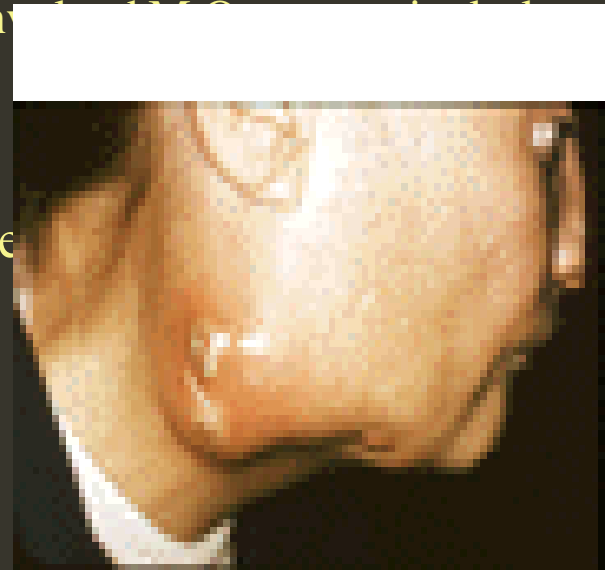


**Osteomyelitis:** an inflammatory process that involve the bone trabeculae & the bone marrow spaces.

- ◆ **1-acute osteomyelitis:** is a destructive lesion of the trabucular bone & bone marrow of an acute inflammatory origin.
- ◆ **Causes:**
  - ◆ A- direct extension of an untreated P.A. abscess    B-trauma to the jaw bone (fracture)
  - ◆ C-radiation for the treatment of malignancy
- ◆ **Note:** the process of acute osteomyelitis rapid if the inv... virulent or the host resistance is reduced.
- ◆ **Clinically:**
  - ◆ 1-sever pain, specially during eating, & sometime
  - ◆ 2-swelling,redness,&fever, malaise
  - ◆ 3-parasthesia



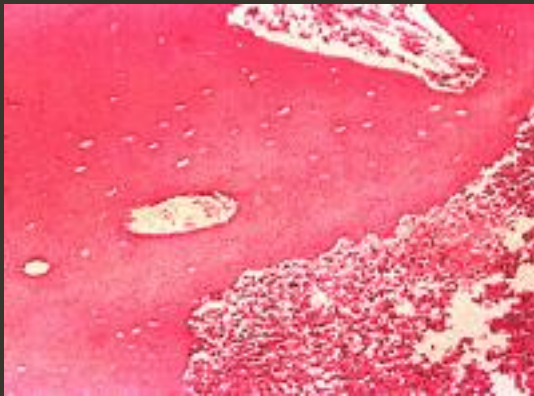
# Radiographically

- ◆ In early stage, no change can be seen, because the exudates firstly progress through the marrow
- ◆ Then the lesion appear as diffuse radiolucency with mottled & indistinct margins of the bone due to involvement of the trabeculae
- ◆ Radiopaque island may seen (sequestrum)



# Histopathology

- ◆ Show
- ◆ Inflammation. Exudates with granulation tissue with neutrophils, fibrin, & tissue debris in the marrow spaces
- ◆ Sequestrum appear as a dead bone with empty lacunae (no osteocyte) with eroded margin (scalloped) in the marrow spaces surrounded by inflammatory exudates
- ◆ Near the junction of the unaffected bone, the marrow consists of a loose, delicate connective tissue with lymphocytes & plasma cell infiltration.



## Treatment:

1-drainage of the lesion by surgical intervention

2-high doses of A.B. that are targeted to the M.O. involved, this determined by culture & sensitivity testing.

## ◆ Chronic osteomyelitis:

it's a chronic inflammatory process involving bone trabeculae & bone marrow, occurs in response to a low-grade process rather than a destructive & intense destructive inflammation caused by virulent bacteria.

