



Unusual Location of Giant Cell Tumor of the Tendon Sheath .. A Case Report

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ABSTRACT

Locking of the knee is a one of the commonest orthopedic outpatient presentation. This patient usually need magnetic resonance imaging (MRI) when there is suspected lesion in the soft tissue clinically. Meniscal tears is the first differential diagnosis when accompany with painful knee. ^(1, 2)

Giant cell tumor (GCT) is benign a localized nodular tenosynovitis often occur in the tendon sheath , Mostly involve the hand tendons in middle age group between 30 and 50 years old , female affect more than male. ^(3,4) The WHO defines two well-known kinds of giant cell tumor: (1) pigmented villonodular synovitis (generalized type), which

mainly involve the joints of the lower limb and (2) giant cell tumor of the tendon sheath (localized type) , which usually involve the figures and small joints rarely the large one. ^(5, 6)

This case presented as unusual appearance of GCT arising from the suprapatellar synovial pouch. Informed consent obtains from the patient.

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Case presentation

A 42 year-old fatty male (BMI 32) consult me with a six months history of pain in his left knee and sometime locking gradual in onset increase during walking and at night, the symptoms worse during climbing ladders . The patient denied any type of trauma during last year. The patient on non-steroidal anti-inflammatory medication for last six months and diagnosis as osteoarthritis.

Clinically, a painful antalgic gait was observed. Local examination revealed mild swelling, slight effusion and tenderness above the patella with a full range of movement. There was a tender mass, ill define palpable swelling located about one centimeter above the patella due to present of subcutaneous fatty tissue. The mass about 6-7 cm diameter, mobile in all direction ,soft in

constancy with slight tenderness and normal range of movement of the left knee. Distal neurovascular assessment revealed normal examination.

Plain X-ray antero-posterior and lateral radiographs showed mild osteoarthritic changes over the medial side of knee joint (Figures-1). Then the patient send for magnetic resonance imaging (MRI) which shown a well-localized soft tissue mass in suprapatellar pouch immediate above the patella, with thickened synovium, low signal intensity on T1 and T2 images and reduced enhancement. (Figures 2)

I decide to performed excisional biopsy and examine the mass histopathologically to rule out malignant pathology



Figure 1: X-Ray of the left knee.

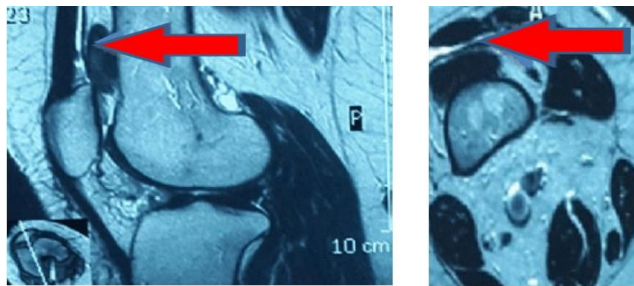


Figure 2: Left knee MRI shown the lesion just above the patella (arrow) sagittal and coronal sections.

Surgical operation details

Under spinal anesthesia, a tourniquet was applied and standard surgical incision to the medial side of upper part of the left knee was performed after full aseptic precaution and prophylactic antibiotic inform of 1 gram 3rd generation cephalosporin half hour before surgery

After opening the suprapatella pouch careful assessment of the pocket, and raised area was detected and palpated to identify the borders of the mass and the consistency which was rubbery in nature. After incised the suprapatellar synovium a yellow lobulated mass was clearly appear and become prominence from the incision and it adherent to synovium, then excise the mass with the adherent synovium.

Hemostasis was obtained and closure in layers, dressing and removal of tourniquet and back slab cylinder were applied for soft tissue rest.

The tumors remove in one piece about 5cmX3 cm (Figures 3).

Grossly the mass appear a well-defined mass with a yellowish red color.

Microscopic appearance showed a collagenous stroma comprising mononuclear fibrohistiocytic cells (giant cell tumor).

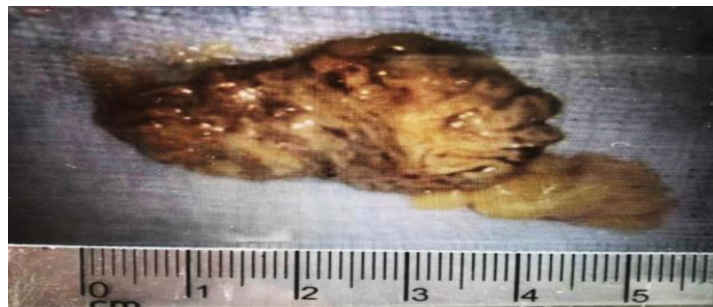


Figure 3: Gross appearance of the tumor.

DISCUSSION

Giant cell tumor is a gradual developing soft tissue tumor from months to years ⁽⁷⁾. The nature of this tumor is controversial; some believe a neoplastic, others consider it a non-neoplastic tumor. There are a few theories regarding the pathogenesis of giant cell tumor, like trauma, infection, vascular disorders, lipid metabolism disorders,

osteoclastic production, inflammation, neoplastic disorders, but the commonest theory is a reactive or hyperplasia accompanying with an inflammatory manner ^(8, 9).

GCT is difficult to diagnosis in large joints due to nonspecific few symptoms ^(2, 10). Several disorders are including in the differential diagnosis like malignant fibrous

histiocytoma, ganglion cyst, lipoma, synovial sarcoma, and liposarcoma

The common complaining of patients is local painless masses and may be associated with anterior knee pain with or without locking^(5, 11). X-ray no helpful in diagnosis⁽¹²⁾ while MRI is the diagnostic tool.

GCT had high recurrent rate about 10-20 % it occur even after complete excision⁽⁴⁾. Thus, the patients should be follow up to record any recurrent rate ,actually our patient follow for six month without any sign of recurrent by MRI ,this mean that complete removal of the tumor play important tool for recurrent and the need for the radiotherapy⁽¹³⁾

CONCLUSION

Giant cell tumor of the suprapatellar area is rare, mainly when associated with pain in an osteoarthritic knee. The clinical improvement and the absence of tumor recurrence by MRI after six months post-surgery although it's short follow up reveal the importance of complete surgical excision.

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