Non- odontogenic tumors

Dr.Raad Salah Shyaa

Importnt Points

- Are common in the pediatric population
- Include giant cell lesions, fibro-osseous lesions, and desmoplastic fibroma.
- From slowly growing, asymptomatic radiolucencyto rapidly expanding, aggressive tumors characterized by pain, root resorption and a high recurrence rate.

- Fibro-osseous lesions represent benign conditions that are characterized by replacement of normal bone with fibrous connective tissue that gradually undergoes mineralization.

- Desmoplastic fibroma is recognized as a benign bony neoplasm and as the intraosseous counterpart of soft tissue fibromatosis.

Giant cell lesions

- Slowly growing, asymptomatic radiolucency .

or

- Rapidly expanding, aggressive tumors characterized by pain, root resorption.

Clinical Findings

- AGE : Occur in all ages .. predominantly in children and young adults.
- SEX : Female patients are affected more often than male patients (60%) .
- SITE :The premolar and molar regions of the mandible are more affected than the ascending ramus region

- Asymptomatic lesion detected on routine radiographic examination.

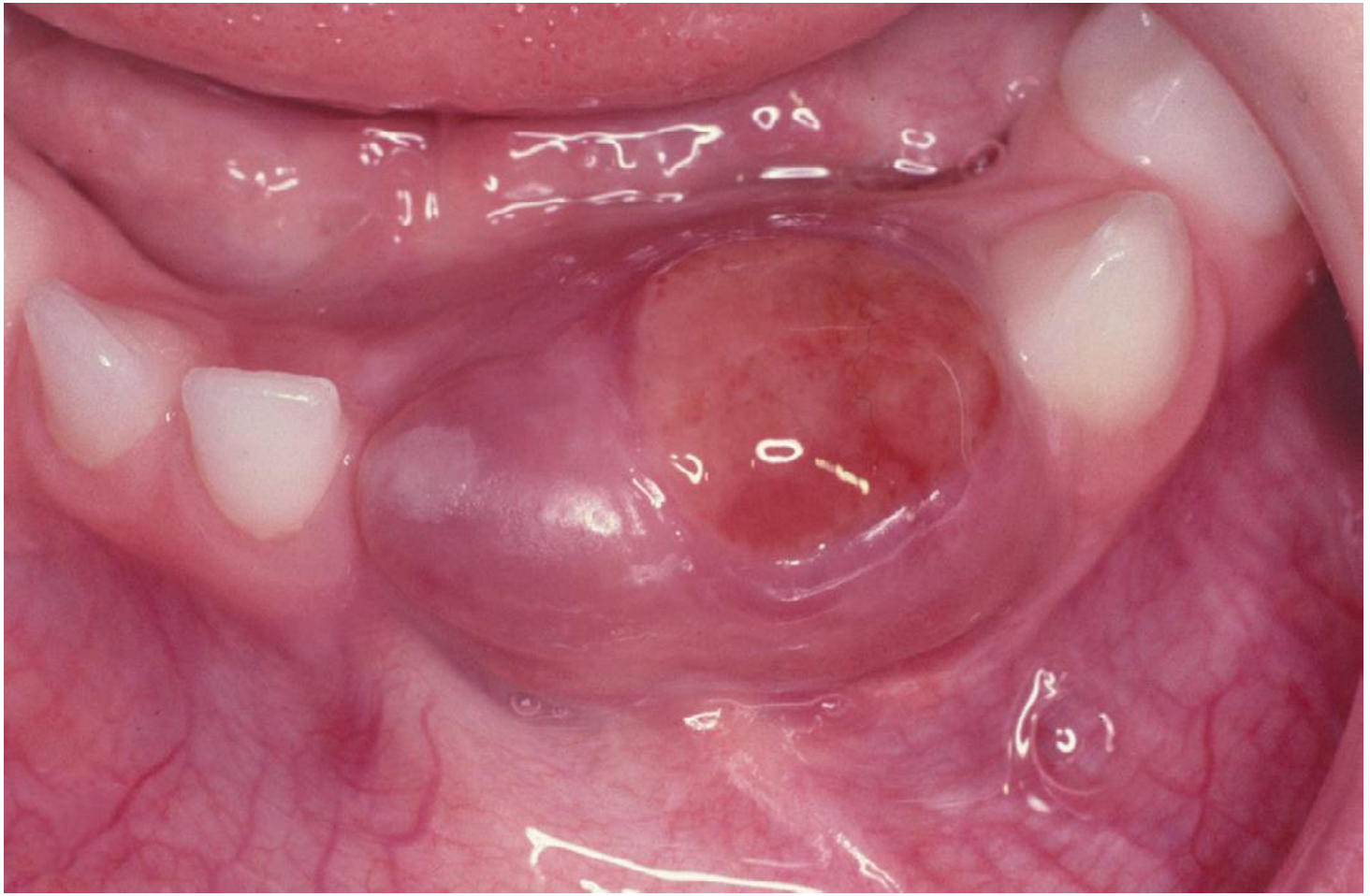
- pain, paresthesia, perforation of cortical bone, mobility, and loss of teeth are reported in aggressive lesions.

