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Dr. Prashant Madan Mohan
Department of Orthopaedic
Surgery, Chettinad Hospital and
Research Institute,
Kelambakkam, Chennai, Tamil
Nadu, India

Dr. Arun Kumar KV
Consultant orthopaedic surgeon,
Department of Orthopaedic
Surgery, Chettinad Hospital and
Research Institute,
Kelambakkam, Chennai, Tamil
Nadu, India

Dr. Prem Regis PA
Post graduate orthopaedics,
Department of Orthopaedic
Surgery, Chettinad Hospital and
Research Institute,
Kelambakkam, Chennai, Tamil
Nadu, India

Dr. Rahul Gusain
Post Graduate Orthopaedics,
Department of Orthopaedic
Surgery, Chettinad Hospital and
Research Institute,
Kelambakkam, Chennai, Tamil
Nadu, India

Prof. M Narayana Reddy
HOD Orthopaedics, Department
of Orthopaedic Surgery,
Chettinad Hospital and Research
Institute, Kelambakkam,
Chennai, Tamil Nadu, India

Corresponding Author:
Dr. Prem Regis PA
Post Graduate Orthopaedics,
Department of Orthopaedic
Surgery, Chettinad Hospital and
Research Institute,
Kelambakkam, Chennai, Tamil
Nadu, India

A rare case of giant cell tumour in proximal femur: A case report

Dr. Prashant Madan Mohan, Dr. Arun Kumar KV, Dr. Prem Regis PA, Dr. Rahul Gusain and M Narayana Reddy

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Abstract

Giant cell tumors are most common benign tumors of bone. The most common sites are distal femur, proximal tibia, distal end of radius. The proximal femur is one of rare site of Giant cell tumor. Here we present a case of giant cell tumor of proximal femur in 50 year old male. We confirmed it by biopsy and patient underwent extended curettage with bone grafting of proximal femur along with proximal femur nailing. We are presenting it as a case report.

Keywords: GCT, giant cell tumor, proximal femur, benign tumors of bone

Introduction

Giant cell tumors (GCT) comprises about 5-10% of all the primary bone tumors [1]. Even though giant cell tumor is considered benign it is well known for its aggressive behavior locally. Giant cell tumours also have potential for recurrence and also metastasis to lungs. Thus the recurrence rate after curettage was reported to around 60 percent [1]. This has lead to use of adjuvants like the liquid nitrogen, high speed burr, hydrogen peroxide along with the curettage. Also 1-3 percent of giant cell tumors are primarily malignant or may undergo malignant transformation [2]. The most common site of GCT is distal end of femur followed by proximal tibia and distal end of radius.

Case report

50 year old male came with chief complaints of pain over right hip for one month duration. Pain was intermittent in nature and relieved on taking analgesics. There was no history of any trauma or change in gait due to the pain. Patients had no co morbid conditions. A routine x-ray pelvis was taken (fig 1) which showed a lytic lesion over right proximal femur. CT scan (fig 2) was taken to know the extent of the lesion and patient was suspected to have giant cell tumour. Patient first underwent core needle biopsy with jamshidi needle which confirmed it to be a giant cell tumour (fig 3). The patient underwent extended curettage and proximal femur nailing and the hollow space was packed with bone grafting from the iliac crest (fig 4). Liquid nitrogen was used as an adjuvant after wide curettage of the site and high speed burr was also used to remove remnants.



Fig 1: Pre-operative x-rays showing osteolytic lesion proximal femur

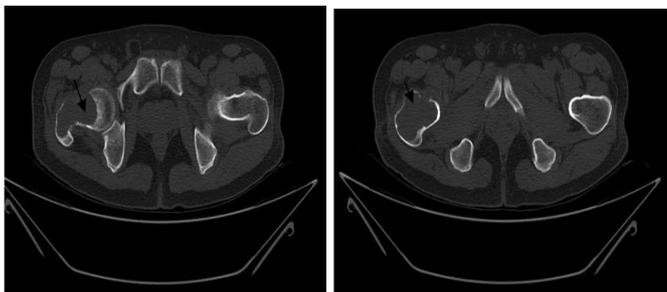


Fig 2: CT- scan showing extent of the lesion

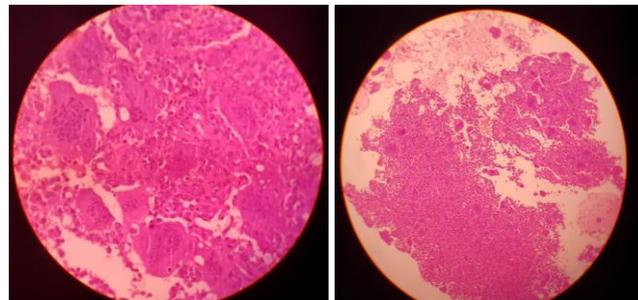
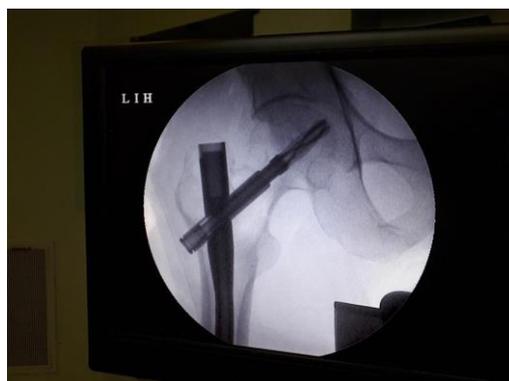


Fig 3: Histopathology pictures



Fig 4: Intra operative pictures and removed tumor tissue



C. Arm image intra-operatively



Fig 5: Post operative X-rays

Discussion

The treatment of GCT is usually surgical. The size of the tumor, location, age of the patient, stage of tumor determines the prognosis of patient [3]. GCT is more common in the distal end of femur, proximal tibia, distal end of radius and is common between 20-40 years [4]. But in our case it is seen in proximal end of femur which is very rare. There are various modalities of treatment available for the GCT proximal femur like reconstruction of proximal femur using prostheses, Total hip arthroplasty, modular titanium endoprostheses [5-7] GCT of proximal femur if diagnosed are treated most of times by resection and reconstruction by prosthesis, a case report by

Paulo silva *et al.* [8] a similar case of proximal femur GCT where they used endoprosthesis for the proximal femur. In our case we did an extended curettage of the lesion, proximal femur nailing and packing of remaining hollow space with bone graft from iliac crest and we achieved good results.

Conclusion

Proximal femur is not a common site for occurrence of Giant cell tumour. There are various modalities of treatments options available which aim at resection of the tumour completely. In the present case we achieved satisfactory results by extended curettage with proximal femur nailing. Thus the aim of GCT treatment should aim to prevent recurrence and also salvage the limb.

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