

Case 12



An 11-year-old girl presented with pain in the right knee. Knee radiographs were unremarkable.

Your Diagnosis?

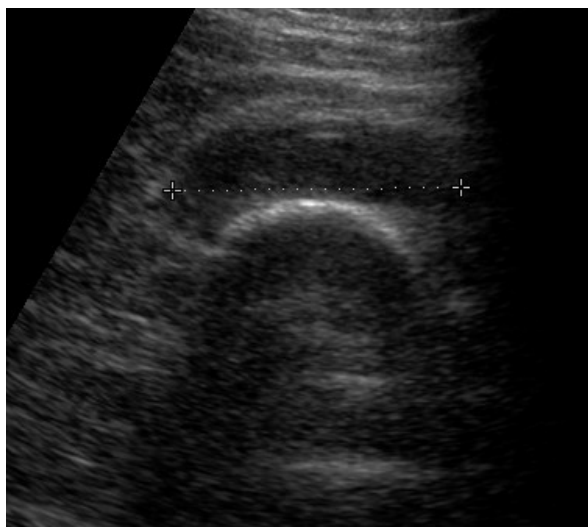
Diagnosis: Subacute osteomyelitis

X ray: Metaphyseal cystic lesion lateral aspect of the distal femur with sclerosis. There evidence of soft tissue swelling.

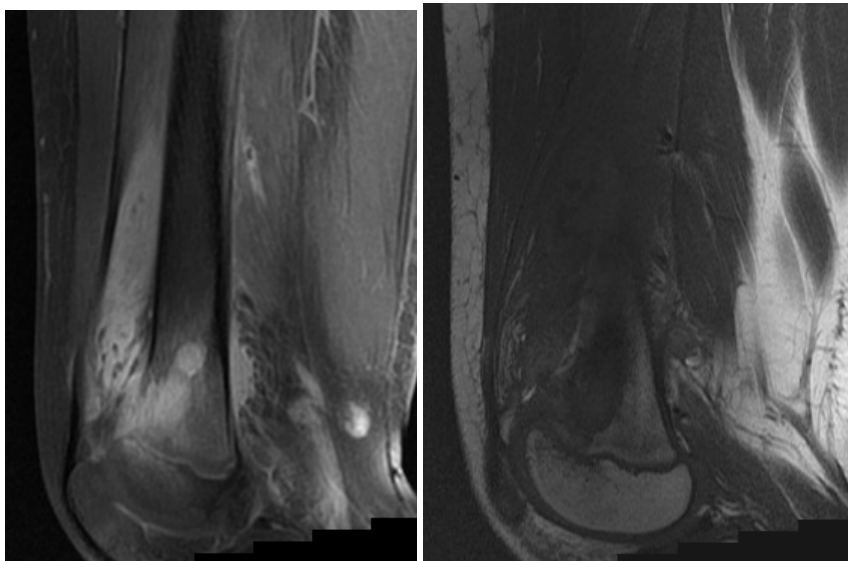
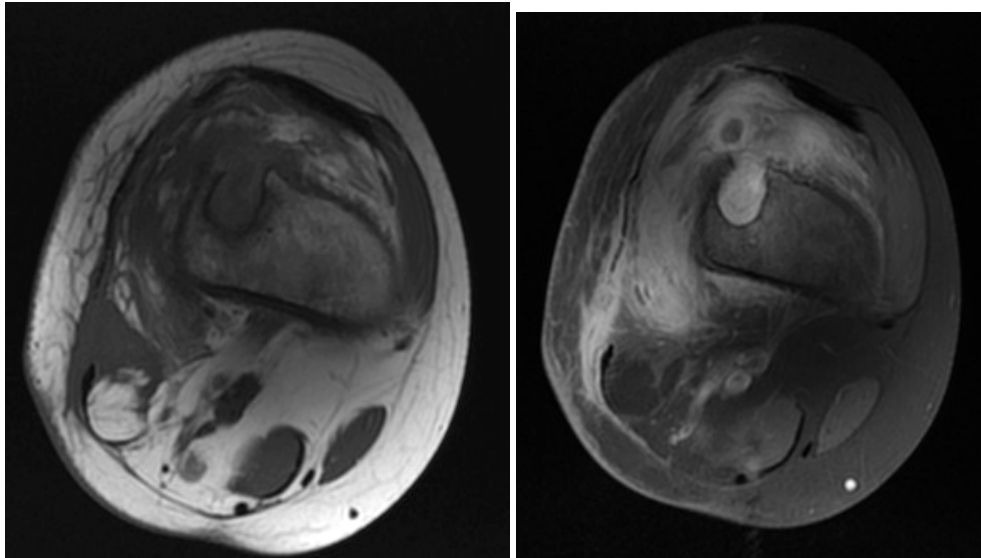
Sequential changes seen following acute osteomyelitis:

First 10 days	soft tissue shadow Osteoporosis (30% of bone loss);
After 10 days	Faint periosteal reaction
>2 wks	Destructive lesions,
>3 wks	Sequestrum, Involucrum Or Sclerotic cyst depending on virulence of organism

Ultrasound: Soft tissue swelling in front of the femur consistent with abscess.



MRI: Infected distal femur with pus outside the femur.



More sensitive: MRI commonly used.

- T1 low signal
- T2 high signal with gad enhancement
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Bone Scan: . Bone scan: Tc 99m

I phase Flow phase 5 sec

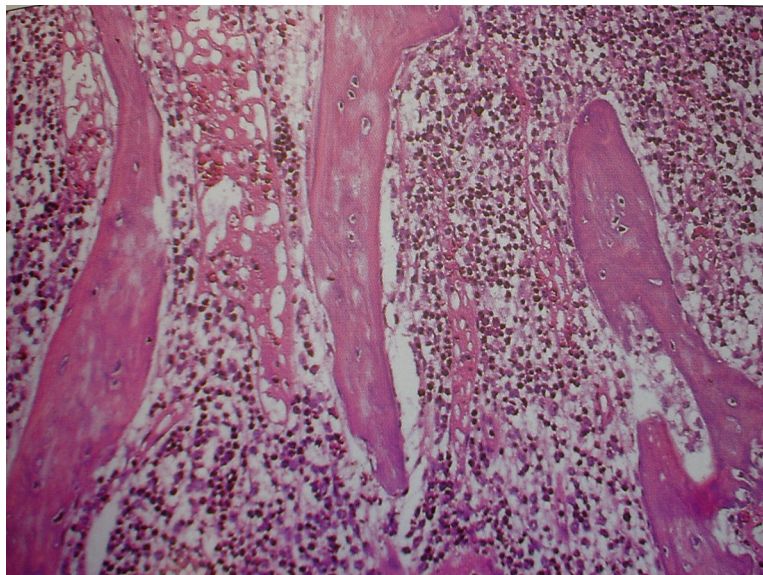
II Pool phase 5 mnts

- III Bone image 3 hrs
- IV Delayed phase 24 hrs

In case of infection, there is increased uptake in all 4 phases.

Histopathology

Acute: Acute inflammatory cells (PMNC) and fibrin
Bone destruction is evident
Osteocytic death



Age and Osteomyelitis

Age	Incidence per 100000
0-4	23
5-9	26
10-14	30
15-19	12

Why Metaphyseal region?

1. Metaphyseal region: very vascular
2. Hair pin bend of the capillaries causing sluggish flow

indicated which accurately depicts the amount of destruction, site of abscess, relation to the growth plate and helps in planning surgical approach.

Drug of choice IV Flucloxacillin 2 g qid [50 mg/kg wt] x 1 week. Mild allergy to penicillin: Cephazole

Severe allergy to penicillin: Vancomycin or clindamycin

Surgery if no clinical response by 24-hours surgery is indicated.

Tourniquet can be used but no exsanguinations. Exposure periosteum at site of maximal tenderness.

Longitudinal periosteal incision. Pus drained and a through wash out is given. Removed any devitalised tissue.