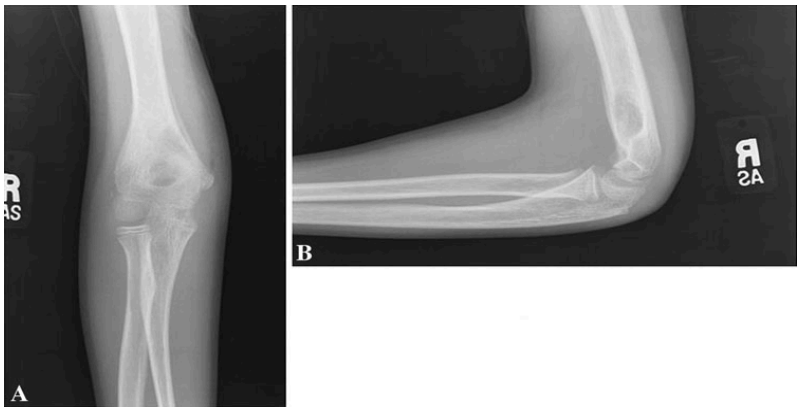
Case 3 Right arm Pain

- A 9-year-old right-hand–dominant boy. 1-week history of right elbow pain. He was afebrile. There was swelling in the region of distal humerus, which was tender. It was warm but without erythema or induration. His elbow ROM was limited by approximately 15" in terminal flexion and extension.



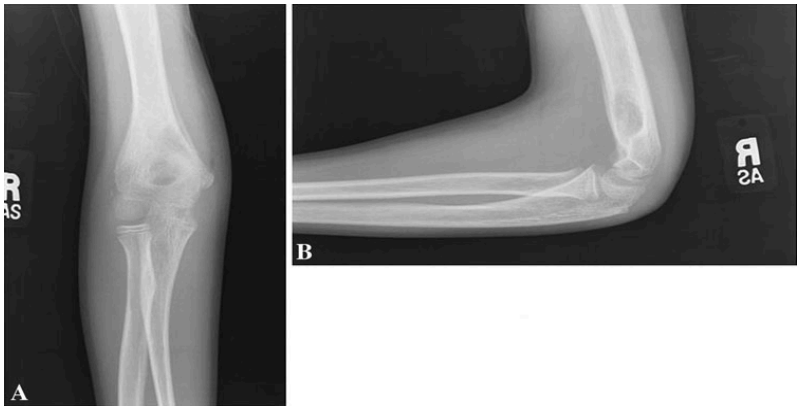
Your Diagnosis

Diagnosis Eosinophilic Granuloma

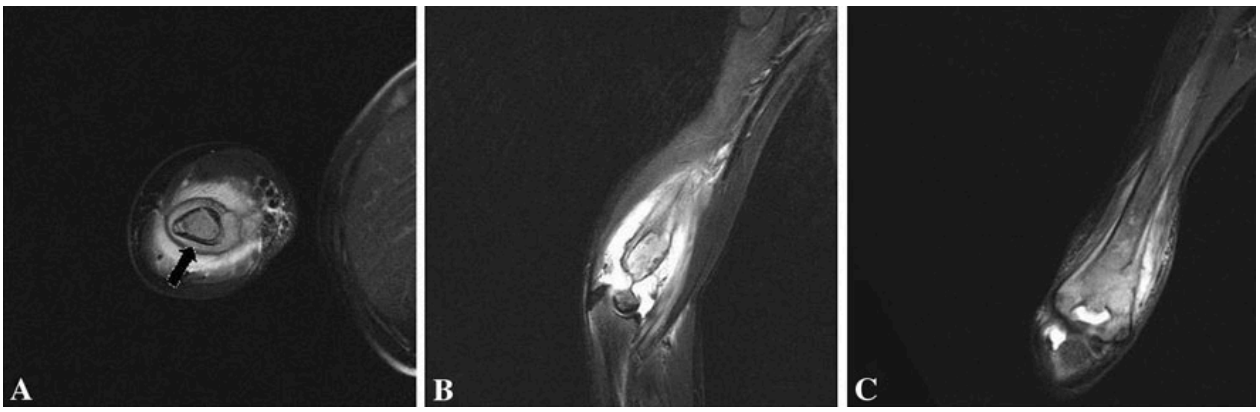
Differential Diagnosis
Infection
Eosinophilic granuloma
Lymphoma
Ewings Sarcoma
Osteosarcoma

1.Septic Screen: WBC, CRP and ESR were normal

2. X ray:
Metaphyseal lesion
Eccentric
Lytic
Has transitional zone with marginal sclerosis
Periosteal reaction present
No soft tissue calcification