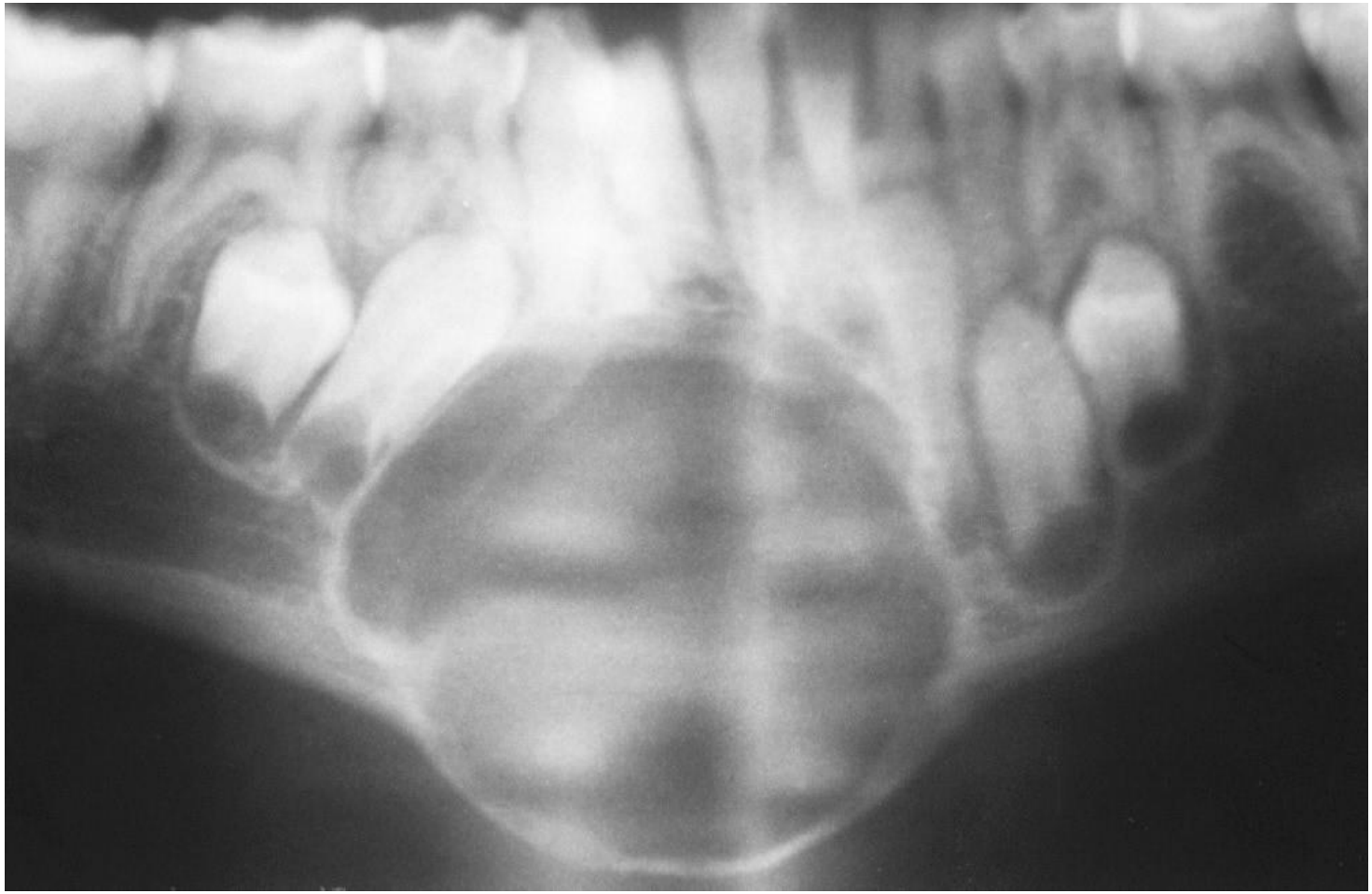
- Maxillary lesions may present as nasal obstruction or epistaxis.
- May present as a bulge of the alveolar ridge

Imaging

- Radiographically, these lesions are usually mixed radiolucent/radio-opaque and multilocular.
- Loss of lamina dura.
- Root resorption
- expansile radiolucency with scalloped margins
- Containing numerous thin septa of wispy bone and osteoid.



