

Rare Case: Aneurysmal Bone Cyst in the Metacarpal of a Child

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Introduction: Aneurysmal bone cyst is a rare, rapidly growing, and destructive benign bone tumor¹. The incidence of aneurysmal bone cysts in the hand of a child is incredibly rare, and only a handful of cases have been reported throughout the literature²⁻⁶. There is no evidence based-protocol for treatment, and controversy exists over the optimal treatment. While considered benign, aneurysmal bone cysts can behave in a very aggressive manner. We report a case of an aneurysmal bone cyst of the third metacarpal of the right hand in a 5-year-old child.

Case Report: The patient is an ambidextrous 5 year old with a 6-month history of swelling of the right hand dorsum centered over the 3rd metacarpal. Imaging studies showed a lytic lesion occupying 90% of the 3rd metacarpal with a mass-effect on the 2nd and 4th metacarpals. At surgery, the bone cortex was egg-shell thin. As much cortex as possible was preserved. The aneurysmal bone cyst was excised and the bone curetted. A cancellous bone graft was harvested from the right iliac crest and packed to fill the defect. Permanent sectioning confirmed the diagnosis. He has been followed for two years since his surgery and the bone has remodeled to a normal appearance and there is no evidence of recurrence. He has a full range of motion in the right hand. He is followed for 6-month intervals to monitor for recurrence.

Discussion: The goal of the care of this child was to remove the rapidly expanding bone cyst and to reconstruct the metacarpal, while preserving length, growth potential, and function. To date, this has been accomplished. While curettage has been noted to have a high recurrence rate, the child has not demonstrated any evidence of recurrence at 2 years post-op.

Conclusion: We report a rare case of an aneurysmal bone cyst of the hand of a young child treated with curettage and cancellous bone graft. In doing so, the growth plate was preserved, function maintained, and despite reports of high recurrence with curettage and grafting, we have seen no evidence of recurrence in this child.

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