



GIANT CELL TUMOUR OF DISTAL END ULNA -RESECTION AND GOLDNER HAYES EXTENSOR CARPI ULNARIS TENODESIS

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Abstract : Introduction - Giant cell tumour is locally aggressive benign tumour occurring at epiphysis in mature skeleton. Knee joint and distal end radius are commonest sites affected. Distal end of ulna is unusual site of occurrence. Treatment depends upon the stage of disease. Case history- We describe a case of 28 year old male with giant cell tumour of ulna managed with excision of distal end of ulna without any stabilization of carpus with stabilization of proximal end with split transfer of Extensor carpi ulnaris tendon. Discussion- A literature review of GCT of distal ulna favors wide resection of ulna to minimize the recurrences. However there is no consensus as to whether stabilization or reconstruction is required or not and what is the optimal method of stabilization or reconstruction. However most of the authors would agree that stabilization of ulnar stump leads to improvement in functional outcome. We have got excellent oncological and functional outcome after wide resection of distal ulna and soft tissue stabilization using one half of the ECU tendon

Keyword : giant cell tumour, resection, extensor carpi ulnaris tenodesis

Introduction

The distal end of the ulna is an uncommon site for primary bone tumour. Giant cell tumour of bone is a rare, benign but locally aggressive tumour accounting for 3 to 5 percent of all primary bone tumours. GCT of the distal ulna is extremely rare accounting for approximately 0.45 to 3.2 percent of all cases of GCT. Wide resection of distal ulna with or without reconstruction or stabilization of ulnar stump is the recommended treatment for GCT in such cases. We present a patient with GCT of the distal part of ulna treated with wide resection followed by stabilization of ulnar stump using one half of ECU tendon.

Case Report

28 year old male presented with history of slowly increasing swelling at right wrist since last 9 months. No history of injury, pain and fever. On examination the swelling was present on distal aspect of ulna. Skin over the swelling was normal with no evidence of dilated veins, stretch mark or sinuses. On

palpation it was not tender, with no local rise of temperature. The swelling was 8 cm in length, arising from distal end of ulna but not involving the wrist joint. It was soft to firm in consistency, not fixed to overlying skin. Flexion and extension at wrist joint were full and painless with restriction of ulnar deviation. Rotational movements were normal suggesting non involvement of distal radioulnar joint. Radiograph of forearm with wrist showed a lytic lesion of distal ulna with ballooning of cortex without soft tissue extension. It was showing characteristic soap bubble appearance suggestive of giant cell tumour of distal ulna. Considering size, extent and Enneking's grading we decided to perform en-block excision of distal ulna.



Pre op Clinical photo



Pre op Xray1



Pre op x ray 2

Operative technique :

The tumour was exposed through a dorsal incision. The dorsal compartment of wrist was exposed. The tumour was exposed between extensor carpi ulnaris and flexor carpi ulnaris. The distal ulna along with 3 cm of normal bone was osteotomised. The tumour was excised along with triangular fibrocartilagenous complex to avoid incomplete tumour removal. The tendon of Extensor carpi ulnaris was identified and split distal to ulnar osteotomy. One insertion was kept intact and other one was used to stabilize the end of ulna through a hole in the stump. No attempt was made to reconstruct DRUJ. Tourniquet was released and hemostasis was achieved. The wound was closed in layers over suction drain. The limb was splinted till suture removal on 14th day.



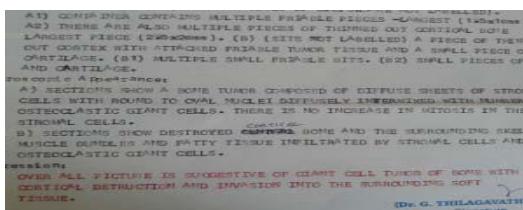
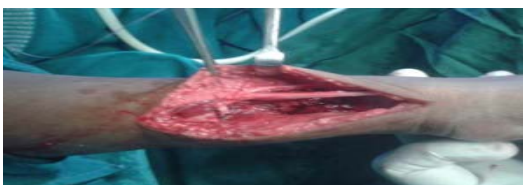
Skin incision



Tumour being resected



Drill hole made in ulna stump



Results :

Post operative X ray showed complete removal of tumour. There was no recurrence of tumour till 6 months follow up on clinical and radiological examinations. Ulnar subluxation of carpus and deformity of ulnar stump was not noted in recent x ray. Patient regained 80% percent of his preoperative range of motion



ROM



ROM



8 months follow up



Conclusion:

A literature review of GCT of distal ulna favors wide resection of ulna to minimize the recurrences. However there is no consensus as to whether stabilization or reconstruction is required or not and what is the optimal method of stabilization or reconstruction. However most of the authors would agree that stabilization of ulnar stump leads to improvement in functional outcome. We have got excellent oncological and functional outcome after wide resection of distal ulna and soft tissue stabilization using one half of the ECU tendon as described by Goldner and Hayes.

