



GCT TURNED OSTEOSARCOMA- A CASE STUDY



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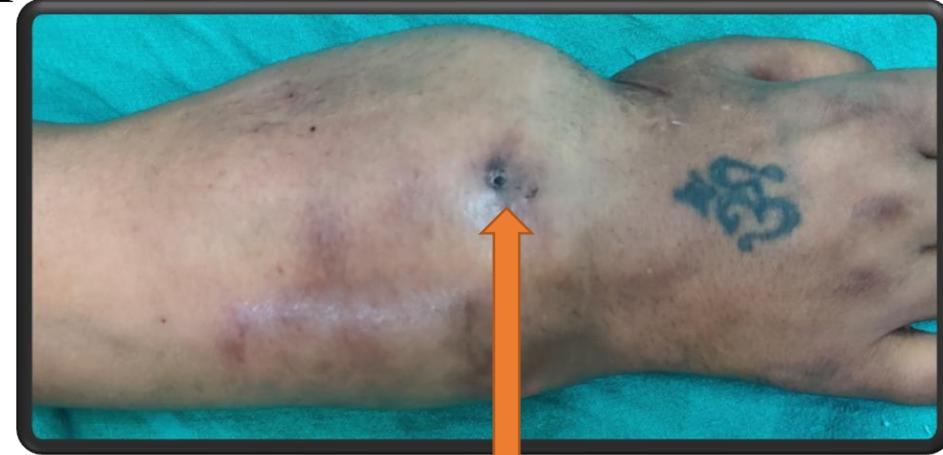
Introduction

- GCT is a primary benign bone tumor with multinucleated giant cells.
- Although there are many reports of GCT in which the cases show malignant transformation but secondary malignant tumor without radiation therapy is very rare.
- We report a case of osteosarcoma arising ten years after the primary surgery for a benign GCT that was not treated with additional radiation therapy.



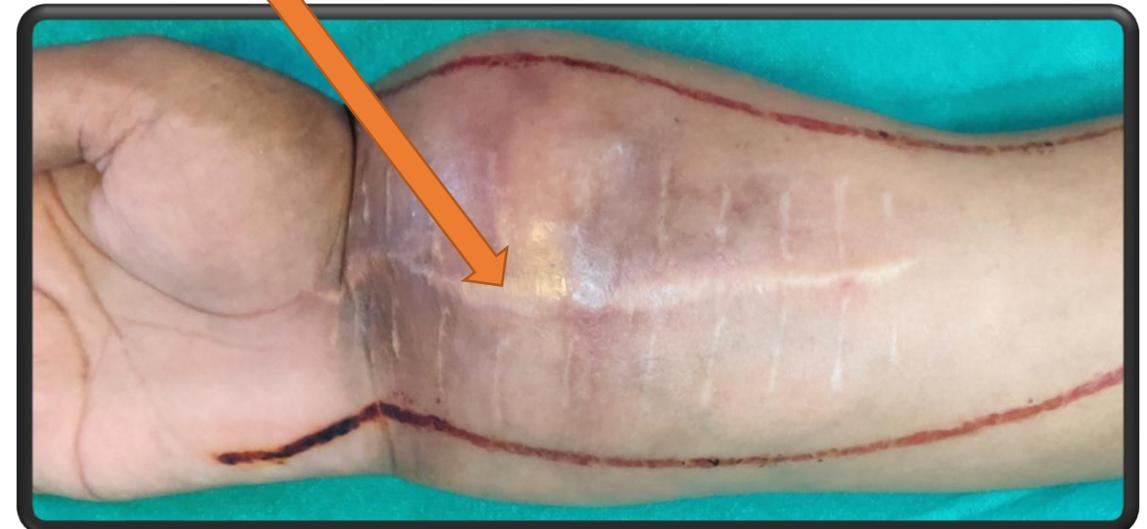
CASE HISTORY AND EXAMINATION

- 35 year male presented with complaint of swelling over right wrist from 2 months
- Past history of curettage with bone grafting done for biopsy proven GCT distal end radius 10 years back.
- On examination hard lobulated swelling present over proximal 1/3 of forearm with ill defined margins with some cystic and hard areas.



