



Using Opteform® to Graft an ABC in the Proximal Humerus

Series D, Number 2

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PRESENTATION

A 7-year-old boy presented with a pathological fracture through a proximal humeral bone cyst. The fracture united without difficulty but the lesion progressed during follow-up and developed the radiographic appearances of an aneurysmal bone cyst. Definitive treatment of the lesion was required but there was a delay due to the coincidental diagnosis of a benign brain tumour that required neurosurgery.

OPERATION

Due to continued progression, at the age of 9 years and 6 months the lesion was treated by open curettage and bone grafting. Through a large osteoperiosteal window the cyst was decompressed and the lining carefully resected to ensure total clearance of the cyst lining macroscopically. 30ml of Opteform® was mixed with the patient's blood and the defect was then packed with the graft. The firm texture is ideal to ensure that the defect remains soundly filled with bone graft. The window was then replaced and secured with sutures and deltoid closed over it. The limb was supported with a broad arm sling postoperatively.

POSTOPERATIVE COURSE

The boy regained use of his arm within a few weeks. Follow-up radiographs have shown excellent incorporation and remodeling of the graft with medullarisation occurring by nearly the second anniversary.

DISCUSSION

Opteform has been shown to be a very effective substitute for use in large bone defects in children. The alternative of taking bone from the iliac crest does not guarantee that sufficient volume of bone will be available and confers considerable morbidity to this sensitive group of patients. Opteform has been shown to have excellent osteoinductive and osteoconductive properties and its use avoids the morbidity of iliac bone grafting. The firm texture of Opteform, once it is mixed with blood, provides the surgeon with a convenient way of packing a large defect with graft material.



Figure 1: An aneurysmal bone cyst of the proximal humerus in a 9-year-old boy.



Figure 2: Postoperative radiograph showing excellent impaction of the Opteform graft in the defect and healing by four months.



Figure 3: Remodeling is progressing well six months after surgery.



Figure 4: Medullarisation of the humerus is clearly seen with no signs of recurrence at nearly two years following surgery.

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713-01-72
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