

Bone Inflammation

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Chronic: Specific T.B.
Syphilis

Non Specific: Following Acute
Chronic from start
Brodie's Abscess

Acute Osteomyelitis

Commonly children Growth, rich blood supply

Commonly haematogenous (septic focus)

less commonly direct infection (open fractures)

Commonly Staph aureus

Less common hemolytic Strept/ G-ve

Acute Osteomyelitis

Pathogenesis: trauma->hematoma in metaphysis->infection from focus

Acute Osteomyelitis

Pathology: Pus spreads:

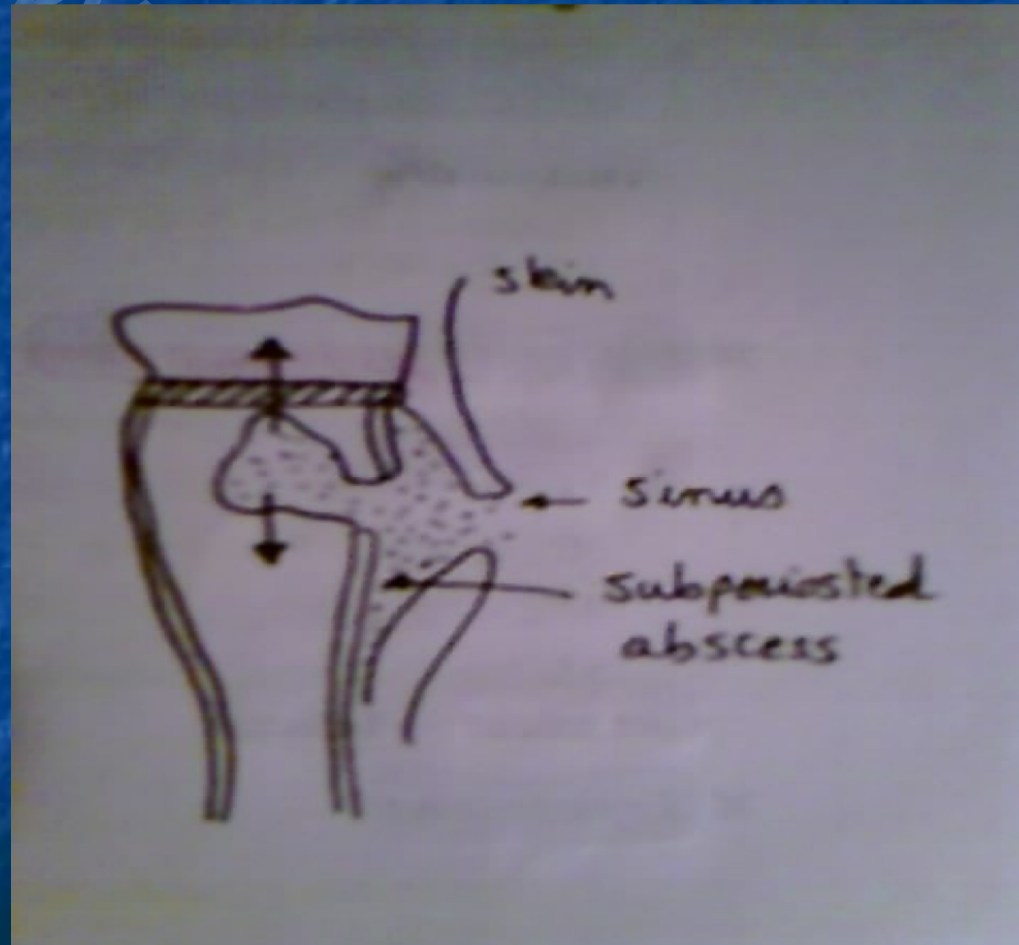
Transversely → raising periosteum, subperiosteal abscess → skin → sinus

Vertically: Medullary cavity → interrupt nutrient artery → bone necrosis → sequestrum