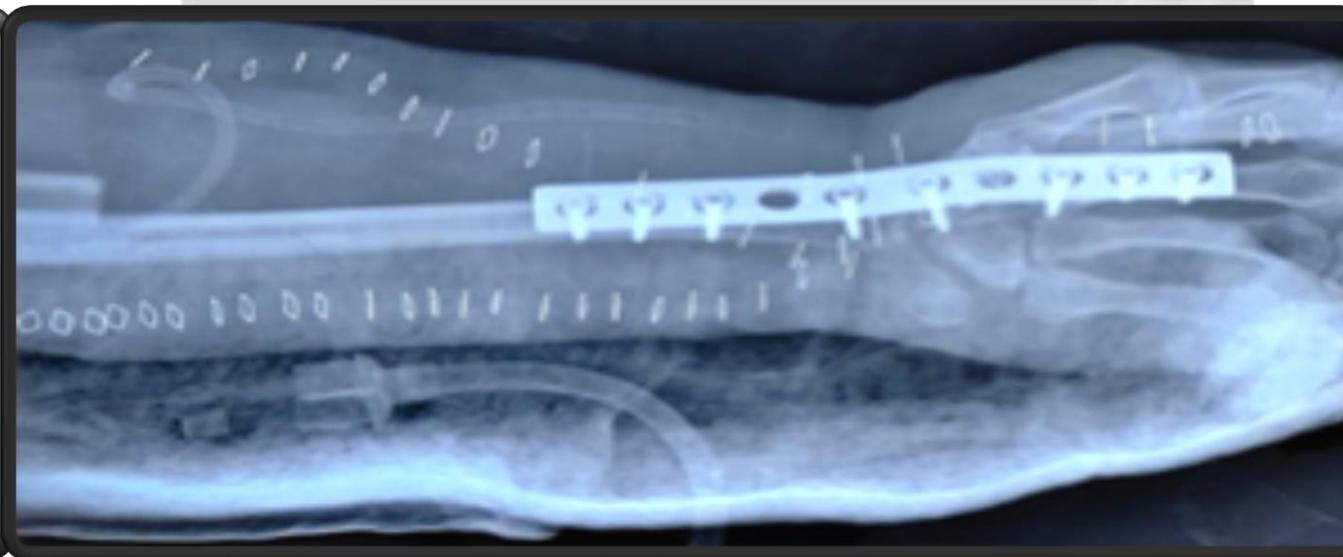
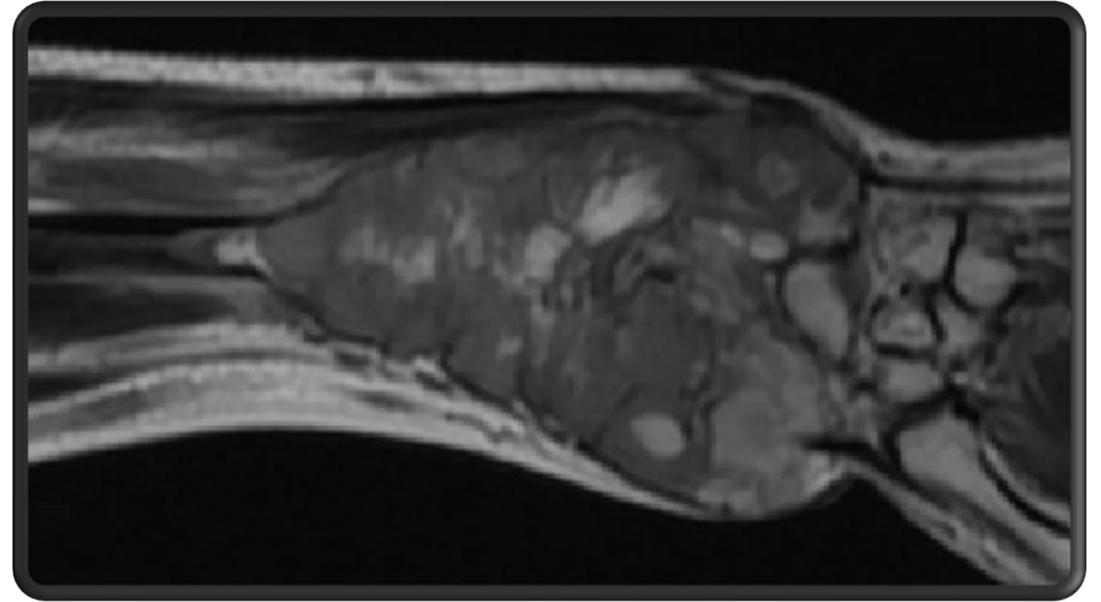
Previous surgical scar

