Introduction

Giant cell tumor of metatarsal bone in a 10 years old boy: A case report

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Giant cell tumor (GCT) of skeleton are very rare in pediatric and adolescent population and that too in foot bones, with the incidence of 1.8 to 7.5%. It should be considered as one of the differential diagnosis of epi-metaphyseal lesions in pediatric population in spite of its rarity.

Case report

We report a 10 years old boy presented with swelling and pain over the dorsum of left foot. There were no signs that could suggestive of infective pathology. On radiographs there was an expansile osteolytic lesion of second metatarsal that spares the epiphysis with classical “soap bubble appearance” (Fig 1). MRI revealed ABC or Enchondroma, but FNAC report was consistent with the diagnosis of GCT (Fig 2).

A reconstructive surgery with local resection of the tumor and replacement with ipsilateral fibular strut graft was done and fixed with K-wire (Fig 3). The fibular strut graft was selected because its anatomy matches the metatarsal, and its strength made it possible for proper weight transfer.

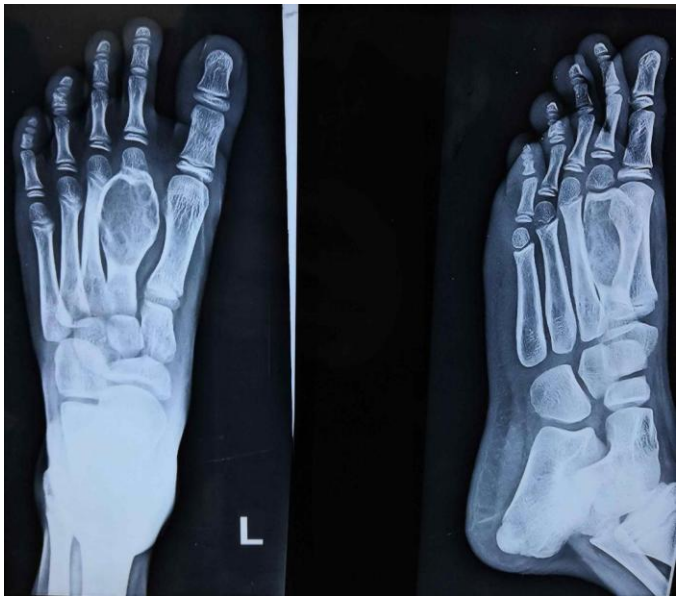

Figure 1

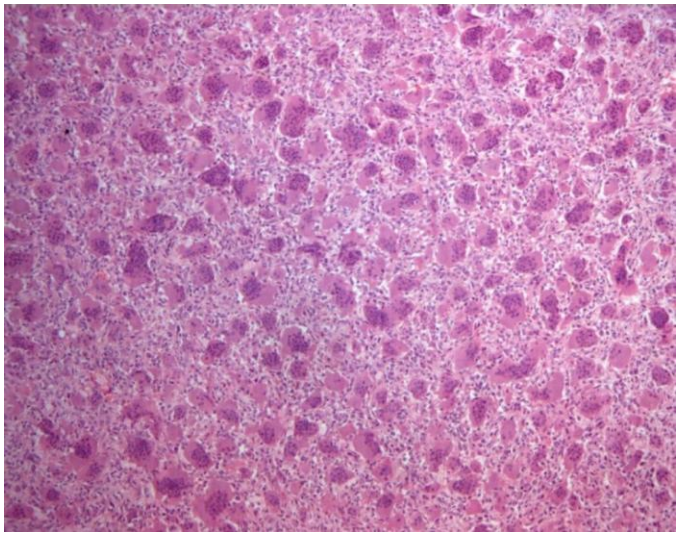

Figure 2

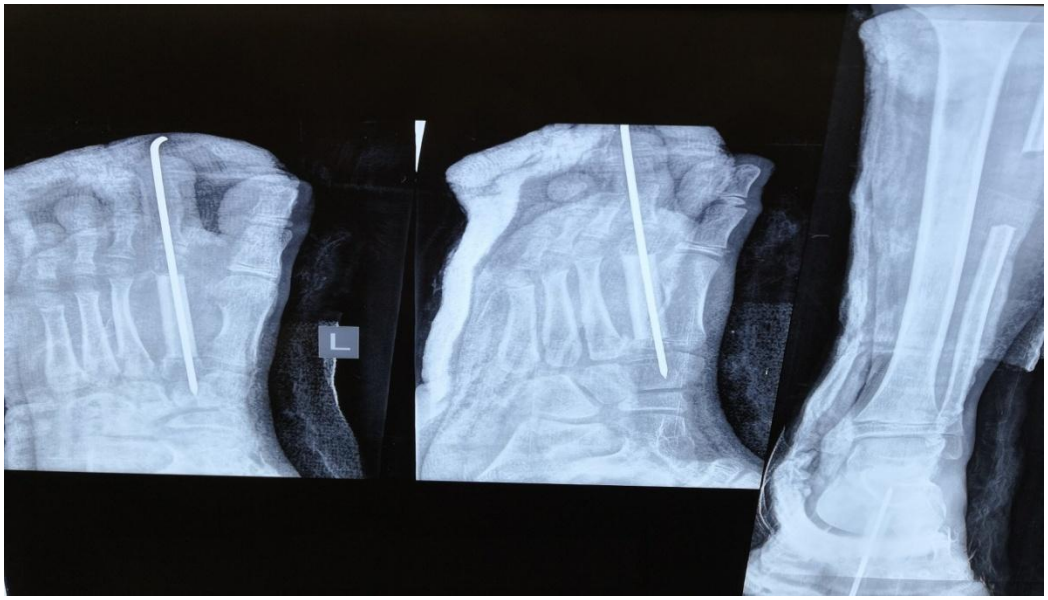

Figure 3

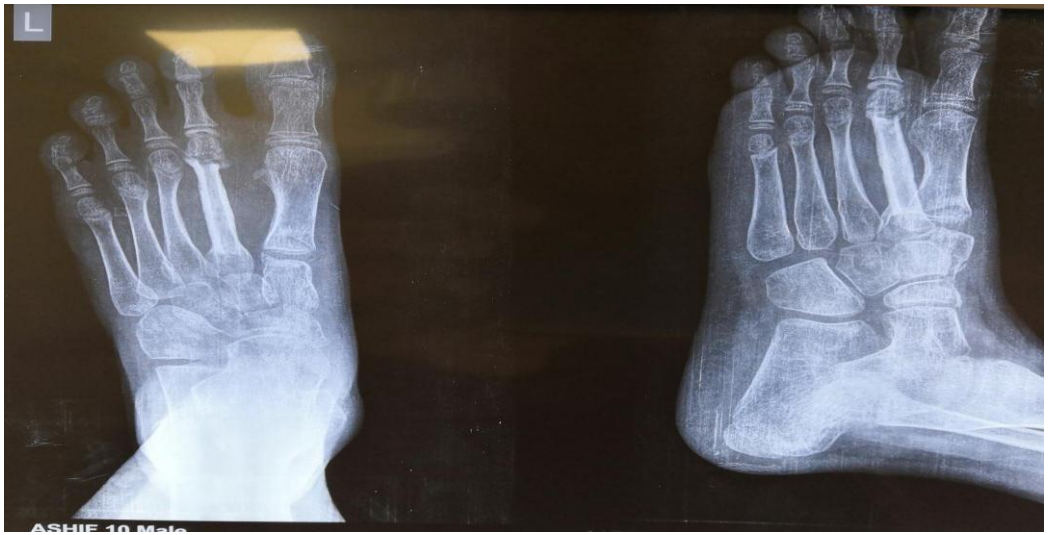

Figure 4

Discussion and Conclusion

- Giant cell tumors frequently are locally aggressive. It does not behave in a predictable fashion in pediatric age groups. It basically starts in the metaphyseal region and gradually progress to epi-metaphyseal location after the growth plate closure. In our patient, it was meta-diaphyseal in location.
- The foot bones are often affected by numerous lytic lesions which results in difficulty for diagnosing these lesions. Hence, a high index of suspicion is needed when dealing with any foot pathology because the dense architecture of the foot may delay the diagnosis. It should be differentiated from other lytic lesions, such as tuberculosis, SBC, ABC, Chondroblastoma, Enchondroma.

- Although these lesions are not malignant and frequently can be managed satisfactorily with intralesional procedures alone, such as curettage, and limited resection but the high recurrence rate following this often dictate the need of an en bloc excision through normal tissues. Local resection of the affected metatarsal with autograft or allograft replacement is the preferred treatment. Even after en bloc excision, the rate of recurrence has been reported to be 0-5%. Follow up X-ray at 1 year revealed complete incorporation of graft with bone (Fig 4).
- We concluded through this case that in spite of location, skeletal maturity and radiography the diagnosis of GCT should be made final only after histopathological study and one should always keep the GCT as differential diagnosis.