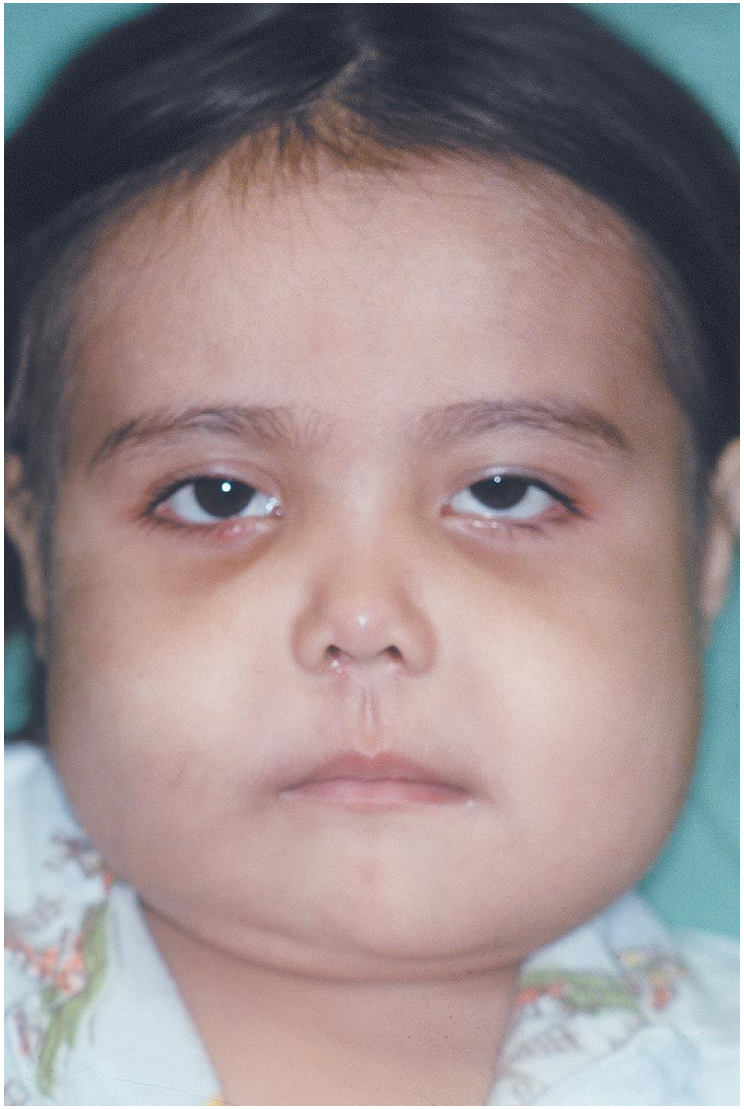


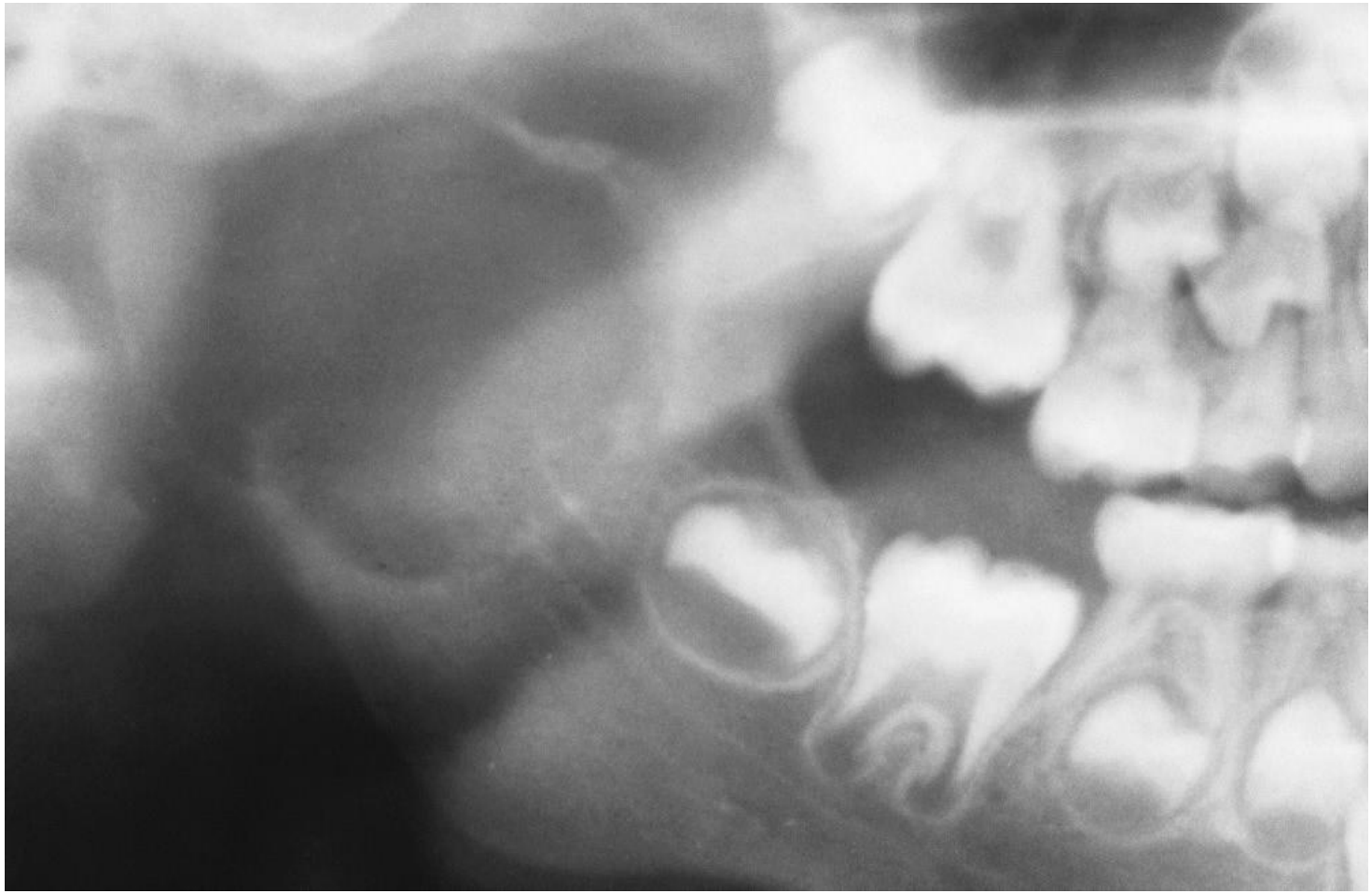


Diagnostic Dilemma

- Several other lesions can resemble a giant cell lesion microscopically and must be considered in the differential diagnosis.

- DDx:
- Brown tumor of hyperparathyroidism
- Cherubism
- Aneurysmal bone cysts
- Fibrous dysplasia





Fibro-osseous lesions

- Characterized by replacement of normal bone with fibrous connective tissue that gradually undergoes mineralization.

- Fibrous dysplasia (FD).
- Ossifying fibroma.
- Osseous dysplasia

Fibrous Dysplasia

- Monostotic fibrous dysplasia

❖Limited to 1 bone

❖Incidence of 80%

❖jaws are the most commonly involved bone, in particular the maxilla.

