



P19:111

Minimal invasive surgery for unicameral bone cyst using demineralized bone matrix: a case series

Hwan Seong Cho¹, Hae Bong Park¹

¹ Seoul National University Bundang Hospit, Republic Of Korea

Background: Various treatments for unicameral bone cyst have been proposed. Recent concern focuses on the effectiveness of closed methods. This study evaluated the effectiveness of demineralized bone matrix as a graft material after intramedullary decompression for the treatment of unicameral bone cysts.

Methods: Between October 2008 and June 2010, twenty-five patients with a unicameral bone cyst were treated with intramedullary decompression followed by grafting of demineralized bone matrix. There were 21 males and 4 female patients with mean age of 11.1 years (range, 3–19 years). The proximal metaphysis of the humerus was affected in 12 patients, the proximal femur in five, the calcaneum in three, the distal femur in two, the tibia in two, and the radius in one. There were 17 active cysts and 8 latent cysts. Radiologic change was evaluated according to a modified Neer classification. Time to healing was defined as the period required achieving cortical thickening on the anteroposterior and lateral plain radiographs, as well as consolidation of the cyst. The patients were followed up for mean period of 23.9 months (range, 15–36 months).

Results: Nineteen of 25 cysts had completely consolidated after a single procedure. The mean time to healing was 6.6 months (range, 3–12 months). Four had incomplete healing radiographically but had no clinical symptom with enough cortical thickness to prevent fracture. None of these four cysts needed a second intervention until the last follow-up. Two of 25 patients required a second intervention because of cyst recurrence. All of the two had a radiographical healing of cyst after mean of 10 additional months of follow-up.

Conclusions: A minimal invasive technique including the injection of DBM could serve as an excellent treatment method for unicameral bone cysts.

E-mail (main author): mdchs111@snu.ac.kr