## ◆ Clinically:

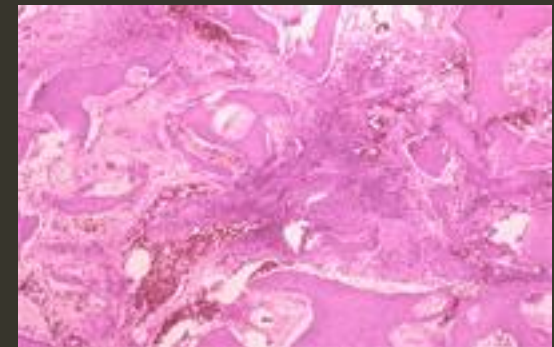
- ◆ 1-there is little or no pain
- ◆ 2-hard swelling because the irritant may be so mild result in dense trabeculae & even lay down additional bone

## ◆ Radiographically

- ◆ Appear mottled, & more radiopaque than normal (osteosclerosis)

## ◆ Histopathology:

- ◆ The marrow space appear
- ◆ Filled with granulation tissue
- ◆ With an attempt for a new bone
- ◆ Formation as an attempt of
- ◆ Resolution
- ◆ Osteosclerosis may be focal
- ◆ Or diffuse



# Garre's Osteomyelitis:

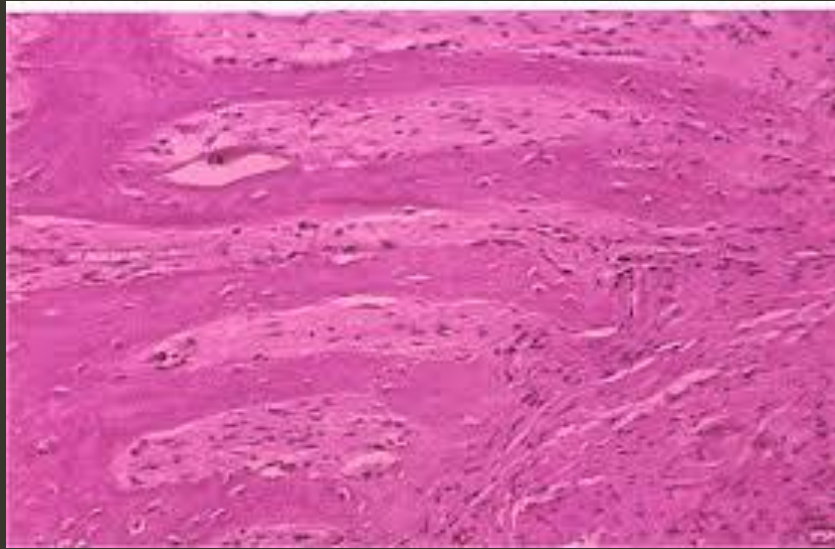
Is an unusual hyperplastic reaction of the periosteum to a chronic osteomyelitis of the posterior mandible that is unique to young patients.

## ◆ Clinically:

- ◆ 1- most frequently associated with advanced acute caries in young patients (mainly in the age group that occurs shortly before mixed dentition or immediately afterward.
- ◆ 2-slowly growing a diffuse or focal enlargement of an area of mand. Usually posteriorly
- ◆ 3-mostly associated with a molar that show partial impaction
- ◆ 4-on palpation the area appear hard as the normal bone & the patient not exhibit pain
- ◆ 5- the area is usually asymptomatic
- ◆ Radiograph:
  - ◆ Characterized by multiple thin layers of new bone, (onion skin) on occlusal film



Histopathology: the reactive bone is less dense than normal cortical bone & deposited in layered pattern, the trabecular spaces are wide & occupied with acellular C.T.



treatment:

1-removal the source of infection

2-extraction of affected tooth or surgical remodeling may be necessary



Pathogenesis: to develop, the inflammatory response must extend through the bone to the outer surface, stimulating the periosteum to thicken & lay down excess layers of new bone.

In other cases this condition occurs when a deep pocket, resulting in food impaction of the deepened gingival sulcus & a constant low-grade infection persists that stimulates the periosteum.