❖Can occur anytime during pregnancy childhood, or adulthood




R
L

Polyostotic fibrous dysplasia

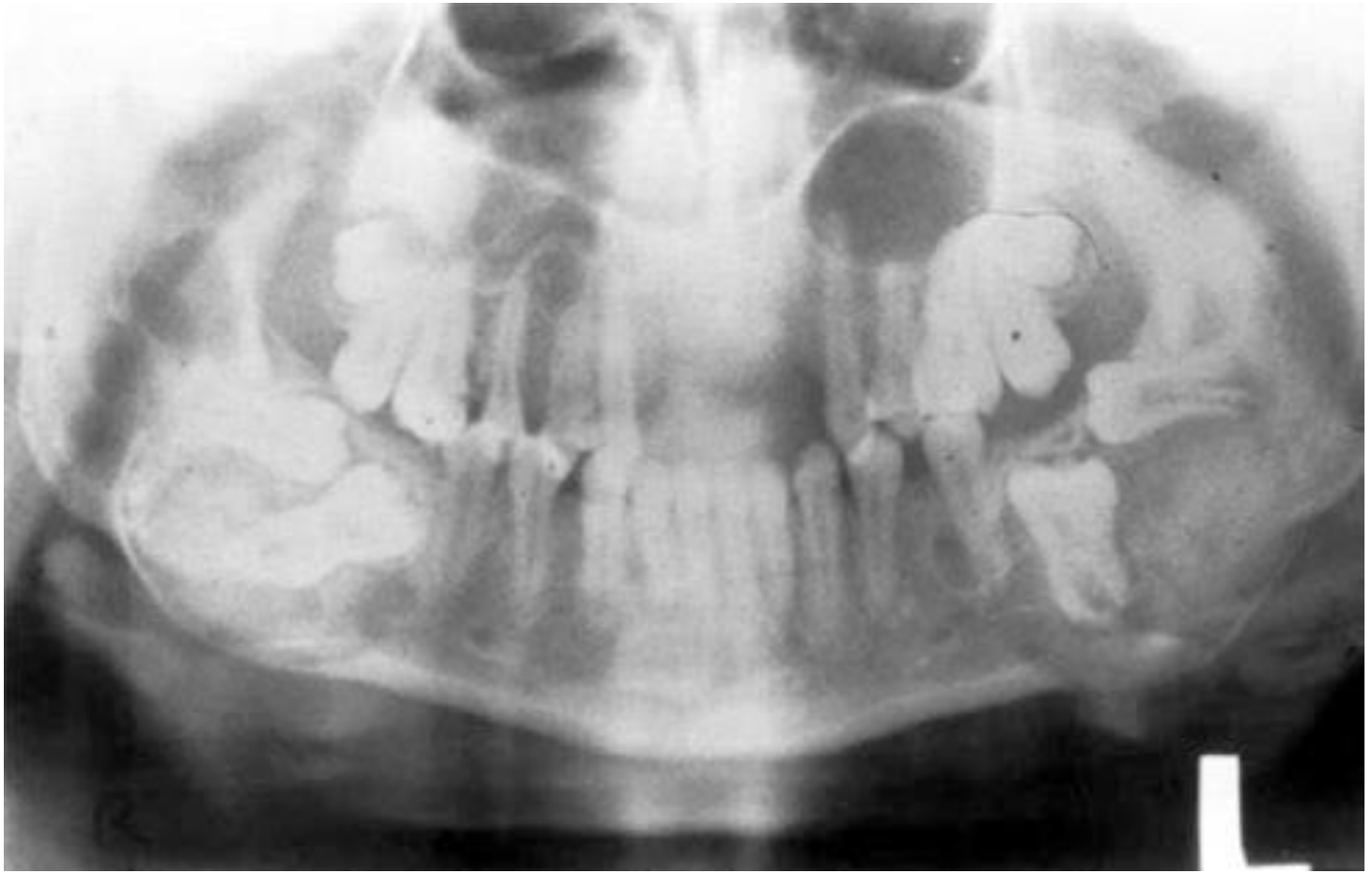
- 2 or more bones are involved. It can be considered syndromic if other abnormalities are found:

1. Jaffe-Lichtenstein syndrome.
2. McCune-Albright syndrome.
3. Mazabraud syndrome.

- These children typically have a facial asymmetry. In the long bone counterpart, they are associated with pathologic fractures with ensuing pain and leg length discrepancy.
- The cafe´ au lait pigmentation is irregular
- (looking like the coast of Maine)

Imaging

- Ground-glass appearance
- Expansion of buccal and lingual cortices
- Displacement of the inferior alveolar canal
- Ill-defined lamina dura
- Not well demarcated from adjacent tissue
- Radiolucent or mixed





