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Giant cell tumour of clavicle: Occurrence of a common tumour in a rare location☆

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ABSTRACT

INTRODUCTION: The clavicle is rare site of bone tumours. Majority of the tumours of clavicle are malignant and are often misdiagnosed due to low index of suspicion. The oncological patterns of clavicle resemble that of flat bones.
CASE PRESENTATION: A 60 year old man presented to our centre with pain and swelling over lateral end of left clavicle. After thorough investigation a provisional diagnosis of giant cell tumor was made which was treated with partial claviculectomy. At one year follow up, there was no shoulder disability or any incidence of recurrence.
CONCLUSION: Since majority of clavicular tumors are malignant so any selling occurring in this area should be seen with high index of suspicion and should be investigated thoroughly.

1. Introduction

The clavicle is a rare site for bone tumours [1]. According to the World Health Organisation, the giant cell tumor is an aggressive potentially malignant lesion which means that its evolution based on histological features is unpredictable [2]. Sites commonly affected by giant cell tumour are proximal tibia, distal femur and distal radius [3]. The oncologic patterns of clavicle resemble that of flat bones [4] and not other long bones. Among tumors of clavicle, malignant are more common than benign [5]. Giant cell tumors have been rarely reported in clavicle [3].

2. Case report

A 60 year old man presented to our department with pain and swelling over lateral end of left clavicle (Figs. 1 and 2). The selling was gradually increasing in size since past 4 months. On palpation the swelling was tender, lobulated and hard in consistency. The overlying skin was non adherent and freely mobile. The pain was insidious in onset, non radiating and had no diurnal variations and was aggravated on shoulder movements and relieved on taking medications. The local temperature was elevated and superficial veins were engorged. There was no regional lymphadenopathy and no neurovascular deficit in left upper limb. We got a plain radiograph which revealed which an expansile radiolucent lesion arising from lateral end of left clavicle (Fig. 3). The swelling demonstrated geographic type destruction without any soft tissue component or periosteal reaction. MRI was obtained which also suggested giant cell tumour (Fig. 4). To aid in the diagnosis fine needle aspiration cytology was done which revealed a predominantly cellular lesion having sheets of plump, oval mononuclear cells with mild pleomorphism. The cells had moderate cytoplasm, oval to elongated nucleus with moderate anisokaryocytosis with irregular nuclear membrane. Amongst these cells, many multinucleated giant cells were also which were distributed evenly. Storiform pattern was not seen. FNAC also diagnosed it as a giant cell tumour. The differential diagnosis which were kept in mind are aneurysmal bone cyst, non ossifying fibroma, eosinophilic granuloma and tuberculous osteomyelitis.

Since the clavicle does not necessary require reconstruction and the patient was a retired school teacher, not engaged in any physical work so surgical resection of the tumor was planned. After proper investigations and pre anaesthetic clearance, a wide excision of the mass along with 3 cm of the healthy tissue was done (Figs. 5 and 6). The excised mass was sent for histopathological examination which also confirmed it to be a giant cell tumor. No radiotherapy or chemotherapy was given post operatively. Wound healing was uneventful. A post operative x-ray was obtained (Fig. 7). The range of motion of the left shoulder was normal and post operatively there was no neurovascular deficict. The patient was happy with the surgical outcome and at 1 year follow up there was no evidence of recurrence or metastasis.

☆ Our case report is in consensus with scare criteria as mentioned in the following paper. Agha RA, Fowler AJ, Saetta A, Barai I, Rajmohan S, Orgill DP, for the SCARE Group. The SCARE Statement: Consensus-based surgical case report guidelines. International Journal of Surgery 2016.

