



CYSTS OF THE JAWS

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Objectives

To know the:

- The definition,
- classification
- pathophysiology.
- Management of the cyst of the jaws.

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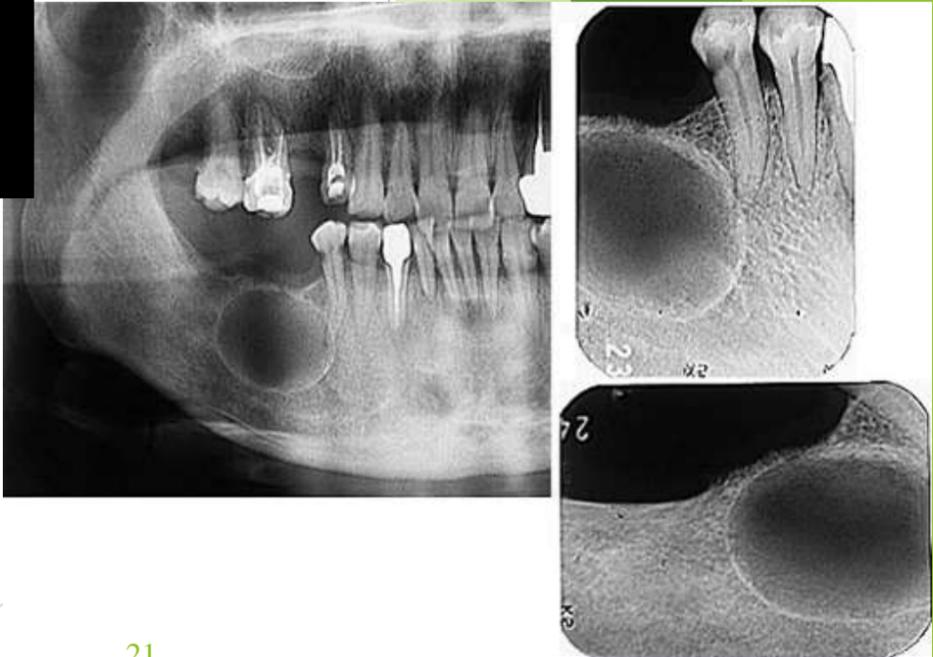
