

Reducing Recurrence in Campanacci Type Three Giant Cell Tumor of Bone: Outcomes from an 82-Case Study Evaluating Pseudocapsule Excision with Extended Curettage

Dr Raj Kumar Harshwal^{1*}, Dr Manisha Sehrawat², Dr Narender Saini³, Dr Prashant Modi⁴,
Dr Kaushal Kishore kumawat⁵, Dr D. S. Meena⁶

^{1,3,4}Associate Professor, ^{2,5}Senior Resident, ⁶Professor, Department of Orthopedics, SMS Medical College, JLN Road, Jaipur, 302004, Rajasthan, India

*Corresponding author: Dr Raj Kumar Harshwal

Email: drrajharsh@gmail.com

DOI:10.56018/20231209



ABSTRACT

Background & Objective: In Campanacci type 3 giant cell tumor of bone (GCT), soft tissue expansion of the tumor has been considered the most important factor for recurrence. We report the outcomes in 82 consecutive patients with GCT of the extremities treated with the excision of pseudocapsule along with extended curettage in terms of recurrence and functional results. **Material and Methods:** We treated 82 cases with histologically proven, radiological grade 3 GCT of the extremities, which had at least two cortices intact. We performed soft tissue expansion excision along with extended curettage using a high-speed burr, phenol, hydrogen peroxide, and electrocautery. Reconstruction was done with bone cement or bone graft, and internal fixation was performed in all cases. Cases were followed up for a minimum of two years. **Results:** The highest incidence of GCT was found in the distal femur (28, 34.1%), followed by the proximal tibia (18, 21.9%), with the third most common sites being in the upper limb, where the distal radius and proximal humerus each had an equal incidence of 12 cases (14.6%). Eight patients had preoperative pathological fractures. Reconstruction with bone cement was done in 65 cases, and bone grafting was done in 17 cases. Recurrence of GCT was not observed in study population. Post-operative infections were seen in 2 patients. **Conclusion:** Soft tissue expansion and pseudocapsule excision along with extended curettage are effective methods for decreasing the rate of recurrence in giant cell tumors of bone.

Keywords: Giant cell tumor, Campanacci type 3, Pseudocapsule, Recurrence.