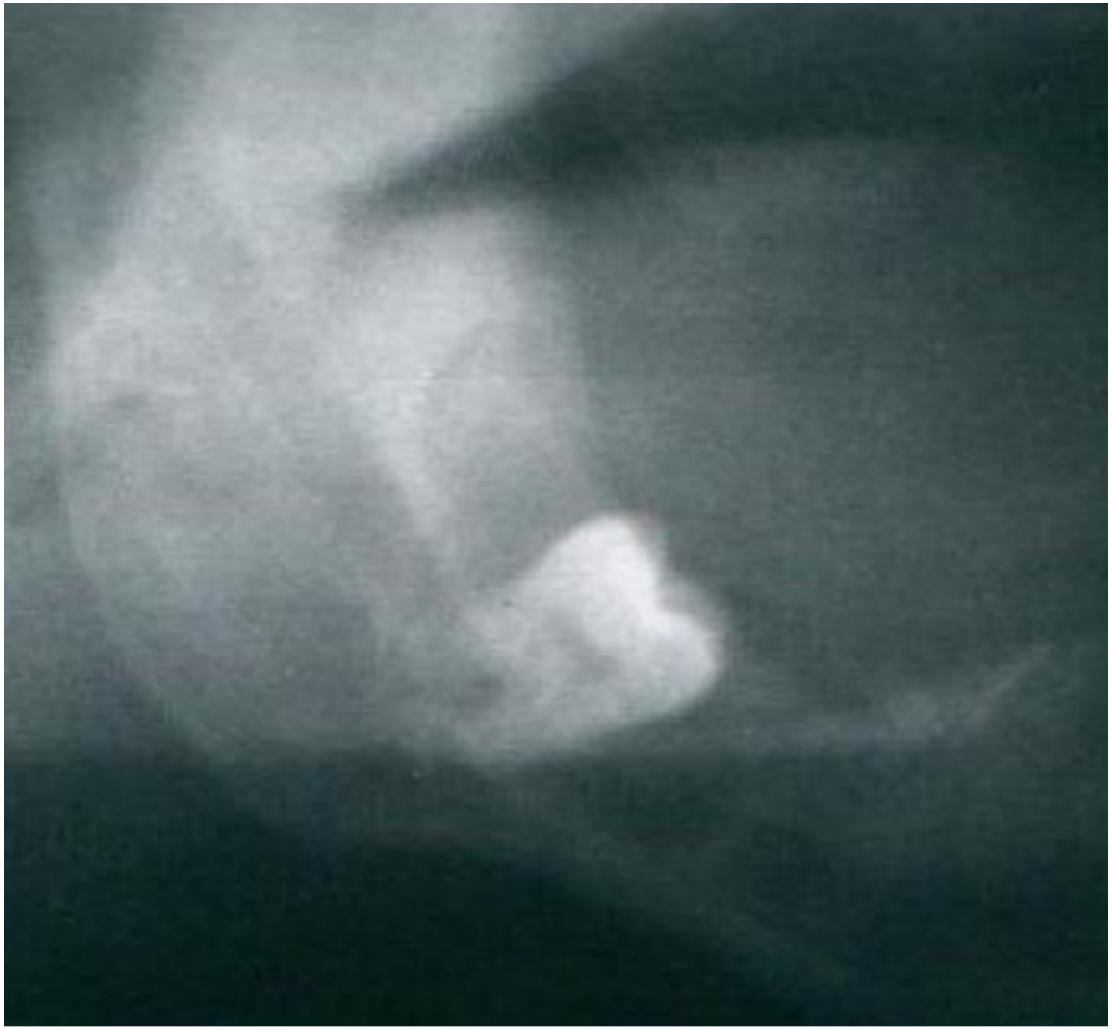




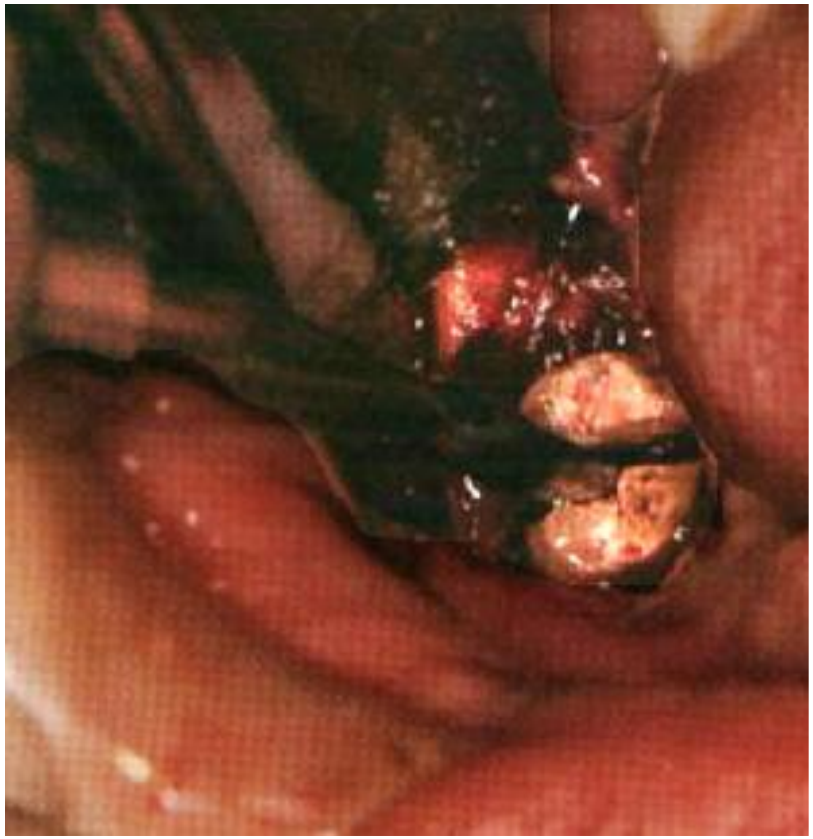


Follow-Up – 6 M PO

