



## Aneurysmal Bone Cyst Of Proximal Ulna - An Unusual Presentation A Case Report

Authors

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### Abstract

**Introduction:** *An aneurysmal bone cyst is a rare, benign, destructive, hemorrhagic and, expansile lesion accounting for 1% of all bone tumors with a thin wall containing blood-filled cystic cavities. The term Aneurysmal is derived from the macroscopic appearance of a sponge-like tumor containing numerous giant cells. This type of lesion predominantly affects the metaphysis of the long bone.*

**Case Report:** *we present a case of a 14-year-old female patient presented with an aneurysmal bone cyst of the right proximal ulna. It is an unusual presentation for its location, which presented with swelling and pain progressive over three months. The plain radiograph showed an expansile lytic lesion with a thin shell of cortical bone at the proximal ulna. Surgical exploration shows a pulsatile blood-filled cystic lesion.*

**Results:** *Postoperatively uneventful. The patient was prescribed physiotherapy and was advised for monthly follow-up. The patient had a full range of motion at the last follow up visit and was conveniently able to do his daily activities.*

**Conclusion:** *An aneurysmal bone cyst is a destructive, hemorrhagic, and tumor-like lesion occurring predominantly in teenaged patients. Radiographs and MRI scans can often confirm ABC's diagnosis; Excision of tumor and replacement of bone defects with an autograft are considered safe procedures with minimal recurrence risk.*

*The present study describes a sporadic case of an ABC in the proximal ulna. It highlighted the importance of radiological and MRI for the diagnosis of the aneurysmal bone cyst.*

### Introduction

Aneurysmal bone cysts are locally destructive, blood-filled reactive lesions of bone and are not considered true neoplasms. Any type of bone may be involved, but the most common locations include the proximal humerus, distal femur, proximal tibia, and spine. It is most commonly seen in patients younger than 20 years old, and there is a slightly female predominance. This case report shows an unusual presentation of aneurysmal bone cyst in proximal ulna.

### Case Report

We present a case of a 14-year-old female patient with an aneurysmal bone cyst of the proximal ulna. It is an unusual presentation for its location. The patient complains of swelling in the right elbow joint, which was gradually increasing over the past three months. The patient complains of tenderness over the swelling.

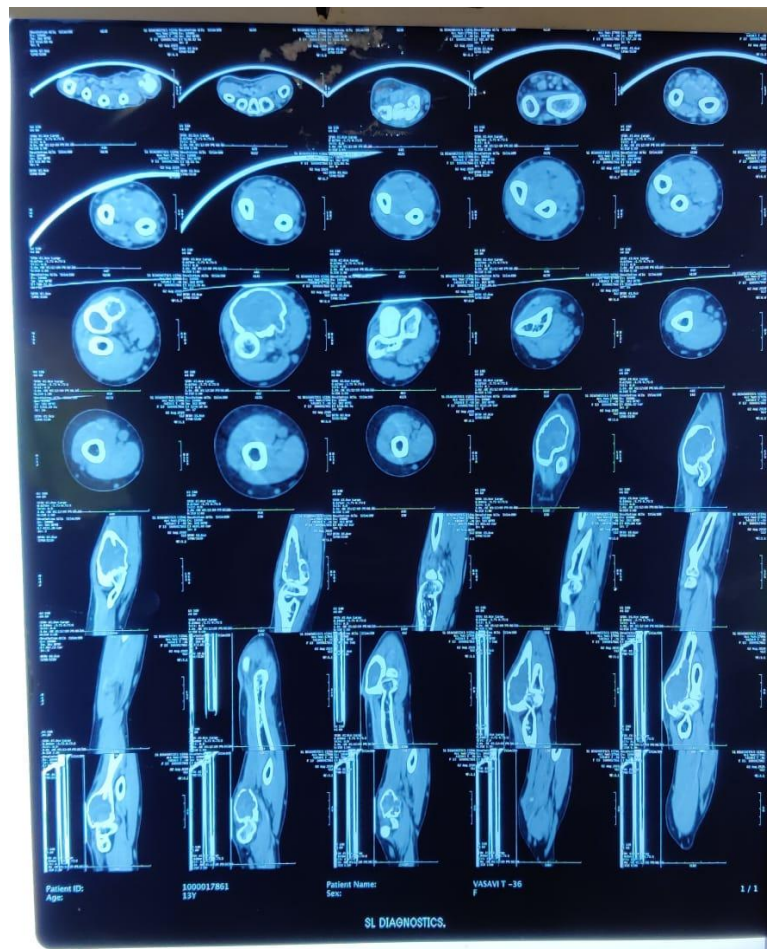
**Investigations**

X-ray right elbow joint shows an expansile lytic lesion covered with a thin shell of cortical bone.

The blood investigation and ultra-sounded guided biopsy, and MRI, were done.