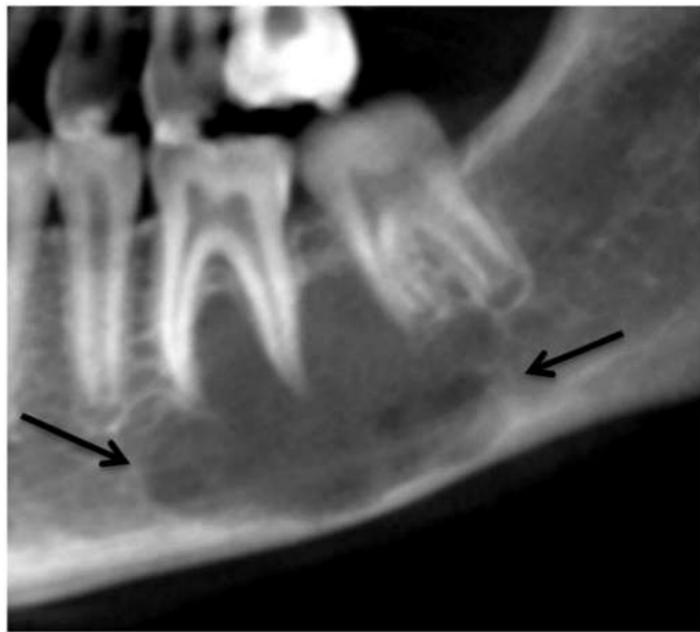
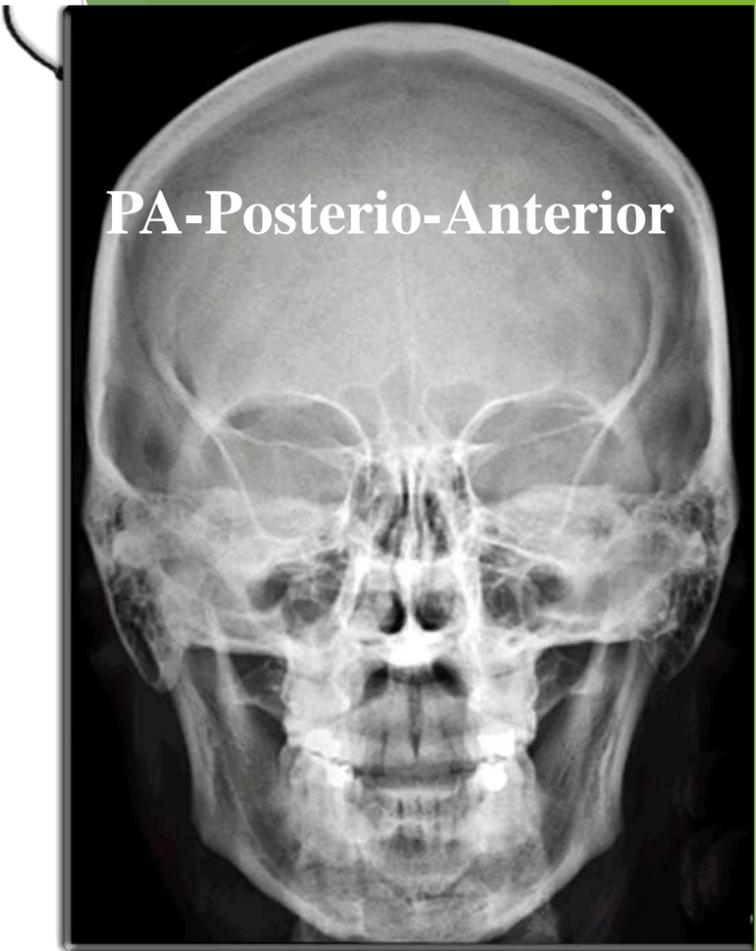
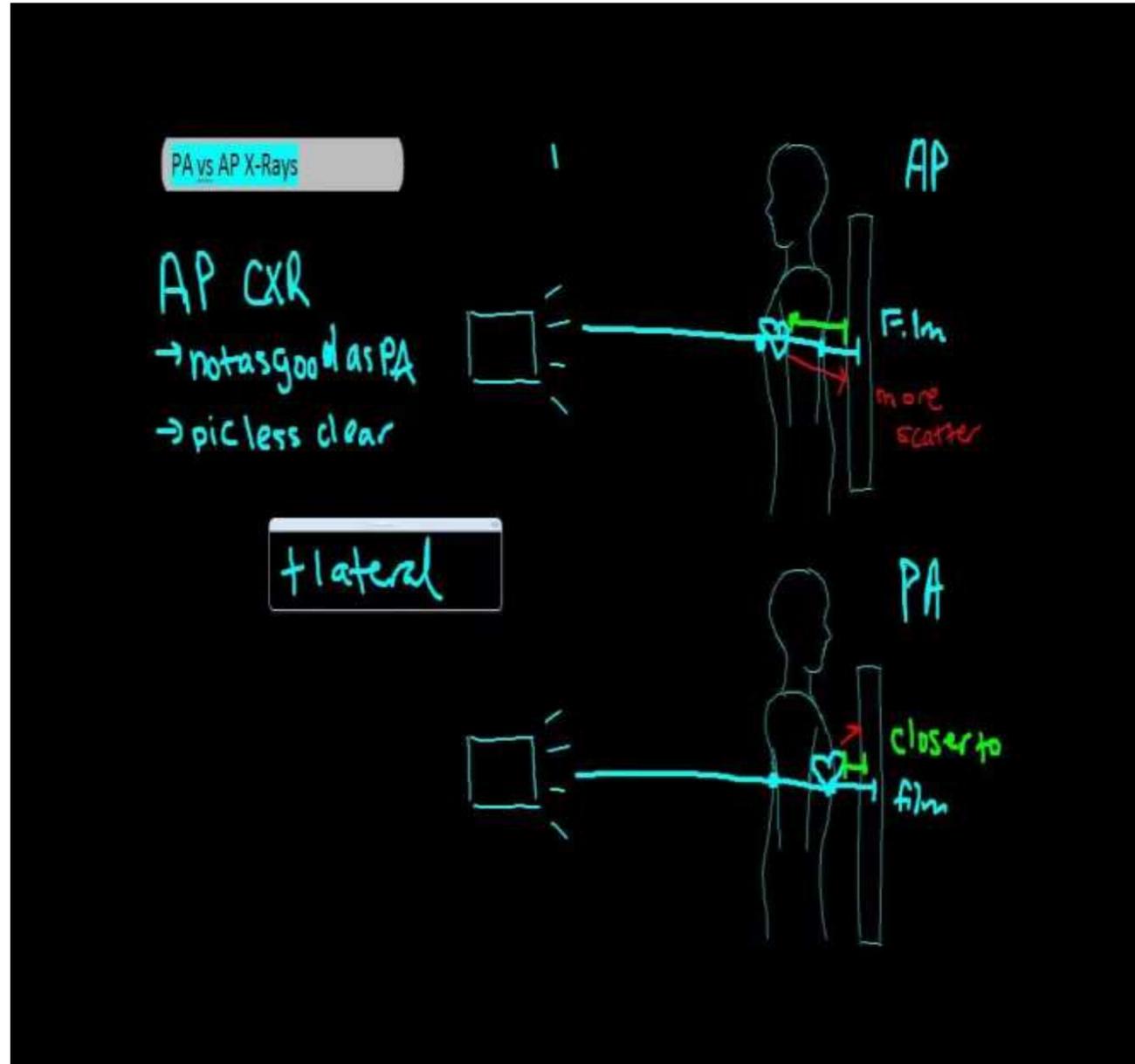
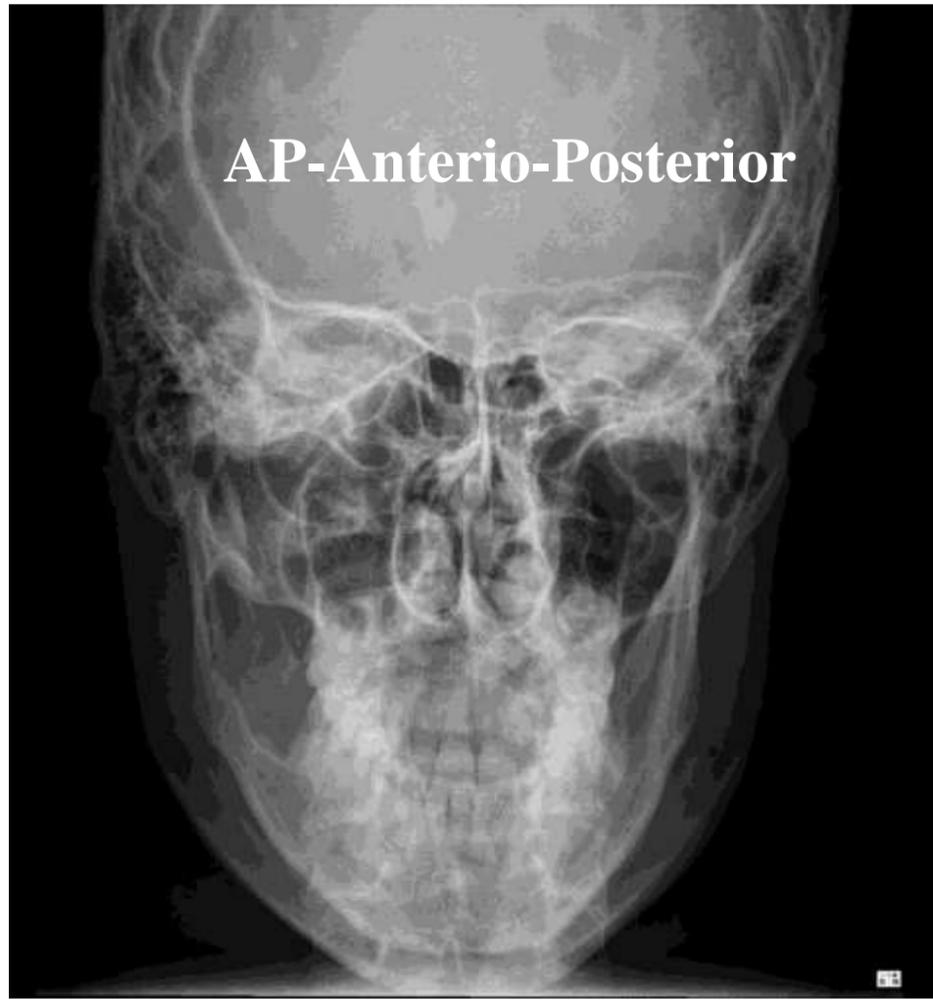


