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Mobilization with Movement Symptom Modification Procedure for a 38 Year-old Male with Patella Femoral Pain Syndrome

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BACKGROUND AND PURPOSE

Patellofemoral pain syndrome (PFPS) is among the most common musculoskeletal conditions seen in a medical clinic. Current evidence suggests that excessive knee valgus due to hip adduction, internal rotation and rear-foot eversion have been associated with PFPS in females. A paucity of literature exists regarding males presenting with PFPS and altered lower extremity kinematics including limited mobility for knee valgus, hip internal rotation and rear-foot eversion.

The purpose of this case report is to describe the weight bearing manual therapy and exercise techniques utilized to restore hip internal rotation and rear-foot eversion for a male with PFPS.

METHODS

A 38 year-old male presented with retro patellar pain during running and walking. The physical examination identified limited passive hip internal rotation to 10° and rear-foot eversion at 2°. Pain levels as measured by the numeric pain rating scale (NPRS) were reported to be 7/10 with activity and 2/10 at rest. Focus on Therapeutic Outcomes (FOTO) scores demonstrated a 64% disability. A symptom modification procedure reduced pain in weight bearing during mobilization with movement to facilitate rear-foot eversion and hip internal rotation (Figure 1).

The patient was seen for six weeks using a multi-modal approach including manual therapy and exercise to facilitate weight bearing mobility of the lower extremity (Figure 2).



Figure 1: Symptom modification manipulation to facilitate rear-foot eversion during weight bearing activities.



Figure 2: Anterior lunge with contralateral trunk rotation to facilitate femoral internal rotation and rearfoot pronation during the loading response of human gait.

RESULTS

| Outcome Measure | Initial Exam | Week 3 | Week 6 |
|-----------------|-------------------|--------|--------|
| PROM | Hip IR - 10° | 17° | 23° |
| | Rear-Foot EV - 2° | 4° | 7° |
| FOTO | 64% | 22% | 0% |
| NPRS | 7/10 | 5/10 | 0/10 |

Table 1: Outcome measures for initial examination, after 3 and 6 weeks of treatment.

Legend: Passive Range of Motion (PROM), Focus on Therapeutic Outcomes (FOTO), Numeric Pain Rating Scale (NPRS), Internal Rotation (IR), Eversion (EV).

DISCUSSION

Current evidence suggests that increased dynamic valgus at the knee is a causative factor for PFPS in females. This case demonstrates a contradictory approach, for a male patient, in which the facilitation of knee valgus through hip internal rotation and rear-foot eversion was the primary intervention utilized. The manual therapy symptom modification procedure was a critical feature in the decision making process for the rehabilitation of this patient.

CONCLUSION

Facilitating femoral internal rotation and rear-foot eversion for a male presenting with PFPS resulted in reduced symptoms and full return to function. The implications of this case demonstrate the potential value in symptom modification as an aide to clinical decision making. Further research is needed to explore the efficacy of interventions targeting lower extremity kinematics in males with PFPS.

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