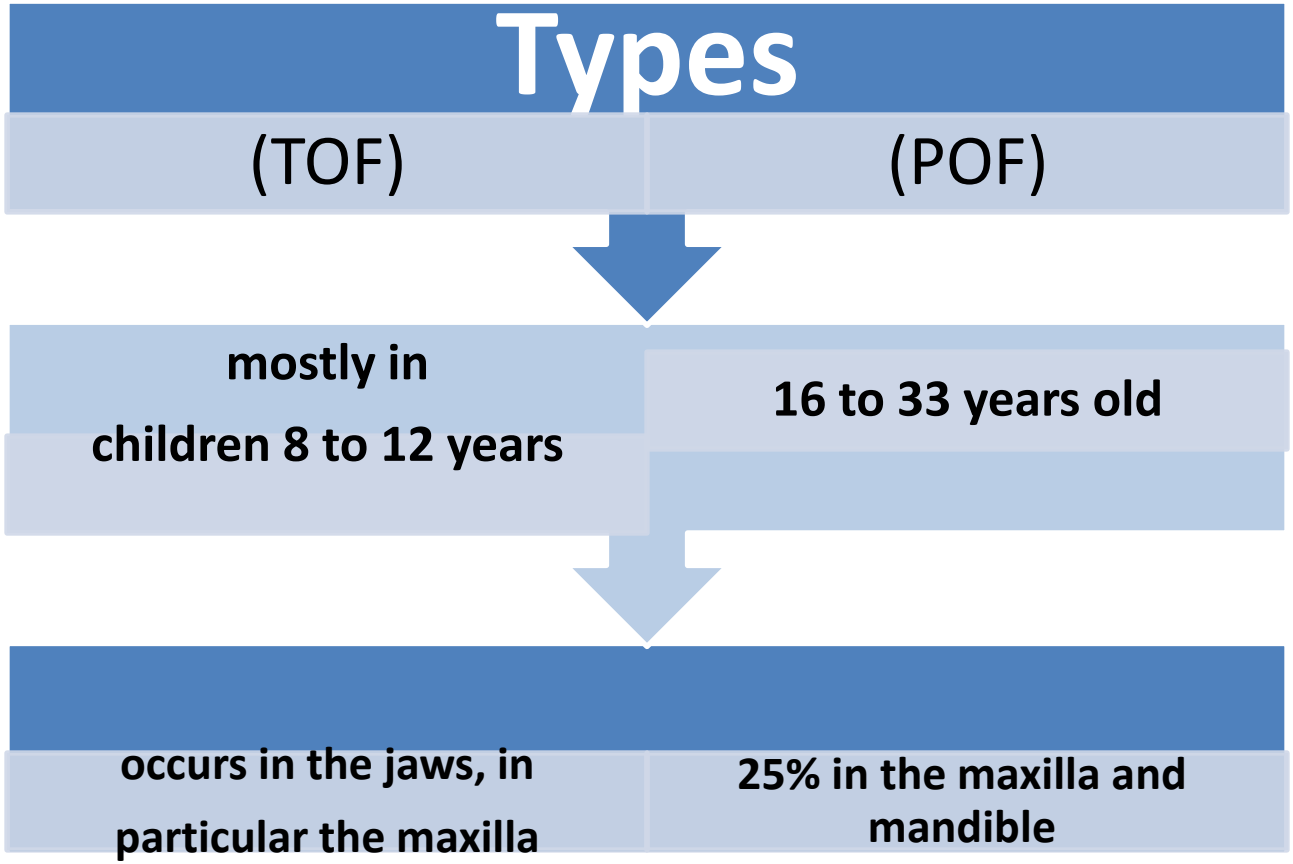


Treatment

- Management of FOLs depends on their diagnosis.
- recontouring, there are reported cases of 25% to 50% regrowth of the bone, especially when this is done at a young age.
- For the polyostotic variant, treatment with intravenous pamidronate and oral alendronate have shown success.
- Transformation to osteosarcoma if it is treated with radiotherapy.

