Langerhans Cell Histiocytosis Mimicking Osteomyelitis Of Tibia: A Case Report

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INTRODUCTION:

Langerhans cell histiocytosis (LCH) is spectrum of rare disorders predominantly affecting the paediatric age group (1). Presentation varies from solitary bone lesion to multisystem involvement. This is a case of unifocal LCH with solitary bone lesion, also known as eosinophilic granuloma (2).

CASE REPORT:

A 4 years old girl was presented with history of left shin swelling for one month and limping gait for two weeks. There was no constitutional symptoms and no history of trauma. Clinically, there was a firm, warm swelling over the left proximal shin sized 4x4cm. The overlying skin was normal. Plain radiographs showed lytic area at the upper third of tibia with periosteal reaction (Figure 1). Total white cell count, ESR and CRP was elevated (18.52, 86 and 16.35 respectively). She was treated as osteomyelitis and started on IV Cloxacillin 50mg/kg qid. After two weeks, repeated blood parameters and xrays was not improving and the swelling had became fluctuant. An ultrasound was done showing subperiosteal collection. Debridement and bone curettage was done and there was a cortical opening of 2x1 cm with yellowish soft sloughy material in the medullary cavity. Cloxacillin was given for 4 weeks followed by Ampicillin for 8 weeks. Intraoperative tissue culture and sensitivity was negative. The white cell count and ESR was persistently high unlike CRP with reducing trend. Later xrays showed that the lesion became more extensive with clearly defined margin (Figure 2). There was no recurrence of swelling. Finally, histopathological study came back showing singly distributed and clusters of monocytes with numerous eosinophils and positive immunohistochemical with S100 and CD1a, consistent with LCH. She was referred to oncology team for further management.

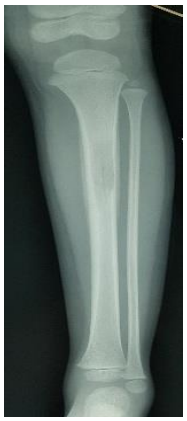

Figure 1

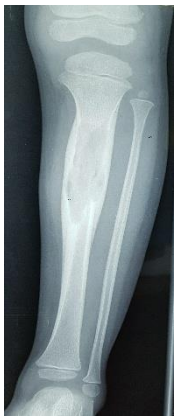

Figure 2

DISCUSSIONS:

Clinical presentation and imaging findings of LCH and osteomyelitis can mimic each other (3). The diagnosis of LCH requires histologic/immunohistochemistry study which usually only obtained much later (4). This causes delay in the actual management and in our case, patient was subjected to long hospital stay and long term antibiotic treatment.

CONCLUSION:

LCH need to be consider as a differential diagnosis when treating osteomyelitis unresponsive to treatment.

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