

**FC-058****Alcohol instillation in aneurysmal bone cysts: outcome of 15 patients treated for ABC solely with alcohol instillation or using a combination therapy in surgically challenging anatomic sites**

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**Introduction:** Aneurysmal Bone Cysts (ABCs) are locally aggressive, osteolytic bone lesions. Treatment options such as curettage, embolization and alcohol instillation are reported as viable treatment options. Depending on tumor site and size using a combination of these techniques might help to prevent persistent bone deformities and functional limitations.

**Methods:** Fifteen patients treated for ABC who underwent alcohol instillation between 2009 and 2014 as a mono- or combination therapy were retrospectively evaluated.

**Results:** All patients underwent incisional or computed tomography-guided biopsy to confirm diagnosis before undergoing treatment. Alcohol instillation was performed as a primary procedure in eleven cases. In four cases persistent/recurrent ABCs were treated after a primary curettage and reconstruction using bone cement (n=3) or synthetic bone substitutes (n=1). ABC sites were as follows: scapula (n=3), pelvis (n=3), sacrum (n=2), proximal femur (n=2), talus (n=2), proximal tibia (n=1), distal ulna (n=1) and proximal humerus (n=1). Four patients had a bone infraction before the beginning of treatment. Tumor size was between 5-10 cm in 66,6% of cases. A mean of 3,8 alcohol instillations were performed (range 1-9 instillations). Three patients received successful embolizations in addition to alcohol instillation, in four patients embolization failed for technical reasons. A mean of 2,6 embolizations (range 1-5) was performed. Additional surgery was performed in two patients, for two other patients surgery is scheduled. Consolidation of the ABC was observed in ten patients after a mean time of 2,7 months (range 1-6 months) and 2,8 alcohol instillations (range 1-5). In three patients with recent initiation of therapy the success of treatment still remains to be seen. In two patients ABC growth was observed despite alcohol instillation. The mean follow up is 13,1 months.

**Conclusion:** In our case series both sole alcohol instillation as well as a combination therapy including embolization and/or surgery have proven to be successful in the treatment of ABC. Therefore, in surgically challenging sites, we believe that a combination of alcohol instillation with other treatment options may prevent the development of persistent functional impairment.