To Blood stream: Pyaemic abscesses

Acute Osteomyelitis

Spread



Acute Osteomyelitis

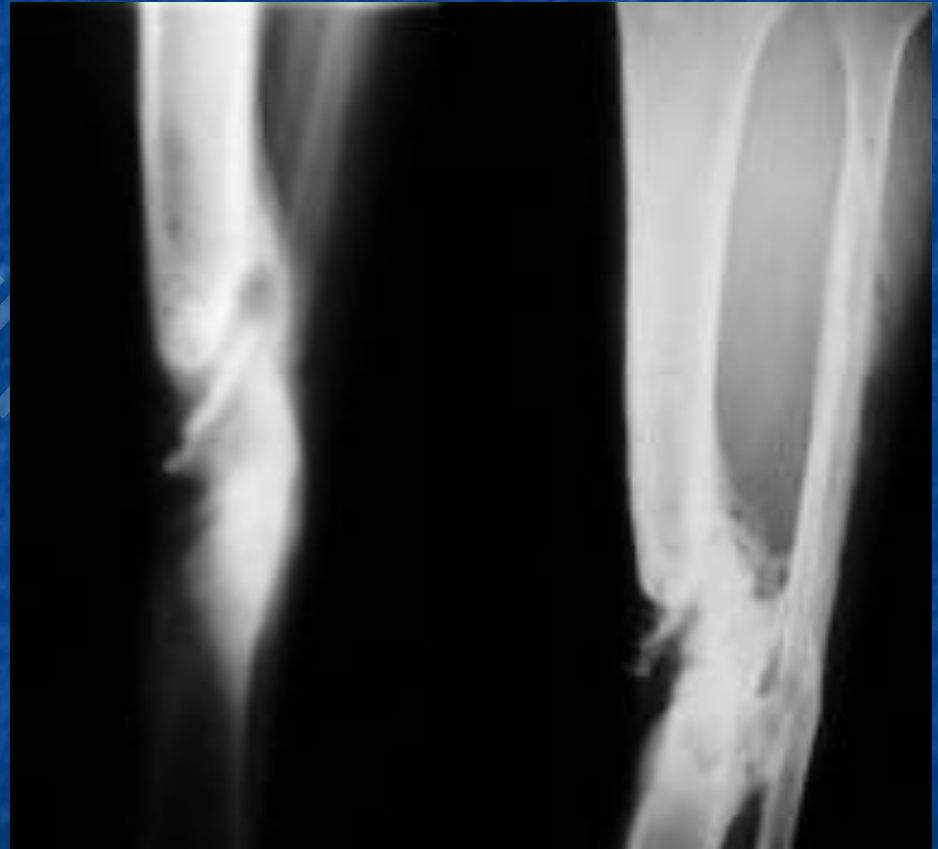
Periosteal stripping → New bone formation

Abscess cavity in bone with sequestrum

Resolution: Hyperemia → Osteoporotic bone → healing fibrosis, new bone → sclerosis → remodeling

Acute Osteomyelitis

Complications:
Chronicity
Septic Arthritis
Pathological Fracture



Acute Osteomyelitis

Clinical Picture:

General: fever, headache, malaise, rigors

Local: Pain, tenderness, hotness, swelling

Limitation of movement

Effusion nearby joint

Complications

Acute Osteomyelitis

Investigations:

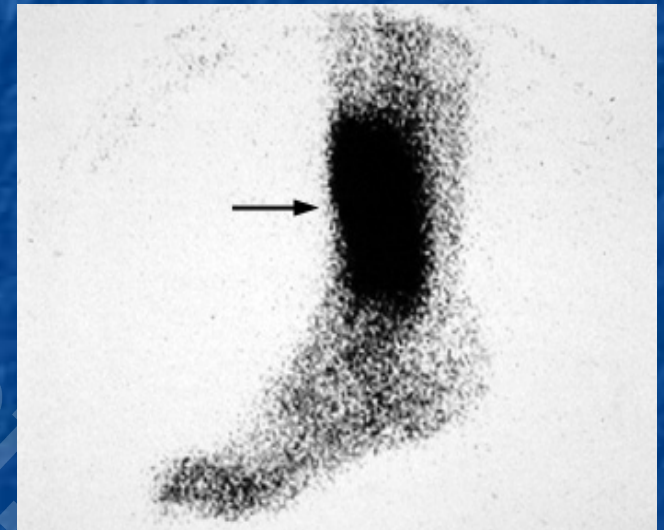
Leucocytosis

Blood Culture +ve

Bone scan: activity

Aspiration: ?+ve

X-ray: not before 3rd week



Acute Osteomyelitis

Differential Diagnosis:

