

# CASE REPORT

## OSTEOCLASTOMA DISTALEND OF TIBIA: A CASE REPORT

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**ABSTRACT:** Osteoclastoma is one of the most common benign tumours. The distal end of tibia is less commonly involved. The most common sites involved are proximal end of tibia, lower end of femur and distal radius. Osteoclastoma rarely affects medial malleolus and posterior malleolus of tibia and recurrence after excision is rare in younger patients.

**KEYWORDS:** GCT, osteoclastoma of the distal tibia, curettage, bone cement.

**INTRODUCTION:** A Giant cell tumor (GCT) of bone, or osteoclastoma, is classically described as a locally invasive tumor that occurs close to the joint of a mature bone. It is generally considered to be a benign tumor. In Government general hospital Anantapuram, a case of GCT in a 30 year-old female which had extensive destruction of the distal end tibia. In view of the extensive involvement, curettage and bone cement [Methymethacrylate] filling done. At 6 months of follow-up, the patient had a painless weight bearing. There was no evidence of recurrence at 18 months of follow-up.

**CASE REPORT:** In the tibia, giant cell tumor (GCT) of bone is an infrequent primary bone tumor that can present late with extensive involvement of soft tissue and articular surface changes often making the joint preservation difficult or impossible.<sup>[1]</sup> GCT account for approximately 5-8% of all primary bone tumors.<sup>[2,3,4]</sup> The authors report a GCT which had led to destruction of the entire tibia in a 30 year-old female. In view of the extensive involvement, total curettage and bone cement filling done in view of pain less weight bearing and less recurrence rate.

A 30 year-old female presented with chief complaints of insidious onset of pain in the right medial aspect of ankle since the last six months, swelling in the right ankle since the last three months and inability to bear weight on right side since the last three months. The patient was treated elsewhere with systemic analgesic medication for past three months. There was no history of fever, loss of appetite, loss of weight, similar complaints in other joints or history of similar complaints in the past. The family, occupational, recreational and drug histories were not significant. The general physical and systemic examinations were within normal limits. On local examination, the attitude of the limb was neutral. There was a 3x2cm swelling over medial malleolus and posterior malleolus. (Fig. 1).

There were no visible veins, sinus or discharge from the swelling and the swelling was tender. All movements at the ankle joint were painfully restricted. Serum biochemistry studies were within normal limits. Anterior posterior (AP) and lateral radiographs of the ankle showed a radiolucent lesion occupying the complete medial malleolus; posterior malleolus with distal end of shaft of tibia involvement. (Fig. 2) A fine needle aspiration of the mass was performed and a provisional diagnosis of GCT was rendered. The computerized tomography [CT] revealed an expansible s cortical destruction in the medial malleolus, posterior malleolus and shaft of tibia.

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**FIGURE 1:** Antero posterior view and lateral view radiograph of right Tibia lower end and right ankle before surgery.



**Fig. 1**



**Fig. 2: Clinical Photo of the right ankle**

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**Fig. 3: Intra-operative Lesion**



**Fig. 4: Intra-operative Radiograph Showing the Lesion**



**Fig. 5: Immediate post-operative radiograph**

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**PROCEDURE:** Through an anteromedial incision over the swelling, the tumor was exposed all around and the base was clearly exposed. The tumor was excised in toto extra periosteally and the tumour space was washed with hydrogen peroxide, betadine and phenol. Then the tumour space filled with bone cement [Methylmethacrylate] and excised tumour tissue sent for histopathological examination. Biopsy confirmed the diagnosis of osteoclastoma.

**DISCUSSION:** GCT, also known as osteoclastoma, is a fairly common bone tumor accounting for 5% of all the primary bone tumors. It is a benign tumor with a tendency for local aggressiveness and high chances of recurrence. GCT is most commonly seen in the distal femur proximal tibia, distal radius and the proximal humerus in descending order of frequency.<sup>[5]</sup>

The distal tibia is an unusual site of presentation and these appear to occur in a younger age group and tend to be multicentric.<sup>[6]</sup> The clinical picture is that of insidious onset pain, which in many cases may be mismanaged as ankle sprain. A history of preceding trivial trauma may be present. Other features are non-specific. Radiologically; the tumor appears as an eccentric lytic lesion with cortical thinning and expansion. There is absence of reactive new bone formation. The tumor may erode the cortex and invade the joint. Pathological fracture may also be seen.<sup>[7]</sup> CT scanning permits accurate delineation of the tumor extent and helps in deciding the line of management.

Many authors have reported satisfactory results with intralesional curettage and bone grafting.<sup>[8]</sup> However, curettage alone has a high rate of recurrence and adjuvants like Methylmethacrylate (bone cement), cryotherapy and phenol have been suggested.<sup>[9]</sup>

Fresh frozen osteochondral allograft reconstruction has also been described for an aggressive GCT of distal tibia but there is paucity of literature on this particular modality of treatment.<sup>[10]</sup> The trend is towards limb salvage and amputation is reserved for recurrences and only rarely done. In conclusion, in a case of GCT of distal tibia presenting late with extensive involvement and in a manual labourer, total curettage and Methyl methacrylate [bone cement] is an valuable treatment option.

### REFERENCES:

1. Ng ES, Saw A, Sengupta S. Giant cell tumour of bone with late presentation: review of treatment and outcome *Journal of Orthopaedic Surgery* 2002; 10(2): 120-128.
2. Huvos AG *Bone Tumours: Diagnosis, Treatment and Prognosis*. 1979, 1st Edition, Saunders, Philadelphia 265.
3. Schajowicz F. *Tumors and Tumor Like Lesions of Bone and Joints*. New York, NY: Springer; 1981. p205.
4. Dahlin DC. *Bone Tumours: General Aspects and Data on 6221 cases*. 1981, 3rd Edition. Charles C Thomas Publisher, Springfield p99.
5. Stoker DJ. Bone tumors (1): General characteristics benign lesions. In: Grainger RG, Allison DJ (Editors). *Diagnostic radiology a textbook of medical imaging*. 3rd Edition. New York: Churchill Livingstone; 1997. p. 629-1660.
6. Wold LE, Swee RG. Giant cell tumor of the small bones of the hand and feet. *Semin Diagn Pathol* 1984, 1: 173-184.
7. Carrasco CH, Murray JA. Giant cell tumours. *Orthop Clin North Am* 1989, 20: 395- 405.
8. Bapat MR, Narlawar RS, Pimple MK, Bhosale PB. Giant cell tumour of talar body. *J Postgrad Med* 2000, 46: 110.

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9. Dhillon MS, Singh B, Gill SS, Walker R, Nagi ON. Management of giant cell tumor of the tarsal bones: A report of nine cases and a review of the literature. *Foot Ankle* 1993, 14(5): 265-272.
10. Schoenfeld AJ, Leeson MC, Grossman JP. Fresh-frozen osteochondral allograft reconstruction of a giant cell tumor of the talus. *J Foot Ankle Surg* 2007, 46(3): 144-148.

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