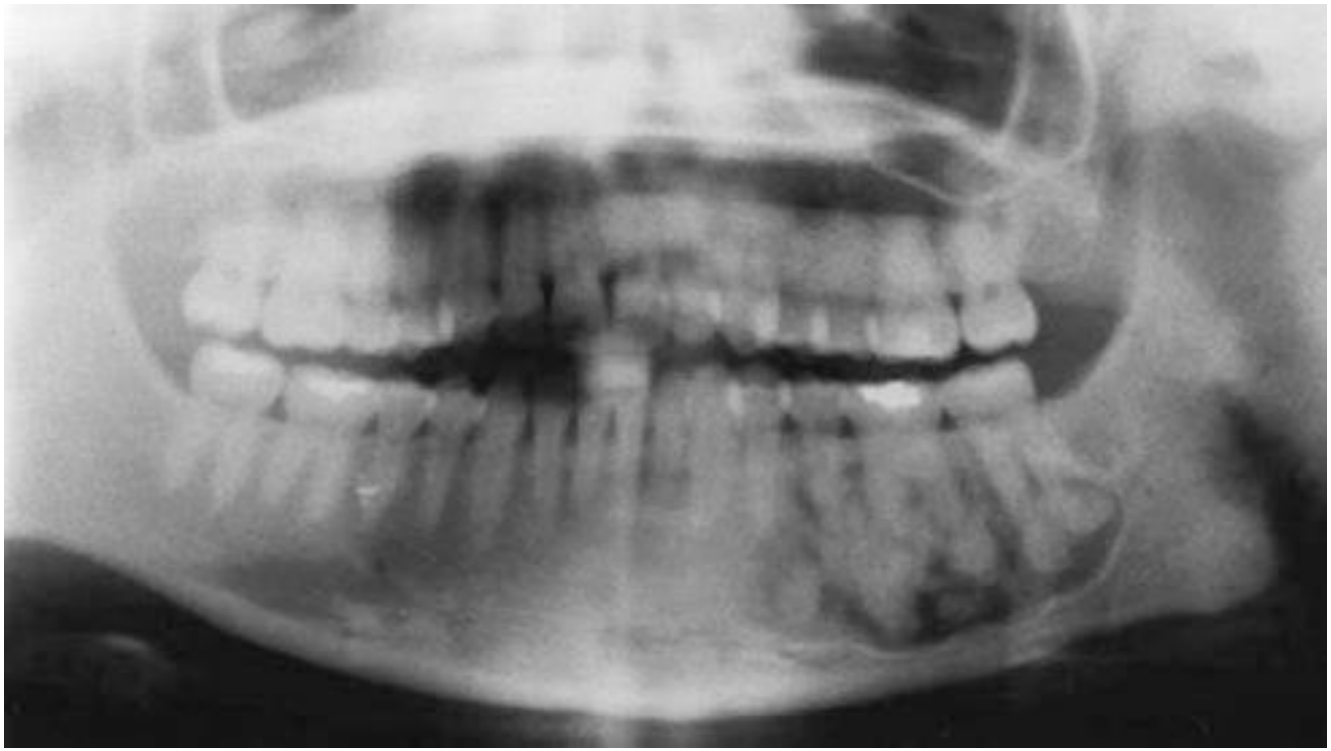
Ossifying fibroma

- Represents a true neoplasm



Imaging

- Well demarcated
- Unilocular with sclerotic border
- Can be radiolucent or radio-opaque
- Root resorption or divergence possible



- **Treatment :**

- The treatment of ossifying fibroma involves enucleation of the tumor.

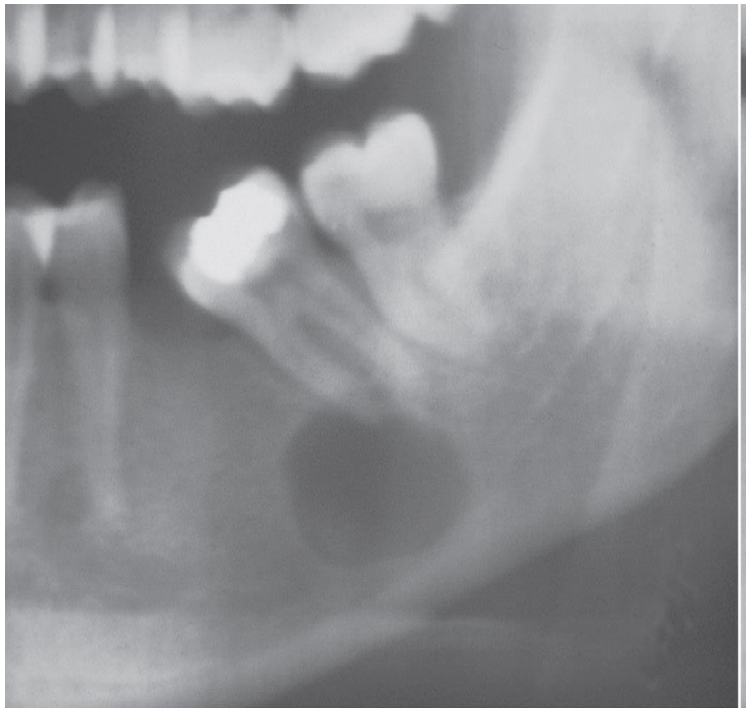
- If there is considerable bony destruction, resection and bone grafting are warranted.

- The prognosis is good and the rate of recurrence is slow.

