

**ORIGINAL ARTICLE**

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**A Randomized Trial of Arthroscopic Surgery for Osteoarthritis of the Knee**

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**ABSTRACT**

**Background**

The efficacy of arthroscopic surgery for the treatment of osteoarthritis of the knee is unknown.

**Methods**

We conducted a single-center, randomized, controlled trial of arthroscopic surgery in patients with moderate-to-severe osteoarthritis of the knee. Patients were randomly assigned to surgical lavage and arthroscopic débridement together with optimized physical and medical therapy or to treatment with physical and medical therapy alone. The primary outcome was the total Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score (range, 0 to 2400; higher scores indicate more severe symptoms) at 2 years of follow-up. Secondary outcomes included the Short Form-36 (SF-36) Physical Component Summary score (range, 0 to 100; higher scores indicate better quality of life).

**Results**

Of the 92 patients assigned to surgery, 6 did not undergo surgery. Of the 86 patients assigned to control treatment, all received only physical and medical therapy. After 2 years, the mean ( $\pm$ SD) WOMAC score for the surgery group was  $874\pm 624$ , as compared with  $897\pm 583$  for the control group (absolute difference [surgery-group score minus control-group score],  $-23\pm 605$ ; 95% confidence interval [CI],  $-208$  to  $161$ ;  $P=0.22$  after adjustment for baseline score and grade of severity). The SF-36 Physical Component Summary scores were  $37.0\pm 11.4$  and  $37.2\pm 10.6$ , respectively (absolute difference,  $-0.2\pm 11.1$ ; 95% CI,  $-3.6$  to  $3.2$ ;  $P=0.93$ ). Analyses of WOMAC scores at interim visits and other secondary outcomes also failed to show superiority of surgery.

**Conclusions**

Arthroscopic surgery for osteoarthritis of the knee provides no additional benefit to optimized physical and medical therapy.