

CASE SERIES PHYSICAL THERAPY INTERVENTION FOR MEDIAL PATELLOFEMORAL LIGAMENT RECONSTRUCTION AFTER REPEATED LATERAL PATELLAR SUBLUXATION/ DISLOCATION

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ABSTRACT

Background: The incidence of patellar subluxation or dislocation has been documented up to 43/100,000 with females more prevalent than males. There are many contributing factors involving the hip, knee, and ankle that lead to patellar subluxation. A patellar position of lateral tilt with lateral glide may indicate weakness of the vastus medialis oblique (VMO) and adductors, increased tightness in the iliotibial band, and overpowering of the vastus lateralis. Patella alta can predispose an individual to lateral dislocation due to the patella placement outside of the femoral trochlear groove with a disadvantage of bony stability. Other factors that may cause the patella to laterally sublux or dislocate during a functional activity or sporting activity include a position of femoral external rotation, tibial internal rotation, and excessive contraction of the vastus lateralis. The medial patellofemoral ligament (MPFL) aids in the prevention of a lateral patellar subluxation or dislocation. In cases where there is recurrent subluxation/dislocation and Magnetic Resonance Imaging confirms a MPFL tear, a reconstruction may be the treatment of choice.

Purpose: The purpose of this case series is to describe the post-surgical physical therapy management of MPFL reconstructions, outcomes using the Modified Cincinnati Knee Outcome Measure (MCKOM) and to propose staged physical therapy interventions for this pathology in the form of a treatment progression.

Methods: Post-operative management data and outcomes were retrospectively collected using a detailed chart review methodology from seven subjects who underwent MPFL reconstruction.

Findings: The Modified Cincinnati Knee Outcome Measure (MCKOM) was analyzed for each participant in four sections that were most important to the return and maintenance of participation in sport. At follow-up the mean scores for the seven subjects in Section 3 (instability) was 19.3/20, Section 4 (overall activity level) was 17.3/20, Section 7 (running activity) was 4.5/5, and Section 8 (jumping and twisting) was 4.3/5. Overall all subjects scored over an 80 which indicated excellent results for return to activity/sport.

Conclusions: In this case series, seven subjects after MPFL reconstruction returned to sport or functional activity following a physical therapy treatment progression including proprioceptive-focused, and dynamic rehabilitation, along with a home exercise program. Based on these positive results and a review of relevant literature regarding MPFL rehabilitation, a rehabilitation progression was presented.

Level of Evidence: Level 4- Case Series

Keywords: Lateral patellar subluxation, medial patellofemoral ligament reconstruction, Modified Cincinnati Knee Outcome Measure.

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