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Clinical results after intralesional curettage in benign and borderline bone tumors

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Introduction: Intralesional curettage is a common surgical treatment for benign bone tumors. Although, in principle, the tumor recurrence rate is higher with intralesional surgery, the functional outcome is often better than in wide resections. Recurrence rates range from almost non-existing for enchondromas, to almost 50 % for recalcitrant giant cell tumors (GCT), in particular when treated without adjuvants. Curettage has also been reported as an acceptable method of treatment for low-grade chondrosarcomas due to relatively low recurrence rates.

Methods: We performed a retrospective review of all consecutive patients (n=166, F/M: 86/80, mean age 31 (2-72 years)) who underwent intralesional curettage for benign or borderline bone tumors in the appendicular skeleton at our orthopedic oncology center, between 2009 and 2013. We recorded histology and anatomic region of the bone tumors, choice of treatment and biopsy verified local recurrence rates.ResultsThe most common lesions treated were enchondromas (n=57), simple cysts (n=31), aneurysmal bone cysts (n=16), fibrous dysplasia (n=14) and GCT's (n=13). Four cases of grade 1 chondrosarcomas were also treated intralesionally by curettage. Cancellous allograft was used for bone defect reconstruction in the majority of the cases (n=141). Autograft was used in 3 cases and a bone graft substitute in 5 cases. In 17 cases, the bone defect was left empty, mainly following surgery in the hand (n=9) or for enchondromas (n=10). Preoperative fracture was present in 16 cases (10%) and fixation/augmentation with a plate or nail was deemed necessary in 20 cases (12%). The most commonly affected long bones were femur (n=47), tibia (n=26) and humerus (n=10), and the most commonly affected region was the knee (n=47). We recorded 10 complications, with postoperative infection (n=3), postoperative fracture (n=2) and nerve palsy (n=2) being the most common. Local recurrence occurred in 13 cases (8%), with simple cysts in children (n=3) surprisingly being the most common.

Conclusion: In this 5-year review of 166 patients, treated for a benign or borderline bone tumor in a single orthopedic oncology center, we found that intralesional curettage and bone defect reconstruction with cancelleous bone allograft is a reliable treatment with acceptable recurrence and complication rates.