

Arthroscopic resection of symptomatic synovial plica of the knee

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Dizdeki semptomatik sinovyal plikanın artroskopik rezeksiyonu

Diğer intraartiküler patolojilerin eşlik etmediği semptomatik mediopatellar ve inforapatellar plikada artroskopik rezeksiyon uygulanan hastalar taranmıştır. Ortalama yaşı 25.1 olan, 13'ü kadın, 8'i erkek 21 hasta. Semptomatik plikaların 18'i mediopatellar sinovyada, 3'ü infrapatellar medial sinovyodur. Klinik deneyimize dayanarak ameliyat öncesinde spesifik bir tanı konduğunda artroskopi sırasında, femoral kondilde karşılık gelen oluk farkedilir ve kalınlaşmış veya fibrotik plikanın eksizyonu vakaların büyük çoğunluğunda olumlu sonuçlanmalıdır.

Anahtar kelimeler: Sinovyal plika, artroskopi

A review of all patients undergoing arthroscopic resection of the symptomatic plica mediopatellaris and infrapatellaris without other intraarticular pathology was conducted. 21 patients with 13 women, 8 man, avg. age 25, 1. Symptomatic plica were: 18 synovialis mediopatellaris, 3 infrapatellaris medialis. Follow up was at an average of 24 months. Based on our clinical experience, when a specific diagnosis made preoperatively, match groove in the femoral condyle is noted at arthroscopy, excision of thickened or fibrotic plica should give a favorable result in a high percentage of cases

Key words: Synovial plica, arthroscopy

It is still difficult to explain how and why the synovium becomes symptomatic. Statistical correlations between the structural changes of the plica and the symptoms are very different in numerous report (1, 2, 3, 7, 8).

In adults the plicas are the excess of the synovial septas from the embriologic decolopment of the joint space. According to clinical and experimental studies there are 5 different plicas, which are suprapatellar, infrapatellar, mediopatellar, patellolateral, and atypical plicas. In the literature mediopatellar plica is the most frequent cause of internal degrement of the knee. The second one is the infrapatellar plica (5, 9).

Our purpose was to review the current knowledge on the syndrome as well as our own results to determine in the patients clinicalpresentation including arthroscopic findings which may be prognostic of good or bad results. A review of all patients undergoing arthroscopic resection of the symptomatic plica mediopatellaris and infrapatellaris without other intraarticular pathology was conducted. Among these patients no other plica was observed which might be responsible from the symptoms.

21 patients out of 407 diagnostic arthroscopies (% 4.9) performed at our institution during the study period met our inclusion criteria (1, 7).

Clinical data was;

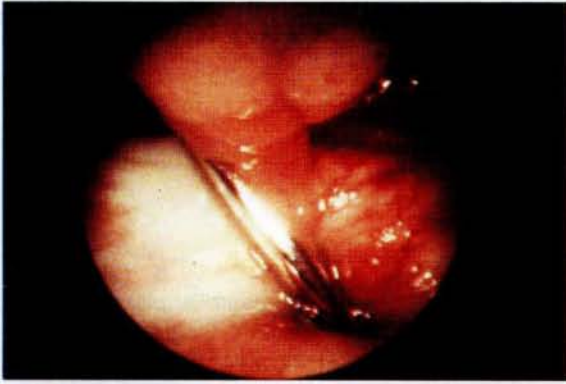
21 patients with symptomatic plica, 13 women, 8

men 18 plica synovialis mediopatellaris avg. age 25. 1 (16-37) 3 plica infrapatellaris medialis. To be considered pathological the plica had to be thickened and/or fibrotic and demonstrate impingement on the femoral condyle or intercondyler notch (Figur I).



Figur I: Arthroscopic view of the thickened and fibrotic pathological plica

In 14 patients sportic activity was the etiologic factor. Volleyball, taek won do and ballet dancing was carrying more risk for causing plica syndrome compared with the other activity branches. In volleyball and taekwondo blunt trauma to knee joint results with hemorrhage, effusion and intermittant synovitis. As a results of recurrent traumas fibrosis and loss of elasticity of the plica occurs (Figur II).



Figur II: Pathological vascularity and fibrosis in the plica

With motion the thickened fibrotic plica which is surrounded by synovia becam compressed and increased tension of the distal and proximal ends which is rich from sensitive nerve receptors induces pain (1, 3, 4, 8).

Pain was the common symptom in all patients. In 6 cases other symptoms like effusion, giving-way and pseudolocking was accompanying. The arthroscopic evaluation revealed that these cases were clinically mis-diagnosed as meniscal tear or chondromalacia patella.

Besides arthroscopy we benefited a specific clinical test described by Farit (2) as follows;

When pressing between the medial border of patella and medial portion of hofa fat pad with the thumb of left hand, the patella is supported with the right hand. By flexing the knee from 30 to 60 passively the plica slides down the medial condyle, at this moment an external rotation induces pain as the plica compresses between the condyle and medial facet of the patella. Further flexion at 90° plica retracts to the lateral and decompresses, becomes pain free. This is important for the differential diagnosis.

In symptomatic knee clinical diagnosis was verified by arthroscopy and treatment was performer with arthroscopic resection of the plica. As much as possible resection of the plica was preferred in order to prevent recurrences (4, 6).

Clinical results were evaluated using a similar scale used in Hardaker's, Nottage's and other plica studies in order to compare our results with the others in the literature (1, 7). Results were graded as excellent (no symptoms, return to unlimited activity), good (occasional mild symptoms, return to most or all activity), and poor (little or no change in symptoms, persistent limitation of activity). Follow up was obtained in 19 patients at an average of 24 months (6-39)

which to date is the longest follow up of our country's reported series. Excellent or good results were obtained in 80% of patients. 15 patients had an impingement lesions defined as a localized femoral condylar ridge or groove of the articular surface that impinged upon the plica with increasing flexion. All of these patients had an excellent or good result. Other factors associated with a favorable outcome include specific pre-operative diagnosis localizing symptoms to the medial compartment, onset of pain after a period of increased athletic activity or after a twisting injury and after a younger age. Poor prognostic factors included associated chondromalacia and a non specific pre-operative diagnosis. Based on our clinical experience, when a specific diagnosis is made pre-operatively, and a matching groove in the femoral condyle is noted at arthroscopy, excision of a thickened of fibrotic plica should yield a favorable result in a high percentage of cases. In our opinion most operative failures probably resulted from an inaccurate diagnosis.

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