INTRODUCTION

Giant cell tumour is a locally aggressive tumour of long-bones in adults in epiphyseal region.1 It occurs in 20 - 40 years old patients with slight female predominance, though rarely found in other age groups.2 Most common locations of this tumour in decreasing order of occurrence are distal femur, proximal tibia, distal radius and spine.3 It is a solitary, benign, locally aggressive tumour, less than 5% are malignant, only 3% show distant metastasis. Patients present with progressive pain, mass and pathological fracture. On radiographs, the lesions are eccentrically located lytic lesion in the epiphyses of long bones and usually abut the subchondral bone, though sometimes in metaphysis of skeletally immature patients.1 Most giant cell tumours are locally aggressive, but some are active and confined to cortex. Different treatment options are available depending upon stage of tumour. For active lesion, simple curettage or extended curettage with adjuvants, bone graft or bone cement is preferred.4 For aggressive lesion primary resection of tumour with or without reconstruction of site with fibular graft5 or endoprosthesys is used. Inoperable and metastatic lesions are treated by radiation or chemotherapy. Postoperatively, patient should be followed up regularly for recurrence.

We are reporting a case of 48 years old lady having a giant cell tumour in proximal radius. This is unusual regarding both age and location of GCT.

CASE REPORT

A 48 years old healthy lady noticed a mass below her right anterolateral elbow in February 2012. She consulted our department regarding the mass. Roentgenogram was taken which showed expansile lesion in the metaphyseal region of proximal radius with the rim of cartilage and ballooning of proximal radius (Figure 1). It was radiologically diagnosed as giant cell tumour. Her MRI was done which showed involvement of extraosseous structures including posterior interosseous nerve (Figure 2). She underwent an incision biopsy for confirmation of the diagnosis. She was then counselled for wide margin resection and informed consent was taken.

Elective surgery was performed in April 2012. Wide margin excision was performed without reconstruction. Posterior interosseous nerve could not be saved as it was encased inside the tumour, so had to be sacrificed. Peroperative and postoperative pictures of resected specimen (Figure 3) and remaining normal bone were taken. She did not have wound problems postoperatively but had loss of finger extension and weakness in wrist extension for which cock up splint and physiotherapy was advised.

She has been under regular clinical and radiological follow-up. Bone scan done 3 months after surgery did not show any recurrence. There are no clinical or radiological symptoms and signs of recurrence of tumour till her last follow-up visit in November 2012. Her wrist drop showed M3 grade motor recovery due to proximal innervation but fingers and thumb had M0 grade motor function on her last follow-up. Elbow was stable in all range of motion. Tendon transfer for her loss of wrist and finger function is being considered. She is reluctant to undergo any more procedure and is satisfied with current function with use of cock up splint.

DISCUSSION

Giant cell tumour is mostly found in third and fourth decade of life though it has been rarely seen in younger age groups also. It is locally aggressive tumour involving epiphyseal region of mature bones. Most of the tumours are found around knee region in distal femur, proximal

Giant Cell Tumour of Proximal Radius in a 48 Years Old Lady

Kashif Mahmood Khan, Muhammad Saeed Minhas, Mohsin Ali Khan and Anisuddin Bhatti

ABSTRACT

Giant cell tumour is a locally aggressive tumour of long-bones of epiphyseal region commonly occurring in adults aged 20 - 40 years. Most common location is distal femur, proximal tibia and distal radius. Different treatment options being used are curettage with bone graft or bone cement, resection with arthrodesis, reconstruction, radiation and chemotherapy. We are reporting a case of giant cell tumour of proximal radius in a 48 years old lady. It is very rare and only 4 cases have been reported in literature. It was treated by wide margin resection without reconstruction.

Giant cell tumour of proximal radius

tibia and distal radius. Different treatment options are used depending on the stage and location of tumour. Four cases have been reported so far in literatures which show unusual age and presentation in proximal radius. Akmaz et al., Mir, Singh and Song have reported giant cell tumour in proximal radius as reported here. Age of presentation in our case and that reported by Singh was almost same and outside usual age range while other patients were from usual age group.

In this patient, the giant cell tumour was extra compartmental invading surrounding muscles and posterior interosseous nerve, which had to be removed resulting in loss of extension of fingers, and some weakness in wrist extension due to resection of involved muscles. Cases reported by others were also extra compartmental tumours. Mir did marginal resection and Singh did above elbow amputation. Song did en-bloc resection with reconstruction of proximal radius with polyethylene insert, screw, pins and bone cement. Akmaz et al. treated the intraosseous tumour in their case by curettage and bone grafting.

In this patient on last follow-up, she had nearly complete range of flexion/extension movements at elbow, supination/pronation and improvement in wrist and finger extension after extensive physiotherapy. There was no recurrence. She is satisfied with her treatment. For her residual loss of function, authors are considering muscle transfer to give her improved wrist, finger and thumb function.

Wide margin resection of extra compartmental tumour is good option for giant cell tumour of proximal radius with no recurrence, no complications and minimal disability.

REFERENCES