Biopsy scar mark



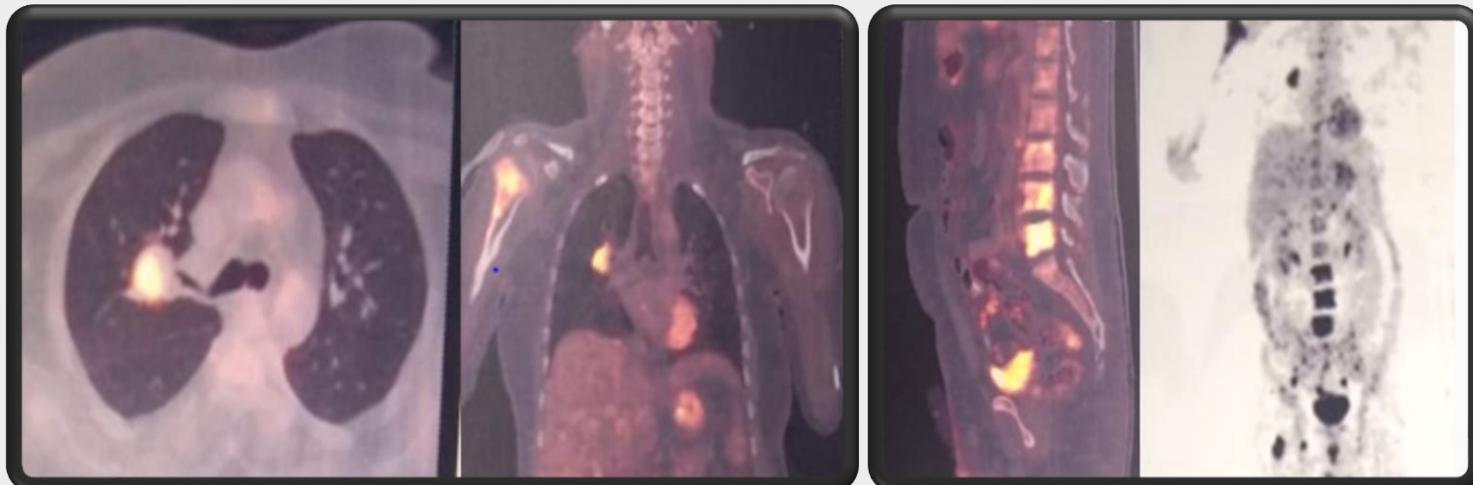
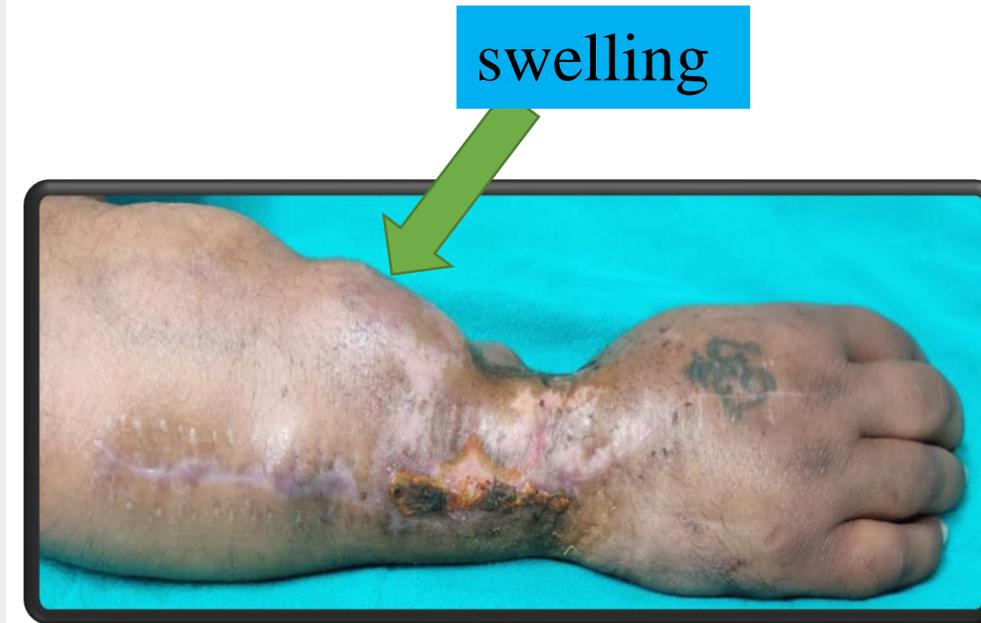
INVESTIGATIONS AND TREATMENT

- MRI suggestive of large expansile mass lesion involving half of distal end radius shaft ,showing solid cystic component.
- Biopsy suggestive of GCT grade 3.
- Tumor excision with centralisation of ulna with wrist arthrodesis done



RECURRENCE AS OSTEOSARCOMA

- Histopathology of resected tumor showed features consistent with osteosarcoma.
- Post operatively patient developed swelling over distal forearm with areas of necrosis around suture site following which above elbow amputation done.
- Patient developed multiple metastasis as evident in FDG PET scan.
- Patient expired after initial cycle of chemotherapy.



DISCUSSION

- Gct can transform into various malignancies of which fibrosarcoma and osteosarcoma are common.
- Nascimento⁽²⁾ reported that prognosis of secondary malignant GCT is worse than primary malignant GCT.
- Osteosarcoma arising from primary benign GCT as in this case is very but should be kept in mind as an important differential.
- Chemotherapy has been found to be associated with improved prognosis in such cases.
- There have been only few reported cases in literature where GCT turned into osteosarcoma without radiation exposure.

1. McGrath, P.J. (1972) Giant cell tumor of bone: an analysis of fifty two cases, J. Bone Joint. Surg. Br., 54, 216-229

2. Nascimento, A.G., Huvos, A.G. & Marcove, R.C. (1979) Primary malignant giant cell tumor of bone: a study of eight cases and review of the literature. Cancer, 44, 1393-1402