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Case Report

An Aggressive Giant Cell Tumour of Phalynx: A Case Report

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ABSTRACT

A Giant cell tumor (GCT) of bone arising from a phalanx is extremely rare. We hereby report a case of GCT arising from a phalanx of left ring finger. She initially had presented with swelling over the proximal phalanx of ring finger. She was diagnosed as GCT and was managed primarily by curettage and bone graft. After 6 weeks the patient presented with aggressive recurrence for which ray excision was done. Giant cell Tumour of phalanx is aggressive and highly recurrent tumor so primary aim of treatment should been ray excision to prevent recurrence.

Keywords: Giant cell tumor, Curettage, Bone Graft, Ray excision

INTRODUCTION

Giant cell tumor (GCT) is a rare benign osseous tumor usually seen at the end of a long bone after skeletal maturity. [(1)] A finger phalanx is extremely uncommon site for GCT. [(2)] According to literature, only 2% of GCTs are found in hand. [(2)] The metaphyseal region of the metacarpals and phalanges has been found to be the common site of GCTs in most of the reported cases [(3,4)] Though GCT is not a sarcoma, it has relatively a high recurrence rate. [(5)] Multiple procedures like excision (local or wide), ray amputation, and amputation are used to eradicate the disease completely. Even with single- or double-ray resection for primary or recurrent tumors, local tumor control may not be absolute.

Here, we report a case of GCT proximal phalanx of ring finger, noting the rarity of a lesion at this site, its high chances of recurrence and need for multiple procedures.

CASE REPORT

A 24-year-old female presented with a complain of painless swelling in the left ring finger. She gives a past history of similar complains for which she was operated 6 weeks back. Current Examination revealed a fusiform swelling, hard in consistency, in the proximal phalanx of ring finger. The overlying skin was not adhered

to the underlying mass. The adjacent joints had normal ranges of movement. Regional lymph nodes were not palpable. Haematological and biochemistry investigations were within normal limits. Radiographs demonstrated a lytic expansile lesion with narrow zone of transition involving the base, proximal shaft of ring finger. The lesion involved the articular surface and showed erosion and destruction of the overlying cortex (Figure I).

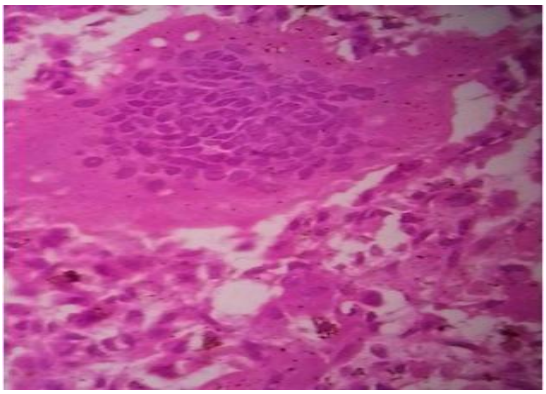

Figure I – Cytology – Multinucleated Giant Cell

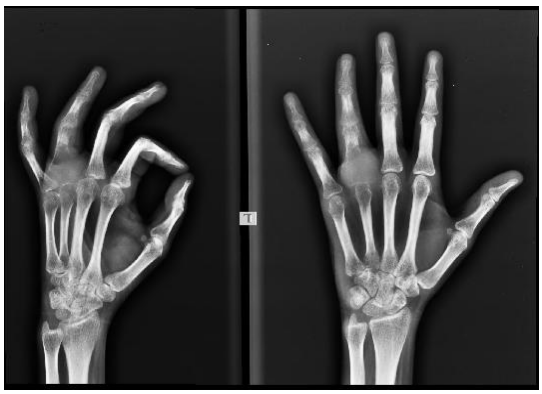

Figure II- Xray AP and Lateral view of hand showing lytic expansile lesion in proximal shaft of ring finger with erosion and destruction of the overlying cortex

Radiograph of chest was normal. Fine needle aspiration cytology was suggestive of multinucleated giant cells with stromal cells in the background (Figure II). As the patient was earlier managed with excision and bone grafting for the same still there was recurrence so we opted for ray resection of the ring finger. Resected tumor tissue was found to involve the entire proximal phalanx, including the articular cartilage. The patient had an uneventful recovery. At her most recent follow-up, there was no evidence of local recurrence.

DISCUSSION

GCT of the hand is rare and is different from the usual GCT, which occurs mainly at long bones in the skeleton. GCTs recur more rapidly in the hand than they do in other locations. GCT from phalynx is even more rare. Around 2,400 skeletal GCTs are reported in the literature, in which less than 50 have involved the phalynx of the hand. [6,7] Reported recurrence rate is 6.2%, even if less frequent metastasis to the lungs and parotid glands have been described. [8,9] Therefore the need to ensure a tumour free margin post excision with frequent follow up of patients, as the tumour characteristics of this lesion is not completely known. It affects mainly adults of both sexes, [10] in keeping with our female patient aged 24 years. Oliveria et al. reported an age range of 5-80 years (median 43 years), [9] while Tagera-Vaquerizo et al. reported an age range of 5-84 years, [11] both with no predilection for sex.

Choice of treatment depends on the aggressiveness of tumour, site and patient characteristics.GCTs of the hand have been treated with curettage and cancellous bone grafting, wide resection. [4,6,12] High local recurrence rates have been reported with these treatment modalities. [4,6,12] Cryosurgery and radiotherapy have also been used as treatment modalities. Most of the GCT cases with recurrent tumors require ray amputation to prevent recurrence. There are studies that suggest, in order to prevent recurrence, success with ray amputation is higher even if it requires loss of finger. [6, 13] Our patient presented with local recurrence within 6 weeks after primary excision with bone grafting, but there has been no

recurrence of GCT for more than a year following ray amputation.

Patel *et al* [6] treated three cases of GCT of the hand with curettage and bone grafting, two of which had local recurrence and required ray resection. Following ray resection of the ring finger, there was no functional loss of the hand in our patient. The patient was satisfied with the results. In view of the rarity of a aggressive tumor arising from the phalanges of the finger with an early recurrence, the present case was considered worth reporting.

CONCLUSION

GCT of phalanx is locally aggressive and highly recurrent tumor so the primary aim of the treatment should be removal of the mass with minimal risk of recurrence. Incomplete curettage and resection of tumour may lead to exponential growth of tumour. Here we have treated a case of GCT phalanx, which recurred, with primary treatment of excision; recurrence was detected early and treated appropriately with ray excision.

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