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Case Study

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GIANT CELL TUMOUR OF APOPHYSIS OF FEMUR: A COMMON TUMOUR AT UNCOMMON LOCATION

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ABSTRACT

Giant cell tumours of bone are quasi-malignant tumours and occur in the metaphysis of the long bone in the third decade of life. This case report describes occurrence of a giant cell tumour of bone in the greater trochanter apophysis in a 50 years old female which is an uncommon location with few cases having been reported in literature.

KEYWORDS: Giant cell tumour of bone, Greater trochanter apophysis.

INTRODUCTION

The Giant Cell tumor of bone is generally benign and characterized histologically by presence of multinucleated giant cells. The giant cell tumor is also known as osteoclastoma because the multinucleated giant cells appear similar to osteoclasts. Radiologically, GCT usually is expansile lytic lesion with well-defined but non-sclerotic margin, is eccentric in location, arises from the metaphysis of the long bones and extends into the epiphysis with sub-articular extension. They have a narrow zone of transition and occurs in patients with closed physes. GCT represents 20% of all primary bone tumors and shows a female predominance.

CASE REPORT

50 years old female presented with complaints of pain left hip for the last 6 months which gradually increased in intensity for the last 1 month. There was difficulty in walking. There was no history of any previous trauma or any constitutional symptoms.

Imaging findings

X-RAY findings: Eccentric, expansile, predominantly lytic lesion involving the apophysis (greater trochanter) of left femur with multiple internal septations giving soap bubble appearance with non-sclerotic margins, with narrow zone of transition, no cortical break seen, no periosteal reaction seen, no soft tissue swelling seen (Figure 1). Left hip joint is normal. Possibility of a benign tumor was kept:- 1.Giant cell tumor 2.Aneurysmal bone tumor.

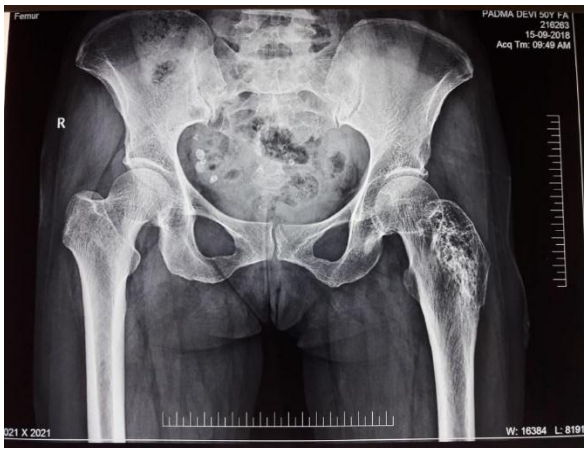

Figure 1: An eccentric, expansile, predominantly lytic lesion is seen involving the apophysis (greater trochanter) of left femur with multiple internal septations giving soap bubble appearance having a non-sclerotic margins and narrow zone of transition.

CT finding: Mixed sclerotic lytic lesions involving apophysis (greater trochanter) of left femur and adjacent region causing mild expansion with thinning/scalloping of cortex (Figure 2). Bilateral hip joints show normal articular surface and joint space. Possibility of GCT was given and histopathological correlation was advice.

Figure 2: Mixed sclerotic lytic lesions is seen involving the apophysis (greater trochanter) of left femur and adjacent region causing mild expansion with thinning/scalloping of cortex.

Histopathological findings: Biopsy of the lesion was done. There was presence of diffuse osteoclastic giant cells in a back ground of mononuclear cells with vascular stroma containing numerous thin-walled capillaries – features suggestive of giant cell tumor.

DISCUSSION

The majority of these lesions (60%) occur in long bones, and mostly all are localized to the articular end of the bone. The most common sites include the proximal tibia, distal femur, distal radius, and proximal humerus. GCT may also occur in apophysis of the long bones which is equivalent to the epiphysis. One such location is greater trochanter of femur. However, when this occurs the lesion is less likely to demonstrate the classic appearance of a lytic lesion with a well-defined, nonsclerotic margin. GCT at this location has only rarely been reported.[2] Trochanteric location has been found as reported by Lichtinger and Gebhardt and also by Kinyanjui JW.[1,3,4] Other uncommon location of GCTs are innominate bones and bones of hand and feet. CT scan is the investigation of choice to see the expansile nature whereas magnetic resonance imaging scan shows soft tissue extension. Rarely, GCT may undergo malignant transformation. This may occur as a result of differentiation of the primary tumor or secondary to prior radiation therapy.

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