3.MRI

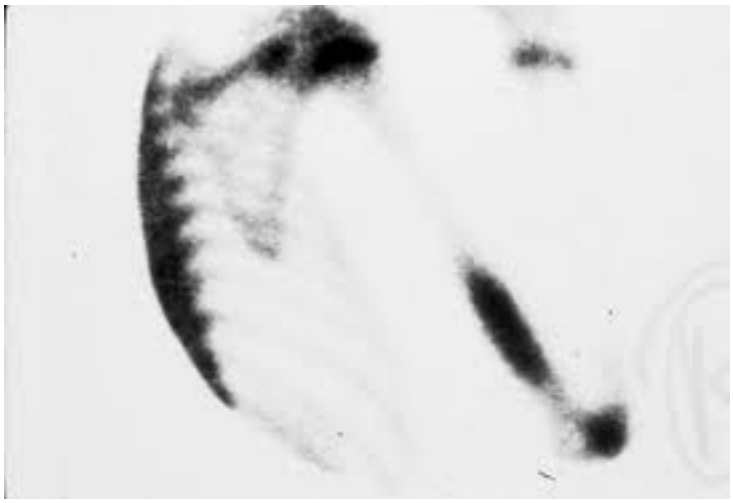


An axial T2-weighted MR image shows the high signal of the lesion around the humerus.

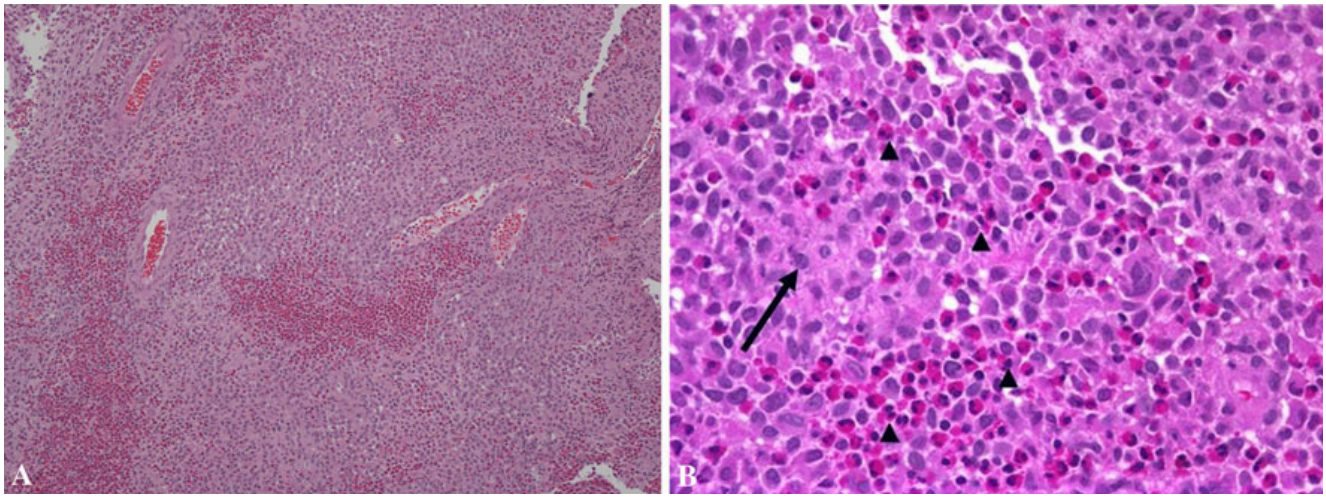
A coronal T2-weighted fat-saturated MR image shows the hyperintense signal of the lesion with extra-osseous edema

A coronal, contrast-enhanced, fat-saturated, T1-weighted MR image shows the peripheral enhancement of the lesion

4. Bone scan: Increased upatake



5. Biopsy



Open biopsy of the distal humerus revealed a sheet-like

- Diffuse proliferation of loosely cohesive, intermediate to large polygonal mononuclear cells with abundant eosinophilic cytoplasm.
-
- Their nuclei often have irregular contours, with frequent clefts and coffee bean-like longitudinal grooves. These cells stained positive for CD1a and S100.

-
- The inflammatory background is comprised predominantly of eosinophils, with scattered lymphocytes and rare plasma cells.
-
- Multinucleated giant cells also are seen.

Langerhans Hystiocytosis: Eosinophilic granuloma is one manifestation of a spectrum of diseases known as Langerhans cell histiocytosis (LCH). It formerly was known as histiocytosis X and is a rare disorder characterized by clonal proliferation of mononuclear cells of dendritic origin known as Langerhans cells.

- 5 to 10 years of age
- Eosinophilic granuloma: involve the skull, spine, pelvis, ribs, mandible.
-
- When it does localize to long bones, it most commonly is found in the diaphyses
-
- MRI is also useful, as it can determine whether there is any soft tissue involvement,
- :
- Always consider osteosarcoma or Ewing's sarcoma in this age group.
-
- Primary musculoskeletal LCH often resolves spontaneously. Lesions typically begin to regress after 3 months but can take as long as 2 years to resolve completely .
-
- In some: In these instances, curettage with or without a bone graft can be performed and often is curative.
-
- Indications for curettage include risk of deformity or pathologic fracture from the lesion.
-
- Local injection of corticosteroids such as methylprednisolone at the site of the bone lesion reportedly relieves pain
-

  Radiation therapy at doses of 150 cGy/day for 4 days has been used as a last-line defense once corticosteroid injection and curettage have failed