

Ortho Path IDM

TOPIC - Xanthogranulomatous osteomyelitis

PRESENTER - Dr. Divya

1. Case Summary:

- Patient with left knee pain for 1 year.
- Diagnosis: Enchondroma, lateral condyle of left knee.
- Procedure: Curettage and bone cementing.

2. Gross Pathology:

- Multiple grey-brown soft tissue and bony fragments from distal femur received.

3. Microscopy Findings:

- Viable, necrotic, and reactive bone fragments.
- Large areas of xanthogranulomatous inflammation with lymphocytes, plasma cells, fibrosis, and calcification.

4. Addendum and IHC:

- PAS stain negative for suspected xanthogranulomatous inflammation.
- IHC positive for CD68 indicating histiocytic origin.

5. Final Impression:

- Suggestive of Xanthogranulomatous Osteomyelitis, a rare chronic inflammatory condition.

6. Xanthogranulomatous Osteomyelitis Highlights:

- Chronic osteomyelitis with foamy macrophages and xanthogranulomatous inflammation.

- Grossly mimics a tumor with yellow-white nodular lesions.

7. Chronic Osteomyelitis Features:

- Persistent bone infection >6 weeks.
- Thickened sclerotic bone, necrotic fragments (sequestrum), and new bone formation (involucrum).
- Microscopy shows necrosis, lymphoplasmacytic infiltrate, fibrosis, sinus tracts.

8. Xanthoma of Bone:

- Rare benign lesion with lipid-laden macrophages.
- Occurs in long, flat bones or vertebrae.
- Radiologically seen as well-defined lytic lesion.
- IHC: CD68 positive, Langerhans markers negative.

9. Differential Diagnosis for Xanthogranulomatous Osteomyelitis:

- Chronic osteomyelitis, Langerhans cell histiocytosis, Erdheim-Chester disease, bone tumors, xanthoma.

10. Importance of IHC:

- Essential for confirming histiocytic origin (CD68 positivity).
- Helps differentiate from Langerhans cell histiocytosis and malignancies.