Septic Arthritis: **ABSOLUTE** Limitation of movement

Cellulitis: Percussion

Acute Rheumatic Arthritis: fleeting +/- carditis

Ewing's Sarcoma: X-rays, Diaphyseal

Osteosarcoma: pulsating swelling

Acute Osteomyelitis

Treatment:

Rest, Antibiotics, Immobilization

24hrs no response → evacuate subperiosteal abscess, drilling of bone to relief pressure and to prevent sequestration

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Chronic Osteomyelitis

After acute... due to inadequate treatment..

Pathology:

Involucrum: new bone formation due to raised periosteum

Sequestra: separated dead piece of bone

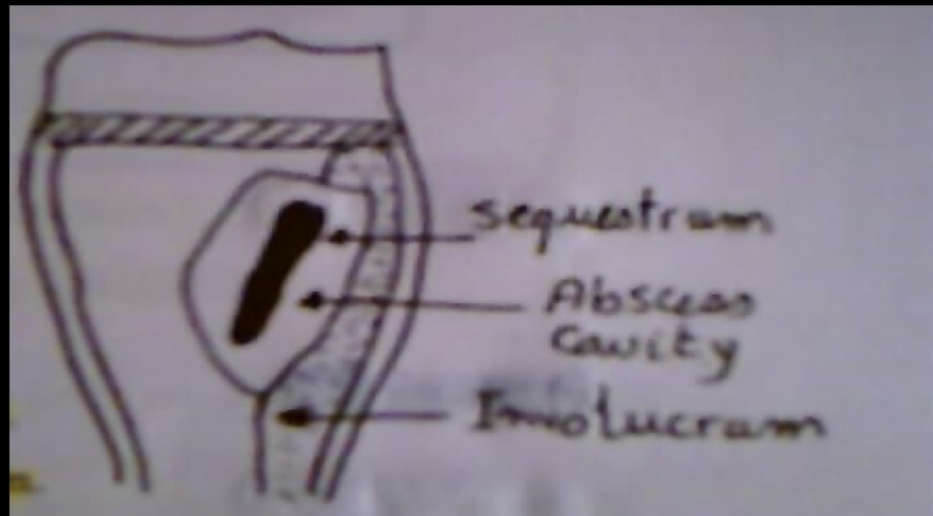
Abscess cavity: containing sequestra

Cloaca: openings evacuating pus through Involucrum

Sinus: discharging pus through skin

Chronic Osteomyelitis

Pathology



Chronic Osteomyelitis

Clinical Picture:

History of Acute Osteomyelitis

Pain Swelling Fever

Bone thickening, tenderness, multiple sinuses

X-ray: Bone sclerosis, sequestra in cavity
surrounded by involucrum

CT, MRI

Chronic Osteomyelitis

Complications:

Acute exacerbations

Pathological Fracture

Toxemia

Arrest of Growth

Chronic Osteomyelitis

Treatment:
Saucerization
Sequestrectomy



Winnet Orr Technique: Wound left open, antibiotic powder, covered with Vaseline gauze, Plaster cast applied, to be changed frequently

Advantages: Pain relief
Good Drainage
Avoids 2ry Aerobic Infection

However: Anaerobic Infection
Offensive smell

Chronic Osteomyelitis

Treatment



Chronic Osteomyelitis

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Chronic Osteomyelitis

Brodie's Abscess

Localized Chronic Osteomyelitis in Children
and Adults, with good resistance

Due to Low Virulence Staph albus

Pathology: STERILE pus in cavity
surrounded by SCLEROSSED Dense bone

Brodie's Abscess

Clinical Picture:

Intermittent Night pain

Mild or Absent General Manifestations

X-ray: Metaphyseal cavity surrounded by sclerosis, no sequestra

CT, MRI

Brodie's Abscess

Treatment:

Saucerization

Curettage

Winnet Orr Technique

Chronic Osteomyelitis

Chronic Sclerosing Osteoperiostitis of Garre'

Non specific inflammation of SHAFT of
Bones

Excessive bone formation obliterating
the medullary canal



Thank You