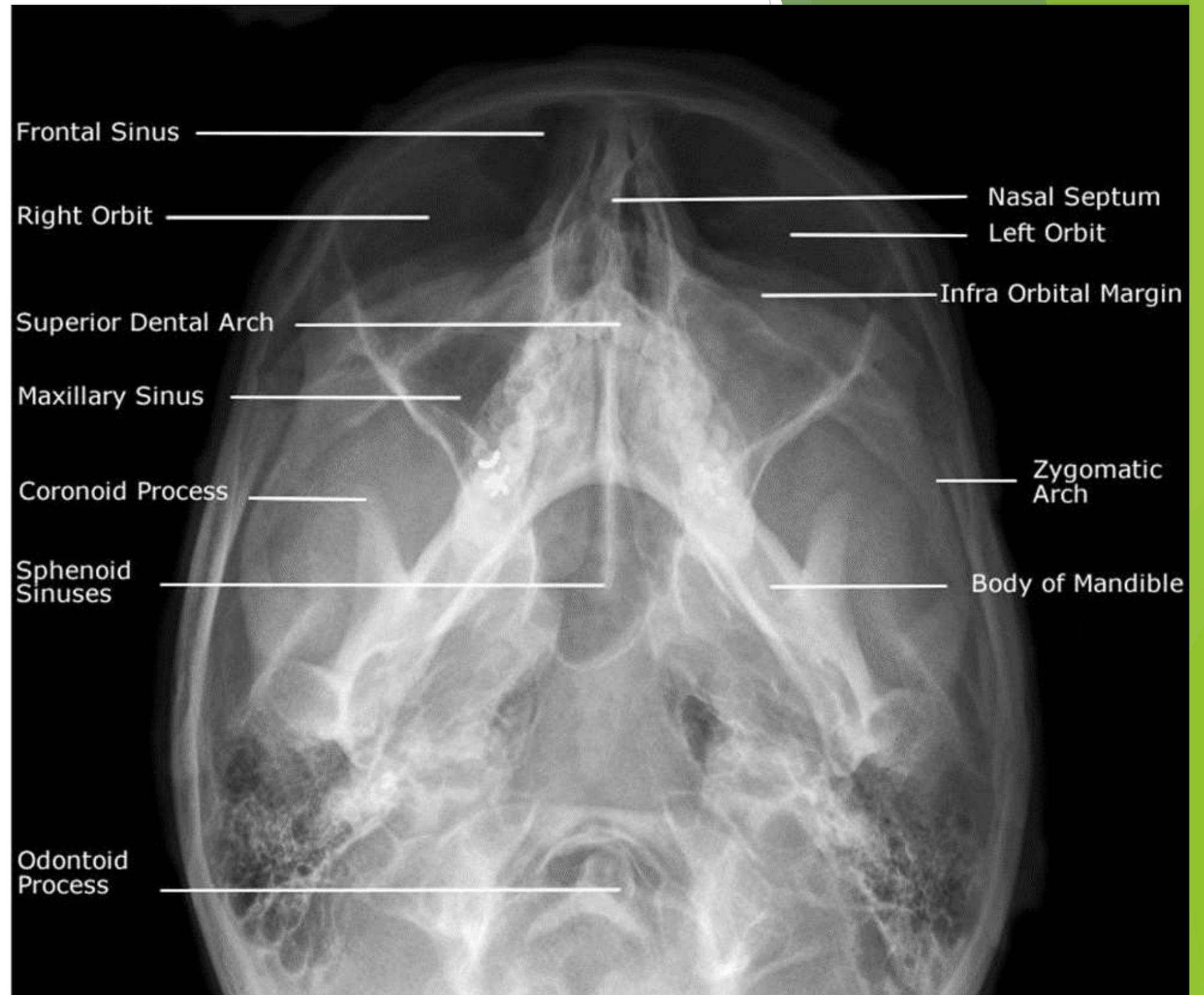