**Figure-1** X-rays showed an expansile lytic lesion covered with a thin shell of cortical bone.

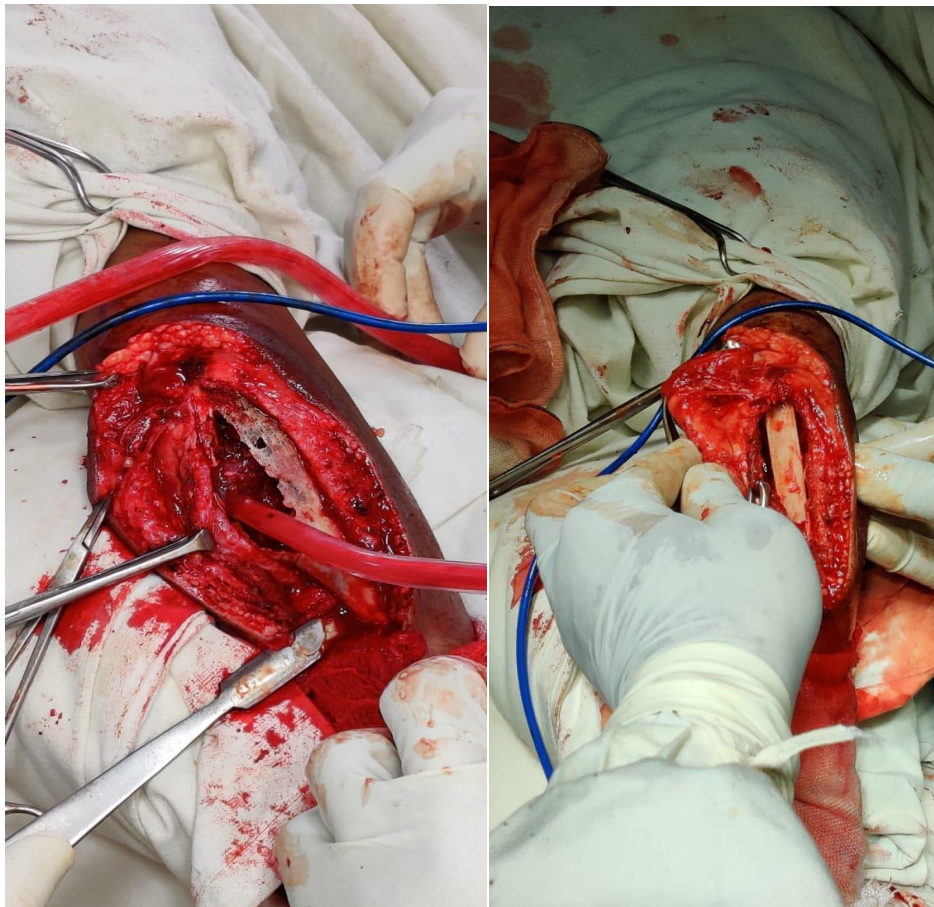


**Figure-2** MRI Showing Intra Lesional Septations

**Treatment**

The posterior approach addressed the lesion, extended curettage was done, and fibular

stud graft was taken from the right side and placed over the deficit area.



**Figure-3** Intra Op Picture



**Figure-4** Immediate Post op Xray

The elbow was immobilized for six weeks, followed by a continuous passive and active range of movements done. The final follow up at the end

of 6 months was entirely satisfied with an almost full ROM.





**Figure-5** Elbow Rom at Six Months Follow up

### Discussion

An aneurysmal bone cyst is a benign aggressive tumor of bone notorious for its recurrence after resection. Aneurysmal bone cysts account for 1% of all primary bone lesions sampled for biopsy<sup>[1]</sup>. The pathogenesis of ABC involves increased venous pressure locally inside the metaphyseal area of the involved bone with the development of dilated and enlarged vascular spaces within the affected bone<sup>[2]</sup>. ABC's differential diagnosis includes other giant cell tumor variants viz Brown tumor, Giant cell reparative granuloma, and Osteoclastoma. GCT comprises multinucleated giant cells and is locally aggressive and occurs eccentrically in the epiphysis<sup>[3,4,5]</sup>. But ABC is a metaphyseal lesion. Surgical excision and bone grafting is the treatment of choice. The lesion is approached through anatomical approach and opened with a wide window and excised with curettage. Filling the remaining void with cancellous bone graft is the preferred treatment<sup>[6]</sup>. The present case posed a unique problem of lack of sufficient harvestable cancellous bone stock akin to her age. Hence we opted for a cortical bone graft from the ipsilateral fibula. She was 14 years old. Her riser grade was 4. We treated the

curetted area of the endosteal surface with carbolic acid to prevent a recurrence. We did not use any implant to fix the graft into the dead space. We chose the size of the graft to be slightly more than the resected bone length. Sagar Patel et al. published a case report in 2017 from Dhiraj General Hospital Piparia. They also used ipsilateral fibular graft for ABC of proximal ulna without treating the endosteal surface and fixing the graft with a k wire for 16 weeks. Their patient was a male aged 16 years. They reported non-recurrence over six months and achieved a complete range of elbow joints<sup>[7]</sup>.

### Conclusion

It is sporadic for the aneurysmal bone cyst to occur at the proximal ulna

Radiographs and MRI scans are required to confirm the diagnosis of ABC.

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