

Nonsurgical Management of Degenerative Medial Meniscus Posterior Horn Root Tears: Poor Outcomes at Minimum 10-Year Follow Up

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INTRODUCTION: Medial meniscus posterior root tears (MMPRTs) cause pain, dysfunction, and are associated with poor clinical outcomes with nonsurgical management at short term follow up. However, little is known about the long-term natural history of these tears. The purpose of this study was to 1) provide an update to the previous minimum 2-year study on the natural progression of these tears, and 2) to evaluate long-term patient-reported and radiographic outcomes.

METHODS: A retrospective review was performed on a cohort of patients with untreated MMPRTs diagnosed between 2005 and 2013 who were followed clinically with IKDC, VAS, and Tegner scores and radiographically at minimum 10-year follow up. Failure was defined as conversion to arthroplasty or severely abnormal patient subjective International Knee Documentation Committee (IKDC) score <75.4.

RESULTS: Five (10%) of the original 52 patients (21M:31F) with previous minimum 2-year outcomes were subsequently lost to follow up. The remaining 47 patients were followed for an average of 14 years \pm 2 (range 11-18). At final follow up, 25 patients (53%) had progressed to total knee arthroplasty, 8 (17%) were deceased, and 14 (30%) still had their native MMPRT knee. Figure 1 demonstrates a Kaplan-Meier estimator of the probability of TKA free survival, while figure 2 demonstrates the probability of death over time. Mean IKDC and Tegner Activity scores for the 14 remaining MMPRTs were 51.6 ± 22.2 and 3.1 ± 1.1 , respectively, and mean Visual Analog Scale (VAS) with use was 4.4 ± 3 . Radiographically, mean Kellgren-Lawrence grade progressed from a baseline of 1.2 ± 0.7 to 2.6 ± 0.5 ($p < 0.001$). At 10-year minimum follow up, 37 of 39 living patients (95%) had failed nonsurgical treatment.

DISCUSSION AND CONCLUSION: Poor clinical and radiographic outcomes are associated with nonsurgical treatment of degenerative medial meniscus posterior horn root tears at long-term follow up. This study provides a valuable update on their natural history and the long-term prognosis of nonsurgical MMPRTs.