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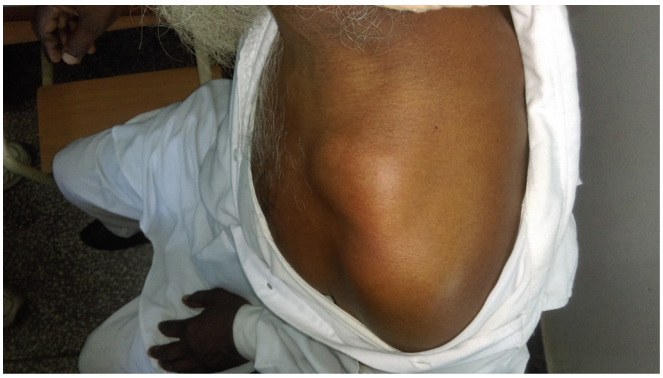

Fig. 1. Swelling over lateral end of left clavicle.

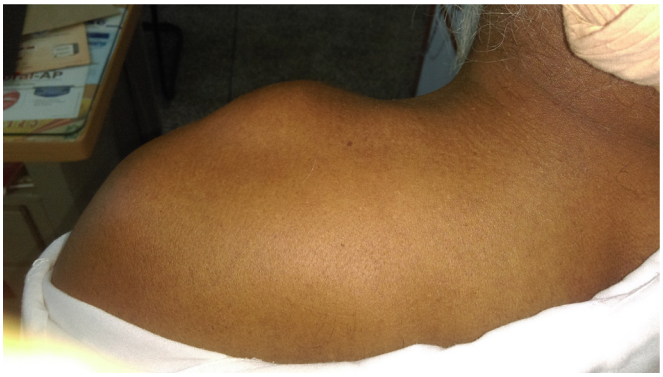

Fig. 2. Swelling over lateral end of left clavicle.

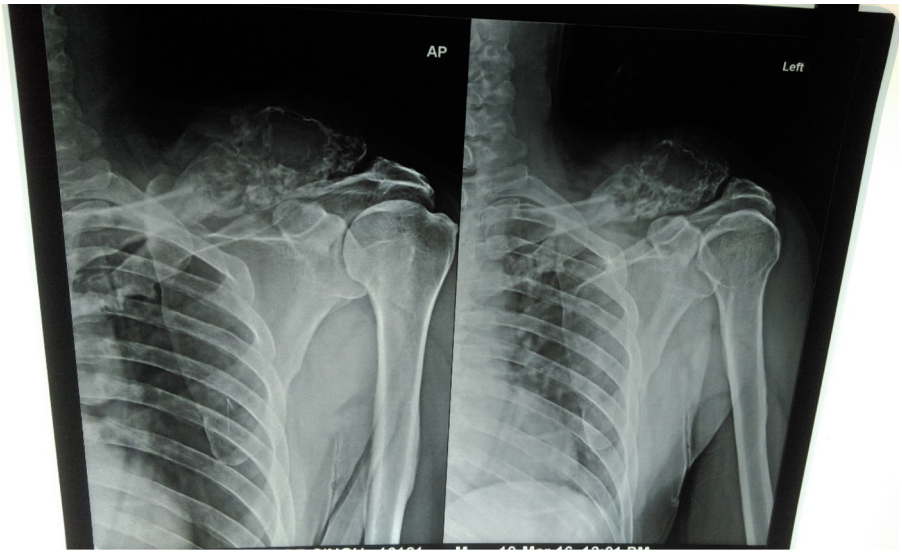

Fig. 3. X-ray showing expansile radiolucent lesion arising from lateral end of left clavicle.

3. Discussion

The clavicle is a rare site for bone tumors. Primary bone tumors of the clavicle are more likely to be malignant than benign [6,7] and amongst these tumors which occur in clavicle, giant cell tumor is a rare entity [7]. The differential diagnosis of giant cell tumor of clavicle which pose a diagnostic challenge both for the surgeon and the histopathologist are primary aneurysmal bone cyst, non ossifying fibroma.eosiniphilic granuloma and tuberculous osteomyelitis. These lesions can be distuingished from each other based on their histological characteristics.

Giant cell tumor is basically a cellular lesion made up of sheets of plump mononuclear cells with mild pleomorphism. The cells have moderate amount of cytoplasm,oval to elongated nuceuswith moderate anisokaryosis with irregular nuclear membrane and 0–1 nucleolus. Amongst these cells are multinucleated giant cells distributed in a regular fashion.no collagen formation, no new bone formation or no necrosis is usually seen.