POEMs

Arthroscopic Meniscal Surgery Is Equivalent to Nonoperative Management

Clinical Question

Is arthroscopy better than nonsurgical treatment for patients with meniscal tears?

Bottom Line

The existing research base, with biases that typically make interventions look better, is unable to demonstrate that arthroscopy for meniscal injuries is any better than nonoperative approaches. Because this is a costly intervention and is being used more often, perhaps insurance companies should reevaluate whether to continue paying for it. (Level of Evidence = 1a–)

Synopsis

These authors searched multiple databases, including registries of clinical trials and the reference lists of retrieved studies, to identify randomized trials of systematic reviews published in English. Two authors independently decided which studies to include and determined the risk of bias in the included studies. They resolved disagreements through conversation and, when necessary, through third-party adjudication. Ultimately, they included nine randomized trials and eight systematic reviews. The clinical trials included 68 to 351 patients and the systematic reviews included 98 to 1,374 patients. All of the systematic reviews were published after 2012, so the variation in sample size is rather striking and reflects the inclusion criteria. For example, the largest systematic review evaluated case series, only slightly less biased than expert opinion in determining the effectiveness of an intervention. The main recurring problems with the randomized trials were the lack of adequate masking and the selective outcome reporting. Only two of the trials compared arthroscopy with sham surgery. The others used active comparisons (e.g., resection, exercise, physical therapy, steroid injections, bioabsorbable arrows). The follow-up duration for the studies ranged from six months to five years. The studies also used several different outcome assessments: repeat tear, radiographic findings, pain on a visual analog scale, Western Ontario and McMaster Universities Osteoarthritis Index score, Knee Injury and Osteoarthritis Outcome Score, and so forth.

The authors, appropriately, decided not to pool the data and just summarized the findings. Most of the systematic reviews failed to identify clinically meaningful improvements, and only one of the randomized trials found "marginal benefit" in patients treated arthroscopically. Because the systematic reviews included cohort and case-control study designs, and the randomized trial flaws all tend to be biased in favor of intervention, the existing data strongly suggest that arthroscopy for meniscal injuries is ineffective. I find it remarkable that so many systematic reviews exist with only nine clinical trials. This seems like overanalyzing the existing data. The authors seem disappointed, and no matter how many times the data demonstrate no advantage to arthroscopy, they will likely call for more clinical trials. No, we do not have an urgent need for evidence—the existing evidence is plenty.

Study design: Systematic review

Funding source: Government

Setting: Various (meta-analysis)

Reference: *Monk P, Garfjeld Roberts P, Palmer AJ, et al. The urgent need for evidence in arthroscopic meniscal surgery.* Am J Sports Med. *2017;45(4):965-973.*

HENRY C. BARRY, MD, MS
Professor
Michigan State University
East Lansing, Mich. ■