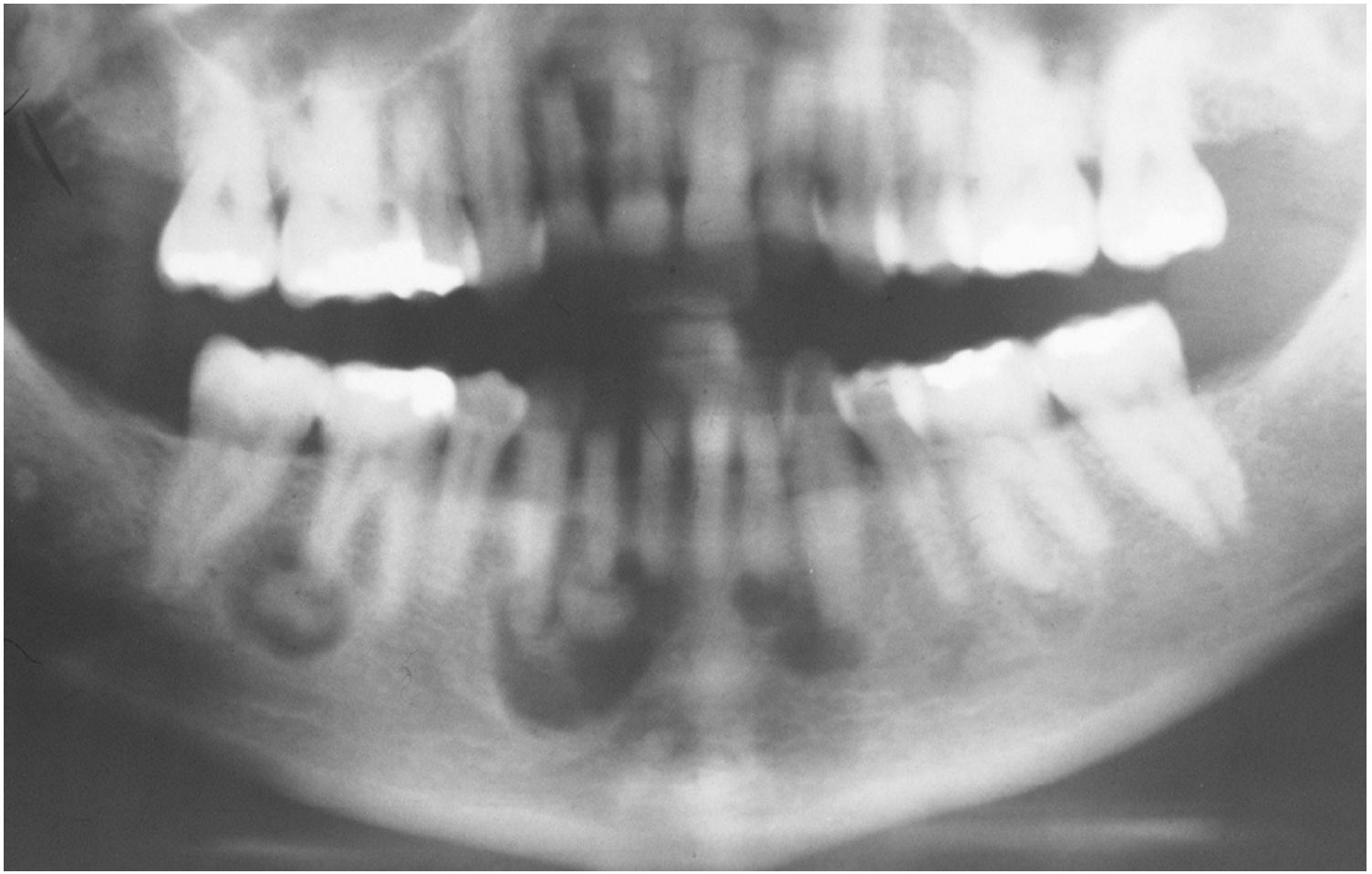
Osseous dysplasia

- Other names for this disease include cemento-osseous dysplasia
- Patterns:
- Focal, periapical, or florid.









Clinical Findings

- These lesions are benign and non-inheritable.
- Seen in the second and third decades.
- Occur mostly in female patients and in the mandible.
- Larger lesions presents as painless swelling of the involved bone.

Imaging

- Mixed radiolucent/radiopaque.
- Well defined with irregular borders.
- Usually associated with dentition.



Desmoplastic Fibroma

- Desmoplastic fibroma is recognized as a benign bony neoplasm and as the intraosseous counterpart of soft tissue fibromatosis.
- It has a locally aggressive behavior and a high recurrence rate.
- seen in the younger population with an average age around 16 years.

- painless swelling with symptoms presenting as the tumor invades adjacent structures.



- This is a benign, aggressive lesion that is locally destructive and easily extends into soft tissue. Therefore treatment of desmoplasti fibroma is resection of the lesion with margins.