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Non-Surgical Management of Fabella Syndrome.

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Abstract: *Fabella is a sesamoid bone present in around 39% of the population. But sometimes the fabella is painful, and this is termed as a fabella syndrome. Management options vary from radical treatments like surgical excision with the reconstruction of the posterolateral corner of the knee to more conservative methods like steroid injections, splinting, analgesics or physiotherapy. We present here our experience of managing 3 such cases conservatively.*

Keywords: *Fabella, Fabella syndrome, sesamoid, knee pain.*

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I. Introduction:

Fabella is a sesamoid bone present in around 39% of the population [1] with a somewhat higher incidence reported in Asian populations[2]. 50% of cases are bilateral. It is more commonly reported in men than in women and in older individuals than in younger individuals. The fabella is a sesamoid bone and is embedded in the tendon of the lateral head of the gastrocnemius muscle behind the lateral condyle of the femur. It is an accessory bone and is considered as an anatomical variation[3]. It was initially reported in the literature and termed as "sesamoid douloureux" by Lepoutre in 1919. Fabella is Latin for "little bean". Individuals with a fabella may also have a fabella-fibular ligament that originates on the fabella and inserts onto the proximal end of the fibula (or ligament of Vallois)[4]. This ligament is also hypothesized to take part in the stability of the knee joint. Fabella is a normal anatomical variant and is not a pathological entity. But sometimes the fabella is painful, and this is termed as a fabella syndrome. "The fabella can lead to posterolateral knee pain either due to cartilage softening (chondromalacia fabellae) or other osteoarthritic changes on its articular surface."[5] Management options vary from radical treatments like surgical excision with the reconstruction of the posterolateral corner of the knee to more conservative methods like steroid injections, splinting, analgesics or physiotherapy. The superiority of any of these methods over each other or even the success of these individual methods hasn't been proven. We present here a series of 3 cases which we managed by physical therapy and the results of this line of management.

II. Material and Methods

All 3 cases were adolescents. 2 males and 1 female presented to the OPD between January 2015 and December 2018 with varying periods of pain ranging from 8 months to 12 months. Clinical symptoms were that of posterior knee pain. The pain was exacerbated in all the 3 cases on climbing stairs or walking for prolonged periods. Clinical signs included tenderness, exacerbation of pain on full extension of the knee, sitting cross-legged, squatting or extreme physical activities. In all the 3 cases the fabella was palpable and tenderness was elicitated. Clinical tests for instability or meniscal injury were negative while radiographs showed well-defined rounded lesions - suggestive of a sesamoid bone. All other common causes (both intra- and extra articular pathologies) possibly causing the posterolateral knee pain were excluded. Manual therapy was employed (cover of analgesics for 5 days) in all the 3 cases. Mobilization of the fabella was done along with the soft tissue of the lateral gastrocnemius followed by medial, lateral and inferior glides of the fabella.

X-ray showing unilateral fabella in the first subject in the left knee with osteophytes in the right knee.

III. Results:

All the 3 patients reported immediate reduction of posterolateral knee pain within 5 days off initiation of manual therapy. Recurrence was not noted in any of the 3 cases, with each case having more than 1 year of follow up. All the 3 patients were evaluated with the Visual Analogue Scale (VAS), and International Knee Documentation Committee Score (IKDC). Results were excellent in all the 3 patients.

IV. Discussion:

Fabella syndrome is a rare case of postero-lateral knee pain. Various other differential diagnoses should be kept in mind and ruled out before coming to a confirmation of this syndrome. Although this condition is very rare , it had been reported in various clinical situations, including arthroplasty and Tibial osteotomy. Various modalities of management have been advocated with good results including manual therapy, eswt, arthroscopic resection, fabellectomy, or arthroscopic osteotomy[5,6]. Out of these manual therapy appears to be a non invasive, least complicated, simple, cheap and universally available modality of management.

V. Conclusion:

Fabella syndrome is a very rare pathology of posterior-lateral knee pain. A high degree of suspicion is required for its correct diagnosis. Although surgical excision is a simple and relatively minor surgical procedure, the condition can be very successfully treated by non-surgical methods with only physical therapy.

Conflict of interest:

The authors declare that they have no conflict of interests.

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