

## A Double Rarity: A Giant Cell Tumor In A Skeletally Immature Metacarpal Bone

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### INTRODUCTION:

Giant cell tumors (GCT) of bone are almost exclusively found in skeletally mature bone, primarily occurring around the knee and distal radius. However, these tumors can involve virtually any bone, although involvement in the hand is rare.

### REPORT:

A 7-year-old girl with a painless and hard swelling in her right hand for two months. A plain X-ray showed a benign but aggressive lesion in the second metacarpal bone.

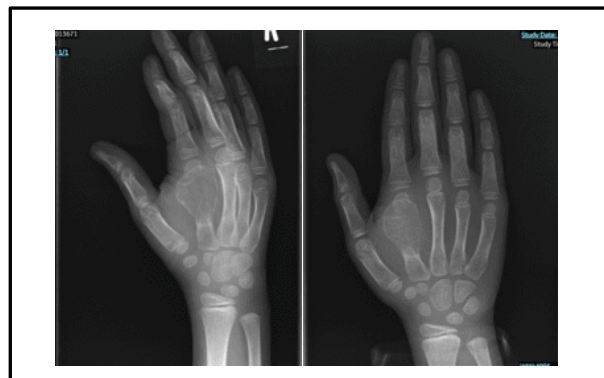
Histopathological examination confirmed the diagnosis of a GCT, with the presence of stromal cells, multinucleated giant cells, and monocytes. Despite receiving sclerosant injection, no improvement was observed. Subsequently, she underwent extended curettage supplemented with gel-foam soaked in local zoledronic acid. Systemic bone-forming agents were avoided to prevent complications in the growing child.

Now, at 4 months post-procedure, improvement is evident on plain radiographs. Clinically, the right index finger appears shortened, but function remains intact. Close observation is warranted to detect early recurrence, and the risk of deformity has been explained to both parents.

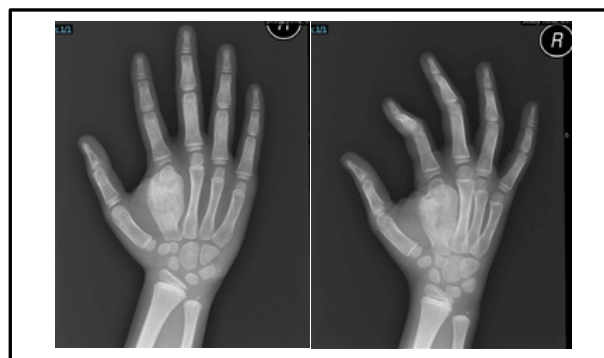
### CONCLUSION:

GCTs of the bone in the hand represent a rare but more aggressive lesion than conventional GCTs found elsewhere in the skeleton. Although uncommon in skeletally immature bone, the diagnosis should be considered in cases of benign aggressive-looking bone lesions. Potential deformity and stunted growth

of the affected bone may occur due to the presence of a GCT.



**Figure 1:** A multiloculated lytic lesion was observed at the distal epiphyseal-metaphyseal region of the right second metacarpal. The lesion appeared expansile, with a narrow transition zone and no sclerotic border nor cortical breakage observed.



**Figure 2:** Significant sclerosis and intralesional new bone formation seen on plain radiograph right hand after four months.

### REFERENCES:

1. Kim WJ, Kim S, Choi DW, Lim GH, Jung ST. Characteristics of Giant Cell Tumor of the Bone in Pediatric Patients: Our 18-Year, Single-Center Experience. *Children (Basel)*. 2021 Dec 8;8(12):1157.