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## The " 3 Cs" surgical treatment of giant cell tumor of bone

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Introduction: Giant cell tumor of bone (GCTB) is an intermediate, locally aggressive, primary bone tumor. Ideally, all patients should be treated with intralesional excision with local adjuvant treatment We report 26 cases treated at our institution with curettage, cauterization and cementation ("3 Cs") aiming to provide useful insights into the effectiveness of this intralesional treatment approach.
Methods: We retrospectively reviewed the files of 22 patients who presented with 26 histologically benign GCTBs. There were 5 male and 17 female patients with a mean age of 30 years (range, 13-62 years). Seven lesions were located at the distal radius, 1 at the proximal femur, 4 at the medial and 6 at the lateral femoral condyle, 3 at the proximal and 2 at the distal tibia, 1 at the proximal fibula, 1 at the talus and 1 at the lumbosacral region. One patient presented multifocal involvement. All patients were treated with the "3 Cs" technique. Follow-up ranged from 6 to 37 years.
Results: Recurrence rate was $9 \%$. Recurrences occurred from 6 months to 2 years after treatment with the " 3 $\mathrm{Cs}^{\prime \prime}$ technique. Recurrences were treated by resection. One patient presented recurrence of a lesion at the distal radius 6 months after initial treatment. A second patient experienced recurrence at the proximal femur. A third patient experienced recurrence twice in a two year period at the distal tibia. No secondary sarcoma was detected and none of the patients developed local or distant metastases.
Conclusion: Treatment of patients with GCTBs with the " 3 Cs " technique seems to be simple and effective, associated with an acceptable rate of local recurrence.

