

- A sequestrum is a **segment of necrotic bone** that becomes separated or “sequestered” from the healthy intact bone
- involucrum is the **reactive bone** that forms around the necrotic sequestrum
- **cloaca** is the draining tract extending from the skin to the sequestrum

## Osteomyelitis

### Types of osteomyelitis:

- Post traumatic osteomyelitis (**adult**)
- Osteomyelitis due to vascular insufficiency (**DM**)
- Osteomyelitis due to hematogenous spread (**child**)
- Osteomyelitis post infection of prosthetic joints

### Acute Osteomyelitis (children)

- long bones of the legs and upper arms (**Metaphysis**)
- **Pyogenic osteomyelitis** PUS

### Chronic Osteomyelitis (Adult)

The hallmark of chronic osteomyelitis is

- **infected dead bone within a compromised soft-tissue envelope**
- surrounded by **sclerotic** (avascular bone)
- the sclerotic bone covered by a **thickened periosteum / scarred muscle / subcutaneous tissue**
- the sclerotic (avascular bone) leaves systemic antibiotics essentially **ineffective**.
- The peculiarity (**characteristic**) of an abscess in bone is that it has chance of **tissue expansion**
- The expansion **lifts the periosteum** off the surface of bone
- combination of pus in the medullary cavity and sub periosteal space causes **necrosis of cortical bone** (المسافة بين هطول البسبين يسير الها نكروسي)
- Brodie abscess: **Lucency** within the distal metaphysis **with reactive surrounding sclerosis**.

### Hematogenous osteomyelitis:

#### 1. Primary hematogenous osteomyelitis

- Most common in **infants** and **children**
- Site: long bone **metaphysis**

#### 2. Secondary hematogenous osteomyelitis

- when childhood infection is **reactivated**
- Occur in **Adults**.
- **Vertebrae (most common)** followed by **long bones, pelvis, clavicle**

Etiology associated with certain risk factors.

- Penetrating wound: **staphylococcus aureus**
- Prosthetic device: staphylococcus **epidermidis**
- Intravenous drug: **pseudomonas** infection
- Gastrointestinal (food poisoning): **Escherichia coli**
- Tooth, gingival, dental infection: streptococcus **viridans**
- Sickle cell disease: **salmonella** species and **staphylococcus**

Pyogenic osteomyelitis

- Days to months
- **Lumbar** spine

Skeletal tuberculosis (**Pott's disease**)

- Months to years
- Thoracic spine (**curved**)

Treatment of osteomyelitis

- Surgery to remove dead bone (sequestrum)
- Antibiotics: **Cloxacillin, Nafcillin, third generation cephalosporins**