Journal Homepage: -www.journalijar.com
INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)
Article DOI:10.21474/IJAR01/8072
DOI URL: http://dx.doi.org/10.21474/IJAR01/8072

RESEARCH ARTICLE

A RARE PRESENTATION OF A MULTI-SEPTATE EXTRA-ARTICULAR GANGLION CYST AROUND THE KNEE JOINT.

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Manuscript Info

Manuscript History
Received: 11 September 2018
Final Accepted: 13 October 2018
Published: November 2018

Keywords:
Ganglion cyst ,extra articular ganglion cyst, knee joint ,MRI (Magnetic resonance imaging).

Abstract

A Multi-septate Extra-Articular Ganglion Cyst At Anterioinferio medial region of Knee joint Is Abstracted and management with surgically excision .

Ganglion cysts are benign soft tissue swellings commonly found in the wrist. The etiology of ganglion cysts is unknown or traumatic. Ganglion cysts can occur at any joint or tendon sheath, but they most often present in the dorsum of the wrist at the scapholunate joint, 75% connect with the dorsal scapholunateinterosseous ligament, other sites of ganglion are dorsal carpal ganglion ,second and third CMC joint,DIP (mucous cyst),flexor sheath,guyon`s canal ,ulnar carpus, volar carpal ganglion ,volar retinacular ganglion but rarely to originate in the knee joint . Ganglion cysts are filled with gelatinous and viscous fluid .Many patients will be asymptomatic cysts for months or even years . In general, ganglion cysts around the knee joint are classified into intra-articular, extra-articular soft tissue, periosteal, and intra-osseous ganglion cysts. Extra-articular ganglion cysts usually appear as uni- or multi-septate cysts on magnetic resonance imaging (MRI).

Introduction:-

Ganglion cysts of the knee arise from both the cruciate ligaments and menisci as well as from the popliteal tendon, alar folds, and subchondral bone.

Case Report:-

A 51-Yr Old Male pt . with 18 months history of painless swelling over medial aspect of right knee joint .there was no history of trauma or any other exacerbating factor.pt also had history of analgesic use since 1 year due to intermittent pain associated with difficulty in walking.

Local examination around knee joint shows trans illuminated fluid filled cyst 8cm *6cm with soft consistency , of motion

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The MRI RIGHT KNEE showed Two lobulated T1 hypotense , T 2 STIR hypertensemultiseptated fluid lesion noted adjacent to the right knee over the anteromedial aspect of femur above the joint line seen adjacent to the meniscal lesion measuring 7.6cm in AP dimension and another 2.5 cm lesionanterior to it.para meniscal cyst at anterior horn of medial meniscus is noted. Rest of ACL,PCL,both collateral ligaments and lateral meniscus are normal . We sent the excised specimen of the cysts for histopathological examination and confirmed the presence of extra-articular soft tissue ganglion cysts in all cases. On gross examination, all specimens showed cystic mass and on histology, the findings were consistent with ganglion with myxoidchange .

Figure1:-The above arrow mark shows right knee extra articular ganglion cyst .

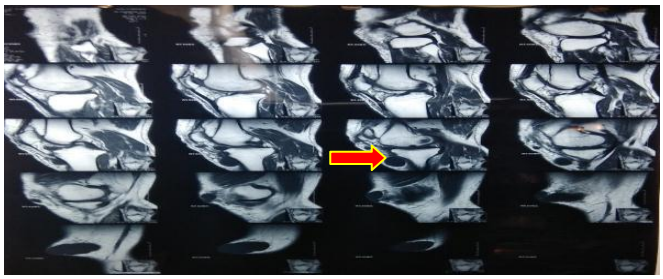

Figure 2:-The arrow mark shows preoperative hypointense lesion noted in MRI T1 WI Around right knee joint.

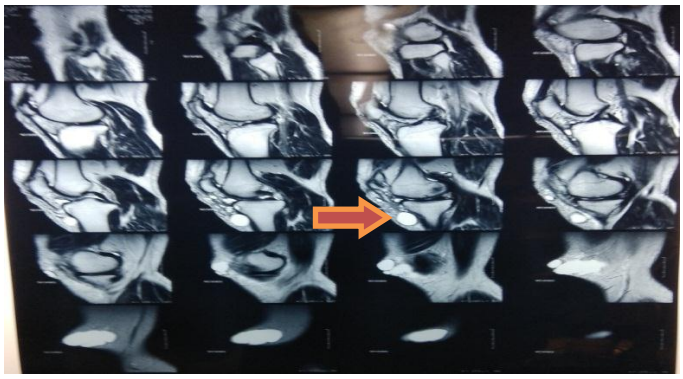

Figure3:-The preoperative magnetic resonance image (MRI) T2-WI Rt knee Shows an Extensive T2- Hyperintense Lesion.

