

EFORT Abstract Submission

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Resection of the Infrapatellar Plica for Adolescent Anterior Knee Pain – Successful Treatment with Long-Term Follow-Up

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INTRODUCTION: Adolescent anterior knee pain (AAKP) is a common, enigmatic condition that has no known etiology, no confirmatory physical findings, and is generally managed conservatively. When conservative management fails the long-term consequences can be devastating^{1,2}. This study is a report on paediatric patients not responding to conservative management for AAKP, who were treated by arthroscopic release of the infrapatellar plica (IPP).

OBJECTIVES: To confirm a treatment algorithm for patients with AAKP.

To report the surgical results of this algorithm.

METHODS: This is a retrospective study of 35 patients who presented to a general orthopaedic surgeon with 49 symptomatic knees over an 18 year period in three geographic locations. After failure of non-operative management, patients were treated by arthroscopic resection of the infrapatellar plica (release at the femoral attachment). Outcome measurements included standardized subjective knee scales: the Lysholm Scale, and the Activities of Daily Living Scale of the Knee Outcome Survey (ADLS). The follow-up period was from 11 months to 18 years, with a mean of 63.9 months.

The records were reviewed for all arthroscopic procedures performed between 1993 and 2009 and extracted those that had release of plica or simple debridement by the senior clinician. There were 49 patients who met these criteria. The post-operative course involved weight bearing after 24 hours, with active range of motion and strengthening exercises. Return to full function was 4-6 weeks.

RESULTS: There were 23 females, 12 males, with 14 patients undergoing bilateral procedures. The mean age at presentation was 16.5 years, duration of symptoms 28 months, and average time post surgery 63.9 months. The knee distribution was: right 28; left 21. The mechanism of onset included: acute injury 13; insidious 25; overuse 9; and repetitive Injury 2.

There was a wide distribution of pain: central deep; parapatellar alone; parapatellar (alone, or with medial or lateral extension); or mimicking meniscal pathology. There were no confirmatory physical findings.

The plica anatomic types included: separate 40; split 5; fenestra 3; torn 1

There were no complications. There were 5 recurrences. No patient was made worse by this treatment protocol.

The clinical results were as follows: from pre-op to post-op, mean Lysholm scores improved from 41 (SD 18; range 8 - 85) to 83 (SD 17; range 36 - 100) and mean ADLS scores improved from 45 (SD 17; range 22 - 77) to 69 (SD 14; range 34 - 80). These differences were highly significant (paired t-test, $p < 0.0001$)

CONCLUSION: Release of the IPP in patients with AAKP provides relief of anterior knee pain in most. The treatment algorithm outlined above offers promise for the group of patients who fail conservative management. Appropriate prospective studies are needed to verify where this approach best fits in the treatment of children with knee pain.

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Disclosure of Interest: None Declared

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