

Surgical Treatment of an Aneurysmal Bone Cyst with Avascular Bone Graft

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Abstract

Background: Aneurysmal bone cyst is a solitary bone tumor, expansile and lytic most often seen in the second decade of life, more frequently in men than in women (2: 1). They can occur in any bone, most common in the metaphysis of the long bones of the lower limbs. Although it is a benign tumor formation, aneurysmal cysts may have an aggressive local evolution and can cause a significant decrease in bone strength. The patient may present local pain, the appearance of local deformation due to a tumor mass or occurrence of pathological fractures. Traditionally these lesions were treated surgically (curettage or resection and bone grafting) with a relapse rate of about 20%. Because bone resection may lead to bone defects, deformations or damage in the affected limb's function, lately the preferred treatment percutaneous sclerotherapy using fibrosing alcoholic agents.

Case report: We present the case of a 14 year old patient submitted for pain and deformity at the distal third of the right forearm with insidious onset and exacerbated lately. Following clinical investigations, laboratory and histopathology he was diagnosed with aneurysmal bone cyst of the right ulna. Since sclerotherapy is not available in our clinic, we initially performed an excisional biopsy with curettage of the lesion. Because the tumor still had an aggressive postoperative evolution, we decided for a bone resection and reconstruction using an avascular peroneal graft. Postoperative, the patient presents a favorable short and medium term evolution, the disappearance of pain and resumed function of the affected segment. Radiologically bone graft integration can be observed, with no evidence of local recurrence.

Conclusion: Although modern techniques for treating aneurysmal bone cyst include either injecting fibrosing alcoholic agents or resection and grafting using vascular bone graft, the traditional technique described by Merle d'Aubigne which implies the usage of avascular bone graft is still helpful, leading to successful results especially in the upper limbs.

Key words: aneurysmal bone cyst, biopsy, avascular peroneal graft, bone reconstruction