Clinical Image

Intra-articular ganglionic cyst of anterior cruciate ligament: A very rare entity

*Corresponding Author: Rajaram Sharma

Department of Radio-Diagnosis, Pacific Institute of Medical Sciences, Udaipur, Rajasthan, India.

Email: hemantgalaria13@gmail.com

Description

A 27-year male presented to our orthopaedic department with complaint of pain in left knee joint on long standing or running since three months. The pain increased with deep flexion. There was no history of trauma or any systemic illness. He was advised X-ray of the left knee joint, which turned out to be normal. For further evaluation, he underwent multiparametric MRI scan of the left knee. MRI demonstrated a well-defined, round to oval, lobulated, loculated abnormal intensity lesion measuring about 17 X 16 X 23 mm in the inter-condylar notch adjacent to ACL. The lesion appears hypointense on T1WI, hyperintense on T2WI and proton density fat saturation (PDFS) sequence. (Figure 1). The lesion is seen extending posterosuperiorly in the intercondylar notch (Figure 2). The diagnosis of ACL cyst was made, and the patient was prescribed analgesics along with rest. He had near complete resolution of his symptoms in the next follow up and no signs of any recurrence till the writing of this article.

A ganglionic cyst is an umbrella term for a wide range of histologic diagnosis. An intra-articular ganglionic cyst is a rare finding, often found incidentally. ACL ganglionic cysts have an incidental detection rate of about 1.3% on magnetic resonance imaging (MRI) [1]. There are several theories regarding the pathogenesis of ACL ganglion cysts like degenerative changes in connective tissue after trauma, herniation of synovial tissue and synovial tissue ectopia. Most of the ACL cysts are asymptomatic, but the patient may present with pain in the knee, restriction of movements, swelling around the knee and knee locking [2]. If symptomatic, these are usually resected with a very low rate of recurrence. On MRI, the ganglionic cyst appears hypointense on T1 weighted images (T1WI) but maybe slightly hyperintense when there is high proteinaceous content or haemorrhage within the ganglia. On T2/STIR, these ganglia have high signal intensity. The choice of treatment usually depends on the severity of symptoms. The asymptomatic patients or less severe symptoms are better left untreated. Surgical interventions include ultrasound (USG) / computerized tomography (CT) guided aspiration or open surgeries [3].

Figure 1: Unenhanced MRI left knee joint. (A & B) Saggital sections of T1WI and T2WI showing a round to oval lesion appearing hypointense on T1 and hyperintense on T2 respectively in the intercondylar notch (white and black arrows)adjacent to ACL (asterixis). (C, D) Coronal sections from the posterior part of the intercondylar notch of T2WI and PDFS sequences, respectively showing postero-superior extension of the lesion in the intercondylar notch (black arrows). The lesion demonstrate hyperintense signal on the PDFS images.
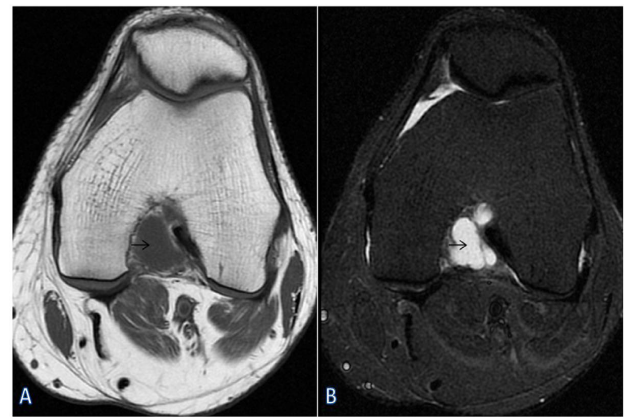
Figure 2: Unenhanced MRI of the left knee joint, axial sections through superior part of the intercondylar notch. (A & B) Images demonstrate hypointense signal of the lesion in the intercondylar notch on T1WI while lesion appears multilobulated and multiloculated with hyperintense signals on PDFS sequences suggestive of superior extension of the lesion in the intercondylar notch (black arrows).

Learning points

1. ACL ganglionic cysts are an incidental finding but an important differential in the causes of chronic knee pain.

2. ACL ganglionic cysts can resolve with conservative measures, but surgical excision is the treatment of choice.

3. MRI is the modality of choice for the diagnosis of this entity.