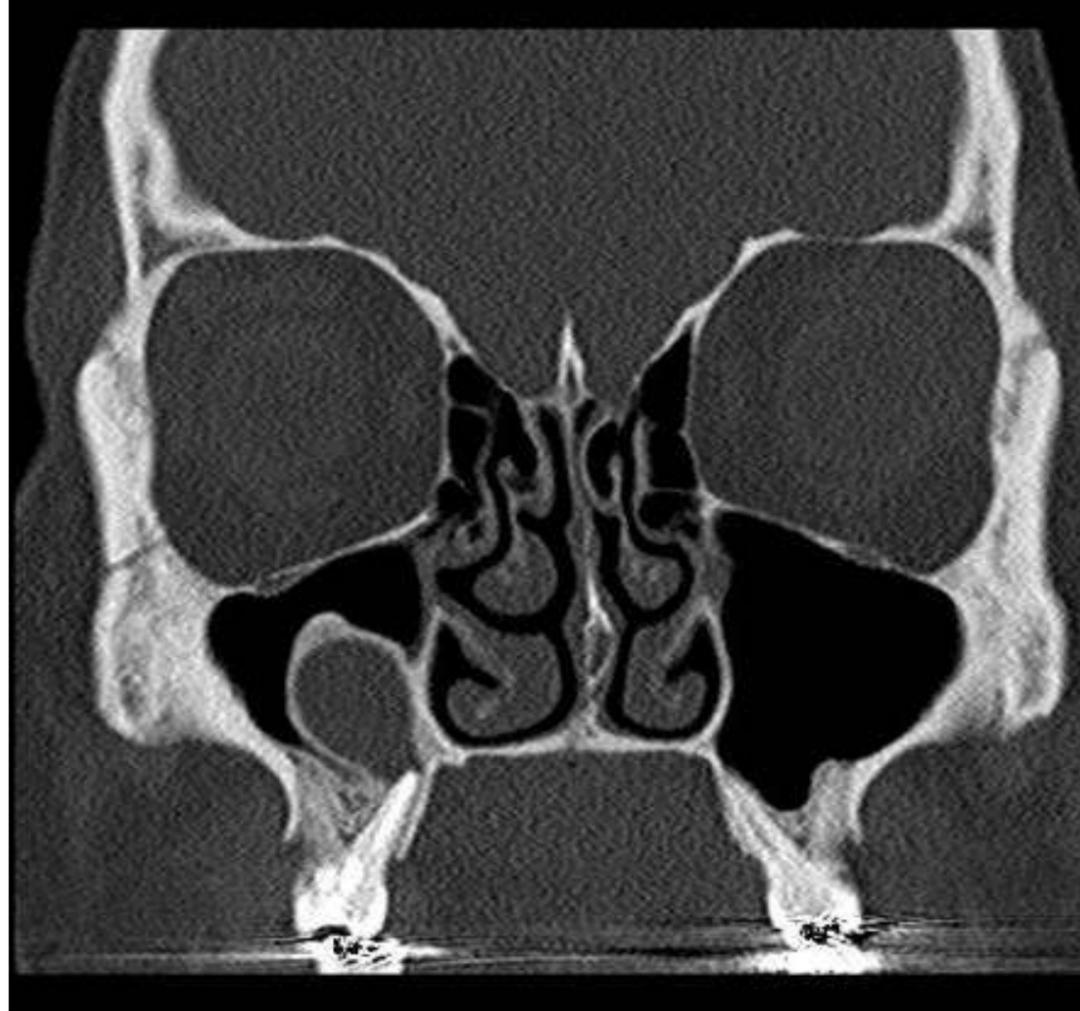
Radiographic Features:



Radiograph of a calcifying odontogenic cyst with well-demarcated margins extending from the right to the left premolar regions of the mandible. Numerous calcifications are present, some suggestive of small denticles.







Differential Diagnoses

- ▶ Cysts
- ▶ Normal anatomical structures
 - ▶ Nose
 - ▶ Antrum
 - ▶ Foramina
- ▶ Neoplasms



Types of Biopsy:

1. Aspiration Biopsy
2. Incisional Biopsy
3. Excisional Biopsy
4. FNA



Aspiration Biopsy

- ▶ Clearly defined outcome
 - ▶ Negative
 - ▶ Poor technique
 - ▶ Solid mass
 - ▶ Gas
 - ▶ Poor technique
 - ▶ Simple bone cyst



Aspiration Biopsy

- **Liquid**
 - **Blood**
 - Aneurysmal bone cyst
 - AV malformation
 - **Clear yellow fluid with cholesterol**
Radicular/residual/lateral periodontal cyst
 - Dentigerous cyst
 - **Clear fluid -**
 - Mucocele/antral polyp
 - **pus appearance**
 - Infected cyst contents
 - Odontogenic keratocyst (Low serum protein)
 - Sebaceous/Dermoid cyst (Low serum protein)



Diagnosis based on type of aspirate

- ▶ 1. *Clear, pale, straw colored fluid with cholesterol crystals.*
Dentigerous cyst
- ▶ 2. *Creamy white, thick aspirate* Odontogenic keratocyst
- ▶ 3. *Yellowish, foul smelling fluid (pus)* Infected cyst
- ▶ 4. *Blood on aspiration* Needle in a blood vessel Vascular lesion or A.B.C.
- ▶ 5. *Air on aspiration* Maxillary antrum Traumatic bone cyst
- ▶ 6. *Negative aspiration* Solid tumor



Aims of Surgical treatment

- ▶ To remove the entire lesion
- ▶ To prevent recurrence
- ▶ Improve Function



Surgical Procedures

- ▶ Enucleation
 - ▶ with primary closure
 - ▶ with packing
 - ▶ with mechanical curettage
 - ▶ with chemical curettage
- ▶ Marsupialization
 - ▶ with decompression
 - ▶ with secondary enucleation



Enucleation

- ▶ Technically difficult may associated with damaging to surrounding structures:
 - ▶ Tooth roots
 - ▶ Inferior alveolar nerve
 - ▶ Predispose to jaw fracture
- ▶ In some situations may allow recurrence of the cyst
- ▶ **procedures**
 - ▶ Enucleation with primary closure
 - ▶ Suture line on sound bone
 - ▶ Enucleation with packing
 - ▶ Placing of the flap into the cavity WITH packing or use bone graft .
 - ▶ Enucleation with curettage
 - ▶ Mechanical
 - ▶ Chemical

Enucleation and primary closure with reconstruction / bone grafting

- Reconstruction with stainless steel or titanium reconstructive plates
- Autogenous bone grafts: Iliac crest, costochondral



Composition of carnoy's solution

- ▶ 1. Glacial acetic acid
- ▶ 2. Chloroform
- ▶ 3. Absolute alcohol
- ▶ 4. Ferric chloride
- ▶ It is indicated mainly in cases of odontogenic keratocyst. After enucleation, to remove any remaining lining of the cyst chemical cauterising agent Carnoy's solution is applied along the walls of the cystic cavity. It is left for about 5-7 minutes and then irrigated thoroughly with saline.

Marsupialization

- ▶ Creating a window in the wall of the cyst
- ▶ Evacuating the contents of the cyst



Fig. 9.9 An acrylic bung occluding the entrance to a marsupialized cyst cavity.

