

CASE REPORT

CONSERVATIVE MANAGEMENT OF AN ISOLATED GRADE III LATERAL COLLATERAL LIGAMENT INJURY IN AN ADOLESCENT MULTI-SPORT ATHLETE: A CASE REPORT

M. Alex Haddad, PT, DPT, OCS, PhD¹

Justin M. Budich, PT, DPT, OCS¹

Brian J. Eckenrode, PT, DPT, OCS²

ABSTRACT

Study design: Case report

Background: Isolated, grade III lateral collateral ligament knee injuries are an uncommon traumatic injury with little guidance available in the literature for conservative management and prognosis for return to sport. The purpose of this case report is to describe the clinical decision-making in both differential diagnosis and physical therapy management of an isolated grade III lateral collateral ligament sprain in an adolescent multi-sport high school athlete.

Case Description: A 16 year-old male, high school, multi-sport athlete (cross country, wrestling, track and field) sustained a traumatic knee injury during a wrestling match when his involved lower extremity was forcefully externally rotated by his opponent. Initial clinical presentation revealed pain and increased laxity with varus stress testing of the left knee, which was subsequently identified via MRI as a complete lateral collateral ligament rupture (grade III). A conservative physical therapy program was developed targeting the active and neuromuscular subsystems, theorized to compensate for the lack of an intact lateral collateral ligament.

Outcomes: The subject attended 18 visits of physical therapy over a period of 12 weeks. His rehabilitation program focused on functional strengthening of the posterolateral corner, enhancement of neuromuscular control, and graded progression to sports specific drills. Return to play decisions were based on a combination of lower extremity functional performance measures, condition specific outcome measures and subjective performance on sports specific tasks. At discharge from physical therapy, he reported 0/10 pain, scored a 76/80 on the Lower Extremity Functional Scale, and was able to return to competitive track and field events.

Discussion: Few descriptions in the literature exist for the conservative management of isolated, grade III lateral collateral ligament injuries. A program of selective functional strengthening, proprioceptive training, and graded sport specific activities may allow these individuals to return to sport with conservative management.

Levels of Evidence: 4 (Single Case Report)

Key Words: Lateral collateral ligament, posterolateral corner, track and field

¹ MossRehab, Outpatient Therapy Department, Philadelphia, PA, USA

² Arcadia University, Department of Physical Therapy, Glenside, PA, USA

Acknowledgements

The authors wish to thank Dr. Tetayana Gorbachova, MD for the MRI analysis and assistance with preparing figures and Mauricio Magaña PT, DPT, ATC and Brian Sullivan PT, DPT for assistance with treatment and helpful discussions. We also thank Kate Bartnik, PT, DPT for modeling exercises presented here.

CORRESPONDING AUTHOR

M. Alex Haddad

MossRehab, Outpatient Therapy
Department

1200 W Tabor Rd, Philadelphia, PA 19141

E-mail: m.alex.haddad@gmail.com