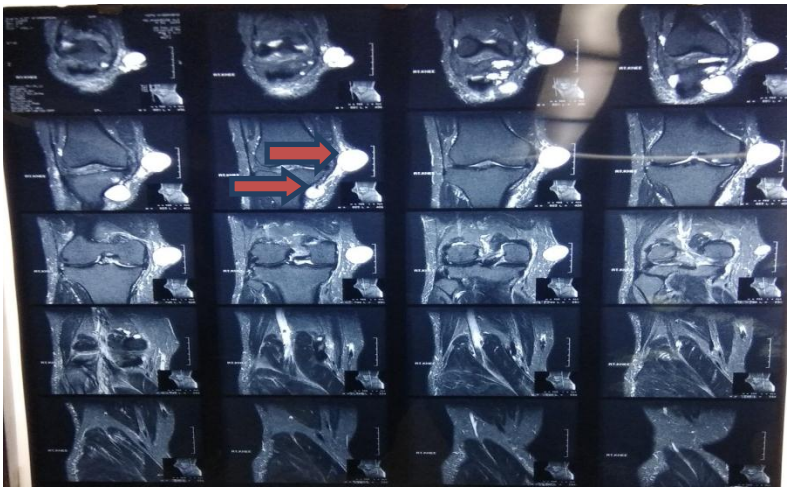

Figure4:-Two mulitiseptated lesions as shown in arrows in pre operative coronal Plane MRI T2WI.

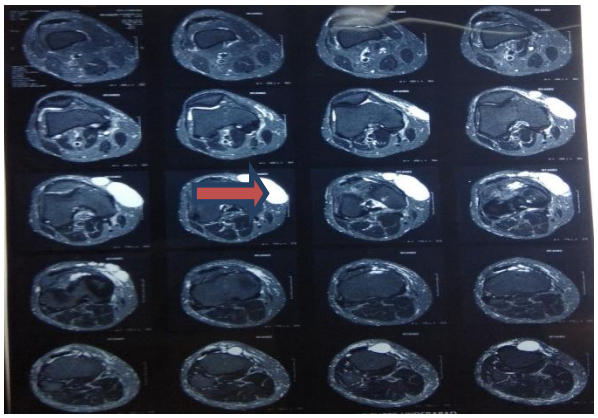

Figure5:-the arrow mark shows two hyperintense lesions in Axial view of T2WI Magnetic resonance imaging (MRI

Figure6:- intra operative image shows incision given around ganglion cyst .

Figure7:-the above image shows incision extending to deep fascia .

Figure8:-The above image shows complete excision of ganglion cysts (two) with cyst wall.

Figure9:-Excised two ganglion cysts as shown in above image.

Discussion:-

A ganglion cyst is a benign cystic mass containing clear, highly viscous fluid that is rich in hyaluronic acid and other mucopolysaccharides within a dense fibrous connective tissue wall without a synovial lining. Cystic lesions around the knee may present with pain, swelling, and discomfort around the knee. MRI of the knee joint helps to confirm the diagnosis of cystic lesions around the knee joint. Extra-articular ganglia may be located in any of the extra-articular soft tissues around the knee, including the joint capsule, tendons, ligaments, busae, muscles, and nerves. They rarely communicate with the knee joint. Albeit rare, the detection of a communication with the joint capsule is

very important in planning surgery as a failure to remove the capsular components of these cysts may lead to a recurrence.

Benign cysts like ganglion cysts can be very well detected on MRI as T2 weighted hyperintense defined lesions without contrast enhancement. A septum membrane inside the cyst visualized with MRI should be considered as a confirmation of the diagnosis. Ganglion cysts may have a definable connection to the joint, which can be visualized well on MRI.[1] However, the detection of joint connection is not possible in all cases. The connection to a joint seems however to be the most important mechanism for the development of ganglion cysts. The degree of intraarticular pressure is an important factor as well, which causes the enlargement of the ganglion cyst. Furthermore a valve mechanism supports the development of these cysts. During surgery it is important to identify the connection to the joint and to remove it as well as the ganglion cyst itself. In addition, the relationship to the knee joint is important in order to evaluate the presence of associated intraarticular diseases.[7]

The decision for surgery should be considered in symptomatic cases or if the patient because of cosmetic reasons wishes it.

Conclusions:-

open cyst excision with ligation of the communicating orifice for the treatment of extra-articular ganglion cysts around the knee joint showed satisfactory clinical outcomes with a low recurrence rate. For adequate treatment of extra-articular ganglion cysts around the knee joint, preoperative MRI evaluation and arthroscopic management of intra-articular pathologies prior to open cyst excision should be considered to diagnose and treat any associated intra-articular pathologies and communications with the knee joint.Trauma or micro-trauma may be an important cause of ganglion cyst formation. Surgery should be performed in symptomatic cases. Before surgery, MRI can confirm the cystic structure of these lesions. The relationship to the joint is important for surgery and for evaluation of the joint for the presence of associated intra-articular diseases.

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