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Case Report

A case of para meniscal cyst of knee managed arthroscopically

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Abstract: Lateral Meniscal cysts are more common than the medial meniscus cysts, almost 10 times more common [1]. Trauma is the main etiology for meniscal cysts. 20 years old female came with complaints of pain and swelling the inner aspect of left knee, had a previous history of trauma 2 years back. On examination swelling was 1x2 cm on the medial aspect of left knee, which was firm in consistency. MRI diagnosed a tear in the posterior horn of the medial meniscus with a para meniscal cyst adjacent to the medial meniscus. Arthroscopically through posterior trans-septal approach, medial para meniscal cyst was surgically resected. If a meniscal cyst is arising from the posterior horn of the medial meniscus, arthroscopic posterior trans-septal decompression and resection is a suitable surgery.
Keywords: Para meniscal cyst, medial meniscal cyst, trans-septal approach, arthroscopic meniscectomy.

INTRODUCTION

Meniscal cysts are rare. When the meniscus is torn, a small cyst can form adjacent to the tear. It is thus a part of the body's healing response. However the cyst can be a cause of discomfort noticeable over the joint line where the meniscal cyst occurs. Usually trauma to the knee is the cause of the tear, but in the aged degenerative tears also causes cyst formation [2]. Lateral meniscal cysts are more common than the medial meniscus cysts, almost 10 times more common. Trauma leads to hemorrhage formation within the meniscus which leads to mucoid degeneration. Finally local necrosis and mucoid degeneration forms a cyst. Later extrusion of synovial fluid occurs through the tear of meniscus. Pain is especially in the erect posture and tenderness along the joint line, are the usual presenting clinical symptoms. Cysts usually become more apparent when the knee is extended. Rarely it may present with symptoms of knee locking. When the cyst extends beyond the meniscal margins they are termed as para meniscal cyst [3]. The cysts of medial meniscus usually are along the posterior aspect of posterior horn and those of lateral meniscus are along the anterior or anterolateral aspect of the anterior horn or body. Long standing large cysts may cause erosions or scalloping of the adjacent bone [4].

The differential diagnosis of the cyst include synovial cyst, bakers cyst[5], ACL and PCL ganglion cyst, Hoffa fat pad ganglion cyst, periosteal ganglion cyst, nerve sheath ganglion cyst, common peroneal nerve sheath ganglion cyst, Sub articular degenerative cyst of Geod, intraosseous ganglion cyst, insertional cyst and infective cyst[6].

CASE PRESENTATION

20 year old female came with complaints of pain and swelling the inner aspect of left knee. She had a history of trauma 2 years back. On examination a swelling of 1x2cm seen around the medial knee joint line, which was firm in consistency. There was low grade pain and it was insidious in onset. Initially swelling was not there and it had developed after one year. Patient had difficulty in flexing the knee. Plain x-ray of knee antero-posterior and lateral views showed soft tissue swelling at the location. MRI study revealed a horizontal tear in the posterior horn of the medial meniscus and a sub-adjacent para meniscal cyst.

PROCEDURE:

Anesthesia fitness was obtained and patient posted for para meniscal cyst resection arthroscopically. Under spinal anaesthesia patient was positioned in supine, and with the knee in 90^0 flexion. Entry portals were made. Anterior cruciate, posterior cruciate ligaments and lateral meniscus were found to be intact. A cyst like lesion was found in the edge of the posterior part of the medial meniscus, but the surface of the medial meniscus was found to be intact. For making a trans-septal portal, postero lateral and postero medial

portals were created. A rod with sheath was inserted in to the septum, through the posterolateral portal and the arthroscope was inserted through the posteromedial portal. The septum was perforated with the help of k-wires and then switching rod was inserted from the posterolateral portal to the posteromedial portal through trans-septal port. Arthroscope and instruments are easily interchangeable though the posterior portals because of the trans-septal port. Viewing from the posteromedial port the cyst and posterior septum was resected by a punch and motorized shavers which were inserted from posterolateral port. Patients pain was relieved post operatively and movements restored. In 24 months of follow up. There was no evidence of recurrence.

Fig: 1(a) **Fig: 1(b)**

MRI of left knee demonstrating the cystic lesion the saggital and coronal cuts

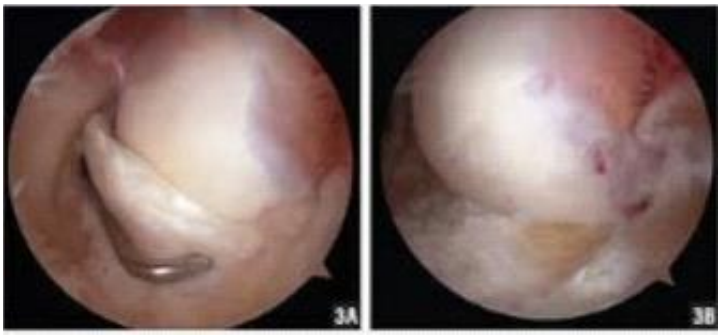

Fig: 2(a) **Fig: 2(b)**

Arthroscopic picture- pre and post cystectomy

DISCUSSION

The sizes of the medial para meniscal cyst are <10mm (range from 0.4mm to 10mm) [7]. Earlier meniscal cyst were managed by open arthrotomy and resection. This carries a lot of complications like infection, damage to the meniscus and surrounding structures [8]. It also takes longer time for recovery and mobilization of patient. In our case, through arthroscopic resection of medial para meniscal cyst by a posterior trans septal approach, has shown good results without any post -operative complications, which was done as per technique described to Howe TS[9].

However small para meniscal cysts are asymptomatic. Large cysts only present with pain and swelling. Most of the meniscal cysts (90%) occur adjacent to the meniscal tears, especially with horizontal tears. Sometimes these cysts may be misdiagnosed as Morrant Bakers cysts if their size is bigger. Baker's cysts are usually associated with osteoarthritis and often resolve spontaneously. MRI is the best modality for distinguishing between other intra-articular knee cysts and meniscal cysts.

CONCLUSION

If the meniscal cyst is arising from posterior horn of the medial meniscus, a posterior trans-septal approach is the best approach for resection of the meniscal cyst arthroscopically.

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