

Conservative Treatment of Isolated Medial Patellar Facet Cartilage Lesions in the Setting of Medial Patellofemoral Ligament Reconstruction: A Matched Cohort Study

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INTRODUCTION:

Patellofemoral articular cartilage injuries are commonly present following lateral patellar dislocation. The appropriate treatment of instability-associated chondral lesions of the medial patellar facet is currently debated in the sports medicine literature. The purpose of the current study was to investigate the short- to mid-term clinical outcomes of patients who underwent chondroplasty of isolated medial patellar facet lesions in the setting of MPFL reconstruction for patellar instability.

METHODS:

We retrospectively identified patients who underwent MPFL reconstruction from 2015-2020 with minimum 2-year follow up. Operative reports were reviewed for the status of the patellofemoral articular surfaces and Outerbridge grade. Patients 15-45 years old were included. Exclusion criteria were: prior knee surgery; multiple patellofemoral chondral/osteochondral lesions; lesion beyond the medial facet; concomitant cartilage repair, trochleoplasty, reconstruction of other stabilizing ligaments, or meniscus repair. Patients were evaluated with the Kujala score, Tegner activity scale, and pain using a Visual Analog Score (VAS). Patients with isolated medial facet lesions (case) were propensity matched to patients without patellofemoral articular cartilage injury (control) by age, sex, BMI, and concomitant tibial tubercle osteotomy.

RESULTS:

There were 40 patients in the final analysis, including 20 case patients with isolated medial facet lesions (5 grade II, 6 grade III, 9 grade IV), at mean follow up of 4.1±2.0 years. The cohort had a mean age of 23.4±7.7 years, BMI of 26.2±6.3, and 80% were female. The mean medial patellar facet chondral lesion size was 1.89±1.43 cm². At latest follow up, there were no significant differences between case and control groups with respect to Kujala score (85.2 vs. 84.6, p=0.906), Tegner activity scale (5.7±2.6 vs. 4.9±3.0, p=0.924), or VAS pain score (12.4±20.1 vs. 16.5±23.9, p=0.718). Chondral lesion size at the index procedure was not significantly correlated with pain (p=0.816) or Kujala score (p=0.779) at latest follow up.

DISCUSSION AND CONCLUSION:

Patients who underwent chondroplasty for an isolated medial patellar facet lesion had similar clinical outcomes compared to patients with intact patellofemoral articular cartilage at a mean of 4.1 years following MPFL reconstruction. Data supports conservative management of medial facet lesions in the setting of MPFL reconstruction without the need for additional cartilage restoration procedures.

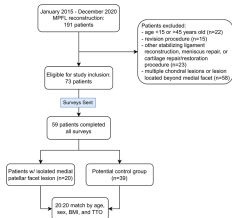


TABLE 1
Patient Demographics

	Case group	Control group	p
N	20	20	
Sex, n (%), female	16 (80.0)	16 (80.0)	1
Age (years)	24.0 ± 8.8	22.8 ± 6.5	0.622
Body mass index	26.7 ± 6.3	25.7 ± 6.3	0.624
Laterality, n (%), right	10 (50.0)	7 (35.0)	0.337
Follow-up (years)	3.9 ± 2.1	4.4 ± 2.0	0.431

TABLE 2
Concomitant Procedures & Intraoperative Findings

	Case group	Control group	p
Tibial tubercle osteotomy	12 (60.0)	12 (60.0)	1
AMZ distance (mm)	19.9 ± 2.1	18.6 ± 0.9	0.625
Chondroplasty	20 (100.0)	0 (0.0)	<0.001
Lateral release modified tuberosity	10 (50.0)	14 (70.0)	1
Cartilage biopsies	4 (20.0)	0 (0.0)	0.106
Loose body removal	8 (40.0)	0 (0.0)	0.003

Abbreviations: AMZ=anterior medial zone

TABLE 3
Clinical Outcomes

	Case group	Control group	p
Favorable	12.4 ± 20.1	16.5 ± 23.9	0.718
VAS pain at rest	31.7 ± 30.6	25.8 ± 28.0	0.531
VAS pain during sport	42.2 ± 14.6	44.6 ± 25.3	0.986
Satisfaction	90.0 ± 20.4	84.3 ± 25.0	0.301
Willing to repeat, n (%)	19 (95.0)	14 (80.0)	0.342
Tegner			
Pre-surgery	7.1 ± 2.9	6.8 ± 2.9	0.883
Post-surgery	2.8 ± 2.2	2.9 ± 2.0	0.963
Change	-5.7 ± 2.6	-4.9 ± 3.0	0.924
Pre-surgery to control difference*	-1.4 ± 1.4	-3.9 ± 2.4	0.560
Any secondary procedure, n (%)	4 (20.0)	2 (10.0)	0.661
Subsequent MUA, n (%)	3 (15.0)	1 (5.0)	0.605

Abbreviations: VAS=visual analog scale; MUA=arthroscopic arthrodebridement.
 *The difference between Tegner score recorded at last follow-up and pre-surgery score.