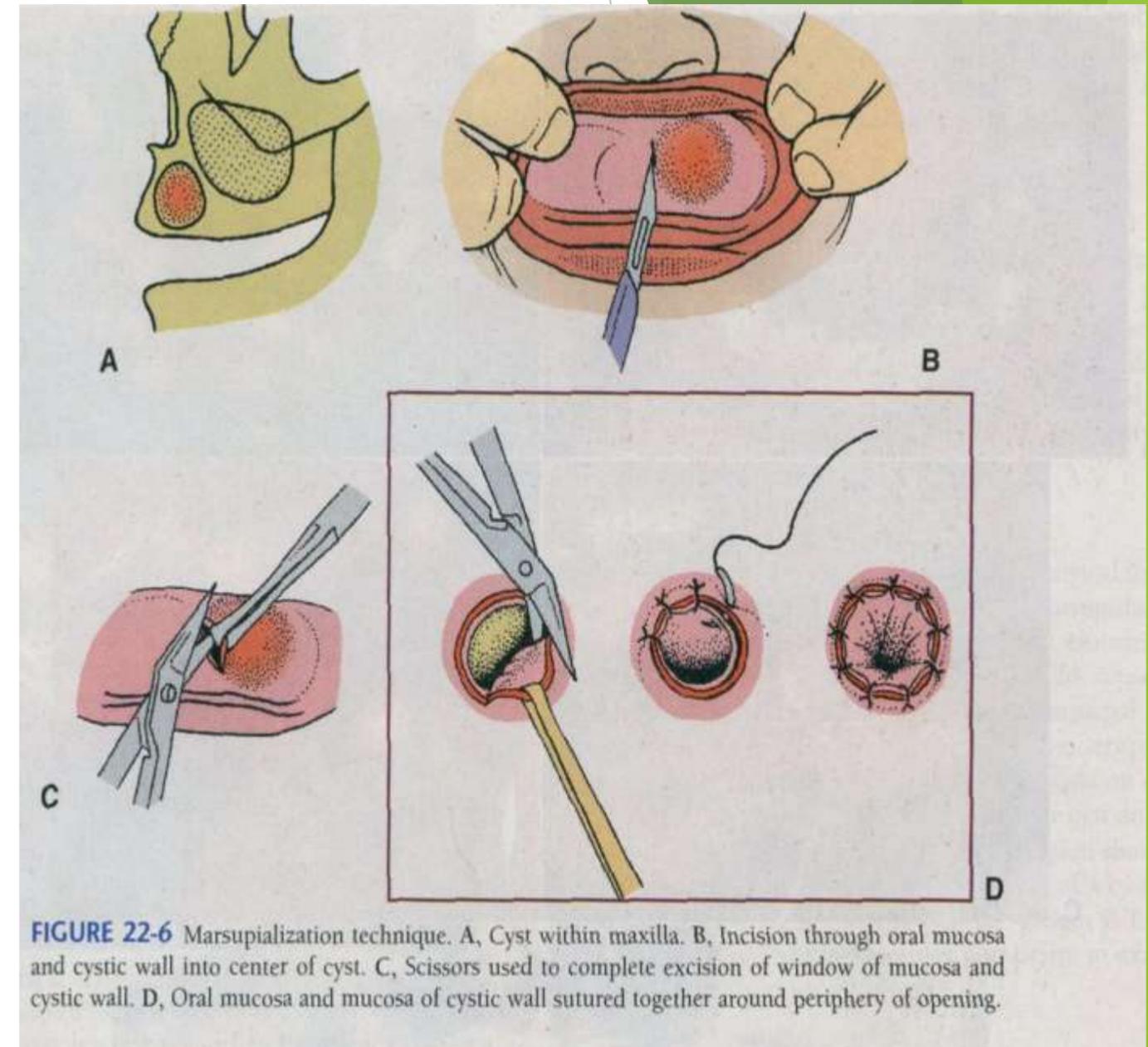


FIGURE 22-6 Marsupialization technique. A, Cyst within maxilla. B, Incision through oral mucosa and cystic wall into center of cyst. C, Scissors used to complete excision of window of mucosa and cystic wall. D, Oral mucosa and mucosa of cystic wall sutured together around periphery of opening.

Marsupialization

▶ Indications

- ▶ very large cysts
- ▶ problems of surgical access
- ▶ proximity to vital structures
- ▶ to allow tooth eruption
- ▶ debilitated patient

▶ Disadvantages

- ▶ Pathological tissue left *in situ*
- ▶ Prolonged maintenance of the marsupialised cavity
- ▶ May require repeated surgery
 - ▶ Enucleation after marsupialization, especially for odontogenic keratocysts

Treatment of odontogenic cysts

1. Enucleation only

- 1) **Radicular cysts**
- 2) **Residual cysts**
- 3) **Dentigerous cysts**
- 4) **Paradental cysts**
- 5) **Periodontal cysts**
- 6) **Gingival cysts**
- 7) **Nasopalatine cyst**

