



Biggs-Kinzer A, Murphy B, Shelbourne KD, Urch SE. Perioperative rehabilitation using a knee extension device and arthroscopic debridement in the treatment of arthrofibrosis. *Sports Health* 2010;2:417-423.

Abstract

Background: Arthrofibrosis is a postoperative complication of intra-articular knee surgery that can be difficult to treat. Evidence suggests that maximizing knee range of motion (ROM) may improve outcomes in patients with arthrofibrosis who undergo arthroscopic debridement.

Hypothesis: Patients who achieve greater knee ROM will have better subjective scores. **Study Design:** Retrospective Case Series Analysis

Methods: A review of records was performed for 33 patients with arthrofibrosis who underwent knee arthroscopy and scar resection coupled with perioperative rehabilitation to maximize knee range of motion. Patient demographics and pre and post-operative ROM measurements were extracted from the records. The International Knee Documentation Committee (IKDC) Subjective Knee Form was administered to assess pain, activity, and knee function. Patients performed a pre-operative and post-operative rehabilitation program utilizing a knee extension device to maximize knee extension. **Results:** According to the IKDC ROM criteria, twenty-seven of 33 patients achieved normal knee extension, and fourteen of 33 achieved normal knee flexion at a mean of 8.6 months after surgery. Patients with normal knee motion had a mean IKDC Subjective Knee Form score of 72.6 ± 13.6 , which was significantly higher than patients who did not achieve normal motion ($p=0.04$). Overall, mean IKDC Subjective Knee Form scores improved from 45.3 ± 16.7 pre-operatively to 67.1 ± 18.0 post-operatively ($p<0.01$) at a mean of 14.7 months after surgery. **Conclusions:** Perioperative rehabilitation that emphasizes restoration of normal knee ROM appears to improve outcomes in patients with arthrofibrosis who undergo arthroscopic scar resection. In support of our hypothesis, patients who achieved greater knee ROM had better subjective knee scores.