

Excessive White Drainage after Cerament Filling and Curettage of an Aneurysmal Bone Cyst at the Distal Radius

HELEN ANWANDER¹, URS HUG², BRUNO FUCHS²⁻⁵

University of Bern, Inselspital¹; Sarcoma Service, Cantonal Hospitals Luzern² & Winterthur³;

University Hospital⁴/ Kinderspital Zurich⁵

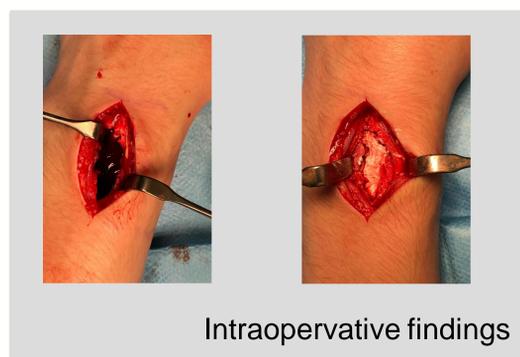
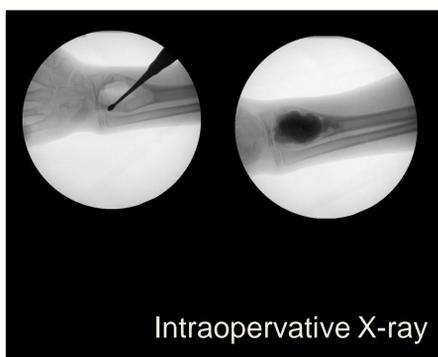
www.SARCOMA.SURGERY / www.SWISS-SARCOMA.NET

INTRODUCTION

An aneurysmal bone cyst is a benign neoplasm of the bone. Standard therapy includes curettage of the cyst and bone grafting. Cerament (Bonesupport AB) is a synthetic bone graft substitute consisting of 40% hydroxyapatite, 60% calcium sulfate, and a liquid component. Successful application of Cerament has been published in patients with benign bone tumours with full resolution one year after surgery in the majority. However, redness, swelling and a few cases of white drainage have been reported, resolving after five days postoperatively.

PATIENT & METHODS

We report on a twelve-year-old boy who after a fall on the left hand was diagnosed with a fracture in association with a, as far unknown, bone cyst in the distal radius. The fracture was successfully treated conservatively. After MR imaging and a biopsy were performed, an aneurysmal bone cyst was diagnosed. The cyst was curetted and filled with 12 CC Cerament.



RESULTS

Postoperatively, redness, swelling, pain and fever up to 38.4 degree Celsius was noticed. One month after initial surgery, excessive white drainage occurred and persisted over four weeks, which lead to revision surgery. Intraoperatively, solid white nodes were found in the subcutaneous tissue. The Cerament was completely dissolved within the bone by extrusion in the soft tissues, and the cyst was filled with clear liquid and covered with a white/green layer.

The histologic analysis of the subcutaneous material found a histiocytic foreign body reaction with giant cells. Two weeks after the revision, the wound was dry and uneventful.



DISCUSSION

The etiology of the described complication is unclear. An allergic reaction is unlikely due to the non-allergic findings in the biopsy. In the biopsy, a foreign body reaction was found. However, it is unclear, if an excessive foreign body reaction of the patient was a cause for the increased reduction of the Cerament, or if the foreign body reaction is a sequelae after extrusion of the Cerament in the soft tissue.

CONCLUSION

Fast reduction of Cerament leading to effusion and extrusion into soft tissues with foreign body reaction occurred in a twelve year old patient after filling an aneurysmal bone cyst at the distal radius. Revision surgery with thorough debridement was necessary and resulted in complete resolution.



HIGHLIGHT:

Excessive white drainage and foreign body reaction can occur after Cerament filling leading to revision surgery.