



Research Week 2020

Portland Pivot Kick Study: Can a novel physical exam maneuver for medial meniscus tears predict improvement after partial medial meniscectomy?

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Keywords

Medical meniscus, Osteoarthritis, knee, meniscectomy, & mechanical symptoms

Abstract

Objective

The efficacy of partial meniscectomies in patients with osteoarthritis is currently debated. The purpose of this study is to determine the effectiveness of a novel physical exam maneuver, the Portland Pivot Kick (PPK), in predicting the potential benefit of arthroscopic partial medial meniscectomy in treating mechanical symptoms, even in the presence of osteoarthritis.

We theorize that differentiating mechanical symptoms from degenerative joint disease in medial meniscus tears can be a prognosticator of improvement following surgical intervention. We hypothesize that patients with a positive preoperative PPK will have improvement of mechanical symptoms and subjective outcomes scores following arthroscopic partial medial meniscectomy.

Methods

This IRB approved retrospective study at the VA Portland Health Care System (VAPORHCS), included patients who received a partial meniscectomy for medial meniscal tears. Exclusion criteria included any patients with prior surgery on the index knee, an intraarticular loose body on MRI, an anterior and/or posterior cruciate ligament tear, a bucket handle tear, or meniscal tear deemed amenable to repair rather than partial meniscectomy.

Objective outcomes included the PPK maneuver before and after surgery. Subjective patient outcomes were evaluated pre and postoperatively using the Knee Injury and Osteoarthritis Outcome Score (KOOS) and the Western Ontario McMaster Osteoarthritis Index (WOMAC).

Results

Fifty-two patients with positive PPKs underwent partial medial meniscectomy for mechanical medial knee pain. At an average follow up of 9.1 months (range 8 days – 18.7 months), 51 of the 52 patients had a negative PPK. Patient outcomes scores were significantly improved postoperatively compared to preoperative values (Table 1).