



GIANT CELL TUMOUR OF MIDDLE PHALANX OF RING FINGER AND ITS RECURRENCE

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ABSTRACT Recurrence of giant cell tumor (GCT) of hand is a common occurrence in this otherwise rare condition. We are reporting a case of GCT arising from the middle phalanx of ring finger, which was treated with treated with amputation of ring finger from PIP joint, but shows early recurrence. Followed by second surgery in which ray amputation of 4th metacarpal with excision of flexor tendons and extensor tendon is done and patient is treated successfully.

KEYWORDS : Giant cell tumor of the middle phalanx, recurrence of GCT.

INTRODUCTION

Giant cell tumour (GCT) in bone is usually located in the ends of the long bone, accounting for approximately for 5% of primary bone tumour. Only 2–5% of GCTs are located in the hand^{1,2}. The hand is one of the rarest sites for bone GCT, but it has a high recurrence rate and can easily be misdiagnosed.^{3,4} In the hand region, GCTs are primarily located in the metacarpal bones; second, they are located in the phalanges. The affection of the hand is associated with a young age that typically ranges from 20 to 30 years. Local recurrence following curettage and bone grafting has been reported to be as high as 90%^{1,3,5,6}. Wide resection and reconstruction with structural bone grafting is also reported to have a high local recurrence rate⁵. Multiple procedures such as excision (local or wide), excision with reconstruction, ray amputation, and amputation have been used to eradicate the disease completely.

CASE STUDY

A 30 yr lady reported with swelling of her left ring finger. On history she was operated 5 month back, and amputation of ring finger was done from PIP joint. Her biopsy report confirmed GCT of the excised finger. She got gradual pain and swelling at amputee stump and reported to the clinic after 5 months of the operation. Her chest CT scan reports doesn't show metastasis. we did Ray amputation of the finger with excision of flexor tendons (FDS and FDP) along with extensor tendon. At 1 month of follow up cosmetically she is happy with appearance of the hand. Gripping power of the hand and writing on paper is satisfactory.

DISCUSSION:

GCT of the hand is rare and is different from conventional GCT as recurrence is more common in the hand⁷. It is even rarer to encounter a GCT arising from the phalanges.

GCTs of the hand have been treated with curettage and cancellous bone grafting, wide resection, and structural bone grafting or ray amputation^{1,5,6,8,9}. High local recurrence rates have been reported with these treatment modalities^{1,5,6,8}. Daniel *et al.*¹⁰ reported a GCT of the middle phalanx treated with curettage and bone grafting, which recurred at 9 months and was successfully treated by excision and allograft replacement. Wittig *et al.*¹¹ reported three cases of phalangeal GCT treated with curettage, cryosurgery, and cementation. Resection-iliac graft and double arthrodesis for GCT of the proximal phalanx of the thumb have also been reported.¹²

Most local recurrences of GCT cases of the hand are reported to occur within 1 year of primary surgery.^{1,6} Patel *et al.*⁸ treated three cases of GCT of the hand with curettage and bone grafting, two of which had a local recurrence and required ray resection. We have treated a recurrence of middle phalanx of little finger in an otherwise nonoperable massive recurrence by excision and double fusion of iliac crest graft and are reporting the case for its rarity as well as rare modality of treatment in this case.

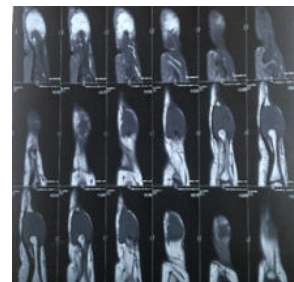


Fig 1 MRI Pic of Primary lesion



Fig 2 Xray Pic of Primary Lesion

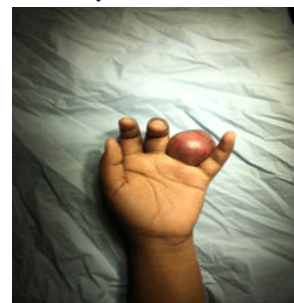


Fig 3 Clinical pic of recurrence

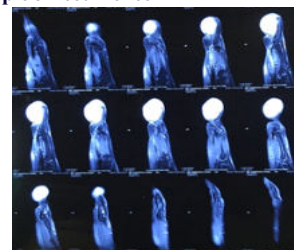


Fig 4 MRI picture of Recurrence



Fig 5 Xray picture of recurrence



Fig 6 Extensor sheath excision



Fig 7 4th metacarpal excision from base



Fig 8 flexor tendon and its excision



Fig 9 Immediat post op pic

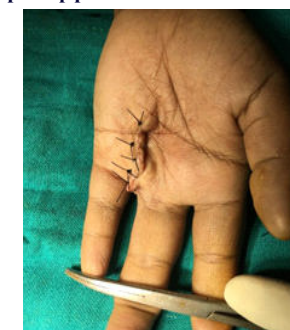


Fig 10 Immediat post op pic



Fig 11 Follow up pic after one month



Fig 12 Follow up pic after one month

CONCLUSION

GCTs of the hand have been treated with curettage and cancellous bone grafting, wide resection, and structural bone grafting or ray amputation.[1,4,6,7,16] High local recurrence rates have been reported with these treatment modalities.[1,4,6,7] Daniel *et al.*[10] reported a GCT of the middle phalanx treated with curettage and bone grafting, which recurred at 9 months and was successfully treated by excision and allograft replacement. Wittig *et al.*[11] reported three cases of phalangeal.

GCT treated with curettage, cryosurgery, and cementation. Resection-iliac graft and double arthrodesis for GCT of the proximal phalanx of the thumb have also been reported.[19] Most local recurrences of GCT cases of the hand are reported to occur within 1 year of primary surgery.[1,6] Patel *et al.*[7] treated three cases of GCT of the hand with curettage and bone grafting, two of which had a local recurrence and required ray resection. A. Agarwal *et al*[12] have treated a recurrence of middle phalanx of little finger in an otherwise nonoperable massive recurrence by excision and double fusion of iliac crest graft. We have treated the recurrence of tumor with ray amputation of that digit and are reporting the case for its rarity as well as treatment modality showed excellent functional outcome. So we can conclude that this modality of treatment can be used as primary treatment option for recurrence and patient has acceptable outcome in respect to functions and cosmesis.

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