**ABSTRACT FORM**

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AUTHOR, CO–AUTHORS(underline name of presenter)

Alexandra H. Aitchison, BS, Sofia Hidalgo Perea, BS, Lindsay M. Schlichte, BS, Daniel W. Green, MD, FACS

INSTITUTION: Hospital For Special Surgery

TITLE OF ABSTRACT: INCIDENCE OF 2ND SURGERY AFTER MEDIAL PATELLOFEMORAL LIGAMENT RECONSTRUCTION WITH OSTEOCHONDRAL FRACTURE FIXATION WITH BIODEGRADABLE TACKS IN PEDIATRIC PATIENTS AFTER PATELLA DISLOCATION



**Background:**

Osteochondral fractures occur in 5-15% of acute or recurrent patellar dislocations. The aim of this study was to determine the incidence of recurrent instability and second surgery following osteochondral fracture fixation (OFF) with concomitant medial patellofemoral ligament reconstruction (MPFLR).

**Methods:**

We conducted a retrospective study of 365 MPFLR performed by a single surgeon between 2008 and 2019. Forty-one knees underwent MPFLR with OFF. Demographic data, surgical details, clinical follow-up, and subsequent surgical procedures were collected.

**Results:**

The average age at surgery was 14.6 (10.7– 19.6) years. The average length of clinical follow-up was 2.6 (0.7– 7.0) years. The average number of biodegradable fixation nails used was 4.4 (2-8) nails. Thirty fractures were fixed to the patella and 10 were fixed to the lateral femoral condyle or trochlea.

There were two reports of recurrent instability (5%) at the latest follow-up. Eleven (28%) patients required a second surgery on the ipsilateral knee, and underwent chondroplasty (n=10), removal of biodegradable fixation nails (n=4), removal of hemi-epiphysiodesis or TTO hardware (n=1), revision MPFL with tibial tubercle osteotomy (n=1), or lateral meniscus repair (n=1).

Nine patients (23%) underwent a second surgery to address cartilage damage or removal of nails. The mean time to second surgery was 40.0 (11-82.7) weeks. The four patients who required nail removal had significantly more implanted nails (7 ± 1.7) than patients who did not (4.1 ± 1.6, p < .05).

**Conclusions:**

Second procedures most commonly involved debridement of a small, unhealed portion of the osteochondral fracture. At 2.6-year follow-up, only 2% of patients had failure of their OFF leading to a cartilage restoration procedure. OFF in adolescents with patellofemoral instability can be effectively treated with fixation and simultaneous MPFLR. This study demonstrates a low incidence of recurrent instability after MPFLR and OFF in a pediatric population.