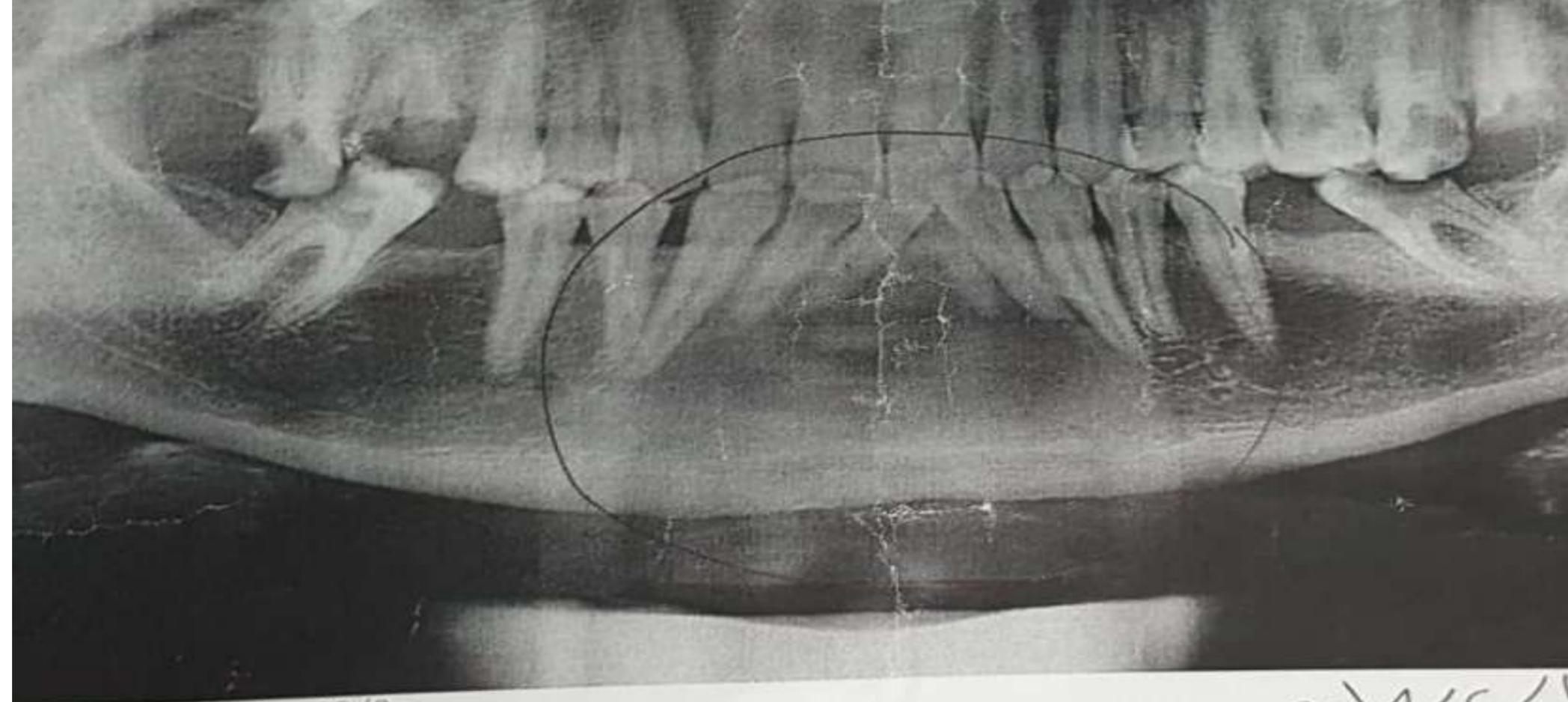
2. Combination of procedures

8) **Odontogenic Keratocyst**

- ▶ **Enucleation**
- ▶ **Enucleation with curettage**
 - ▶ **Mechanical**
 - ▶ **Chemical**
- ▶ **Marsupialization with secondary enucleation**

Enucleation

- ▶ The complete shelling out of the cyst lining from the bony wall is the treatment of choice in most jaw cysts unless important adjacent structures have to be sacrificed



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Complications of cyst management

- ▶ **1. Injury to inferior alveolar nerve**
- ▶ **2. Injury to adjacent teeth**
- ▶ **3. Fracture of jaw**
- ▶ **4. Oro antral fistula communication**
- ▶ **5. Hematoma formation**
- ▶ **6. infection**
- ▶ **7. Dead space**
- ▶ **8. Incomplete removal**
- ▶ **9. Recurrence**
- ▶ **10. Malignant transformation**

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2. **Peterson Oral & Maxillofacial Pathology (2nd edition)**
3. **Cawson oral pathology**
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THANK YOU