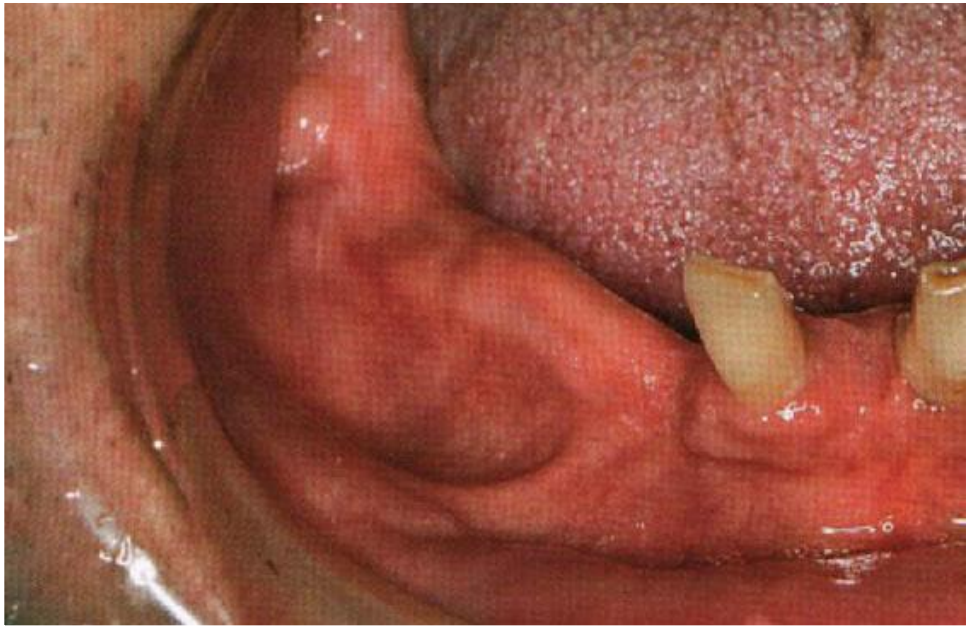




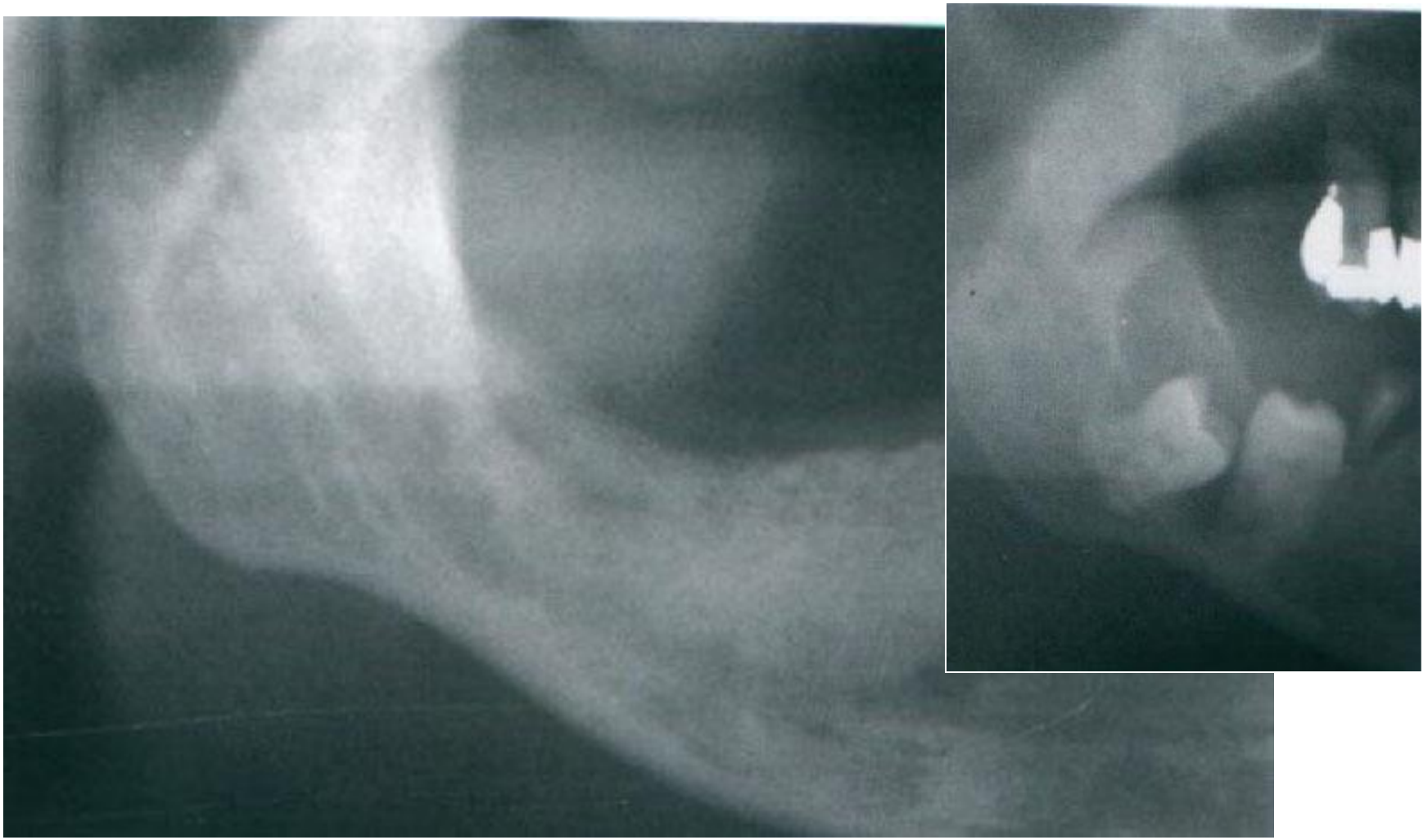
Second Surgery – Third Molar Removal



Follow-up – 18 MPO



Follow-Up & Comparison – 18 MPO



C. Maxillary Dentigerous Cyst