Determining the Patient Acceptable Symptomatic State for Patients Undergoing Arthroscopic Partial Meniscectomy in the Knee

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Objectives: Arthroscopic partial meniscectomy is one of the most commonly performed procedures in orthopaedic surgery. However, information on the threshold at which patients consider themselves to be well for patient reported outcome measures (PROMs) after this surgery remains limited. Our goal was to determine the patient acceptable symptomatic state (PASS) for the Knee Injury and Osteoarthritis Outcome Score (KOOS), the International Knee Documentation Committee (IKDC) Subjective Knee Form, the Western Ontario Meniscal Evaluation Tool (WOMET) and the Marx Activity Scale (MAS) in patients with knee meniscal pathology who treated with partial knee meniscectomy.

Methods: A consecutive series of patients with knee meniscal pathology treated with arthroscopic partial meniscectomy plus or minus intra-articular debridement were eligible. Other inclusion criteria were: a Kellgren-Lawrence Grade of 0-2, and ligamentous integrity. The KOOS (0-100, 5 subscales), IKDC (0-100), WOMET (0-100) and MAS (0-16) were administered at baseline and 12 months postoperatively. An external anchor question at 1 year postoperatively was utilized to determine PASS values: "Taking into account all the activities you have during your daily life, your level of pain, and also your functional impairment, do you consider that your current state is satisfactory?" A receiver operator curve analysis was used to determine the PASS value at which patients considered their status to be satisfactory.

Results: There were 115 patients (mean $\pm$ SD age, 53.8 $\pm$ 12.0 years), and 57.3% were male. Based on a receiver operator curve analysis, the PASS values - at which patients considered their status to be satisfactory - at 1 year after surgery were 43 (KOOS-symptoms subscale), 83 (KOOS-pain subscale), 84 (KOOS-functions of daily living subscale), 75 (KOOS-function, sport and recreational activity subscale), 56 (KOOS-quality of life subscale), 56 (IKDC), 61 (WOMET), 7 (MAS). The PASS threshold was not affected by baseline scores across the different instruments and there was no relationship between baseline score and likelihood of achieving the PASS. Age and sex were not significantly related to the odds of achieving the PASS for any of the PROMs.

Conclusion: This is the first study to determine PASS in four commonly used knee-related PROMs in patients undergoing arthroscopic partial meniscectomy. The findings can allow researchers and clinicians to determine if partial meniscectomy is meaningful to patients and will be helpful for responder analysis in future trials related to knee arthroscopy and the treatment of meniscal pathology.

The Orthopaedic Journal of Sports Medicine, 5(3)(suppl 3)

DOI: 10.1177/2325967117S00122

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