

CASE REPORT

A RARE PRESENTATION OF GCT OF PATELLA: CASE REPORT

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ABSTRACT: Patellar neoplasms are rare. Patella is an uncommon site for giant cell tumour. We report a rare presentation of giant cell tumour of the patella in a thirty year old female manual labourer who presented with pain and swelling of the knee. The first clinical symptom was anterior knee pain. The tumour mass restricted her daily activities. We present a case of this rare entity along with its clinical and radiographic features. To relieve her of her symptoms she was operated and the tumour mass was excised. Autogenous and synthetic graft mix was used to pack the defect. At the end of one year follow up patient is pain free and is able to carry her daily activities.

KEYWORDS: Autogenous graft, GCT patella, Hydroxyl apatite crystals.

INTRODUCTION: Patellar neoplasms are rare. The majority of these tumours are benign with giant cell tumour being the most common primary patellar neoplasm. Other reported primary tumours of patella include chondroblastoma, chondroma, aneurysmal bone cyst, osteoid osteoma, and osteochondroma. The most common malignant tumours of patella are metastases and the most common primary patellar malignant tumour is osteosarcoma. The treatment guidelines for patellar tumours are not very well described in the literature because of the paucity of cases.

CASE REPORT: A thirty year female manual labourer hailing from Srikakulam presented to our OPD with chief complaints of pain, swelling over the anterior aspect of right knee since one year. Her complaints started insidiously about one year back. Pain and swelling of the knee compelled her to limit her daily activities over the next one year. She has been on medication (analgesic) for the same over the past one year. Her regular work and activities were affected due to the nature of her complaints.

Upon examination swelling was noticed over the anterior aspect of knee and supra patellar region and was extending inferiorly below the patella. She was unable to extend her knee. Other test was normal/negative. No clinical signs suggestive of any pathological fracture.

Radiological evaluation showed a lytic lesion involving the patella consistent with features suggestive of giant cell tumour. MRI scan of the knee joint and biopsy was done.

Procedure: The patient was operated under spinal anaesthesia. With the patient in supine position and under tourniquet a vertical midline incision over the anterior aspect of right knee was made. Through this anterior approach to knee, after exposing the patella a rent was made in the antero inferior part of patella. All tumour tissue was evacuated through the rent. Phenol cauterization was done to kill any remaining tumour cells and avoid local recurrence.

Autogenous Iliac crest bone graft mixed with synthetic graft (hydroxy apatite crystals) was used to pack the defect created following removal of the tumour mass. The extensor apparatus

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was repaired before closed of the wound was done. No drains were kept in the wound. AN above knee slab and bandage was applied and maintained for a period of two months. Gradual passive and active range of knee movements was then started after the initial period of two months. Patient was pain free at the end of two months and weight bearing was allowed at this time after surgery.

Post operatively the patient was followed up regularly at 4 weeks, 8 weeks, and 24 weeks and at the end of one year. At each follow up clinical assessment of the patient was carried out and follow up x-rays were taken to ensure identification of any local recurrence.

At the end of one year patient was pain free, had no complaints was able to carry her daily activities.

DISCUSSION: Giant cell tumor of the patella is very rare indeed, seen typically in only a few sites such as distal femur, proximal tibia and distal radius.^[1] Giant cell tumours account for 5% - 9% of all primary bone tumours. GCT presentation at other sites is less common. Of all giant cell tumours in the skeletal system, less than 1% occur in the patella.^[2] Very few reports of GCT of the patella are reported till date. They typically present in the 3rd decade of life.

Features in the patella are not different as compared to GCT occurring elsewhere in the skeleton. They are usually larger in size as compared to chondroblastomas and have a geographical pattern of bone destruction and involve more than 75% of the patella. These tumours are locally aggressive, and pulmonary metastases have been reported in 1- 2% of giant cell tumours. Pathologic fractures are not uncommon in GCTs of the patella and are reported to occur in 11% to 37% of patients.^[3] They have also been reported to occur in greater frequency in patients with multicentric GCTs.^[4]

Though this tumour has been long known as the commonest tumour of the patella worldwide, the diagnosis has always remained controversial. While in the developed world pain may be the only presenting symptom for which the patient seeks medical attention at a very early stage the scenario in the developing nations are very different due to ignorance, cost constrains and lack of good medical facilities.

Curettage with a combination of cryosurgery may be attempted in early stage of the disease but it still carries the risk of recurrence.^[5] Resection may be the only form of treatment left in advanced cases which offers good to excellent functional results. The risk of recurrence has also been less as compared to the other modalities of treatment ^[6]. Follow up in such cases have shown long term good function and no recurrence with patellar resection thus emphasizing the role of patellectomy in such advanced cases.

CONCLUSION: In conclusion, giant cell tumor of the patella is very rare. It can occur in a sesamoid bone such as the patella. Treatment of choice is based on the nature of lesion and its extent. Local excision of the tumour can be a useful option if properly planned and executed to avoid recurrence. Proper repair of the extensor mechanism is essential to obtain satisfactory results following surgery. Post-operative rehabilitation plays a key role in determining the functional outcome attained by the patient.

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