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Correspondence: Arthroscopic Partial Meniscectomy for Degenerative Meniscal Tear

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Arthroscopic Partial Meniscectomy for Degenerative Meniscal Tear

TO THE EDITOR: Previous studies have suggested that partial meniscectomy has little benefit in patients with advanced osteoarthritis^{1,2} but some benefit in those with mild-to-moderate osteoarthritis.³ Sihvonen and colleagues (Dec. 26 issue)⁴ attempted to assess the benefit of partial meniscectomy in patients without osteoarthritis.

However, although the authors excluded patients with radiographic degenerative changes, the declaration of “no knee osteoarthritis” is misleading. It is important to note that patients in this study did have cartilage degeneration. In fact, 80% of the patients in the partial-meniscectomy group and 67% of those in the sham group had degenerative or osteoarthritic changes on diagnostic arthroscopy. In addition, patients with traumatic tears or mechanical symptoms were excluded, yet this is probably the group that would benefit most from arthroscopic partial meniscectomy.⁵ Lastly, magnetic resonance imaging (MRI) was not used to exclude or stratify patients according to factors such as subchondral edema or chondromalacia.

We submit that arthroscopy remains an effective treatment for meniscal tears in selected patients. Surgical decision making should be individualized, including consideration of mechanical symptoms, degenerative versus traumatic meniscal tear, and other pain generators, including the degree of arthritis.

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1. Moseley JB, O'Malley K, Petersen NJ, et al. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *N Engl J Med* 2002;347:81-8.
2. Kirkley A, Birmingham TB, Litchfield RB, et al. A randomized trial of arthroscopic surgery for osteoarthritis of the knee. *N Engl J Med* 2008;359:1097-107. [Erratum, *N Engl J Med* 2009; 361:2004.]
3. Katz JN, Brophy RH, Chaisson CE, et al. Surgery versus physical therapy for a meniscal tear and osteoarthritis. *N Engl J Med* 2013;368:1675-84. [Erratum, *N Engl J Med* 2013;369:683.]
4. Sihvonen R, Paavola M, Malmivaara A, et al. Arthroscopic partial meniscectomy versus sham surgery for a degenerative meniscal tear. *N Engl J Med* 2013;369:2515-24.
5. Lyman S, Oh LS, Reinhardt KR, et al. Surgical decision making for arthroscopic partial meniscectomy in patients aged over 40 years. *Arthroscopy* 2012;28:492-501.

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THIS WEEK'S LETTERS

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TO THE EDITOR: The Finnish Degenerative Meniscal Lesion Study (FIDELITY) Group conducted a surgical prospective, blinded, randomized trial. Their data are persuasive that the combination of knee pain and a meniscal tear confirmed on MRI does not warrant an arthroscopic partial meniscectomy. It would be a mistake, however, to extrapolate a conclusion that partial meniscectomy is inappropriate for all patients with degenerative tears.

Mechanical symptoms are an important primary problem that arthroscopic meniscectomy can alleviate. Such symptoms were reported by less than half the patients in this study, and a locked knee was an exclusion criterion, according to data in the Supplementary Appendix (available with the full text of the article at NEJM.org).

The American Academy of Orthopaedic Surgeons (AAOS) has recently created appropriate-use criteria for osteoarthritis of the knee.¹ Rather than MRI evidence, mechanical symptoms were the trigger for recommendations for arthroscopic meniscectomy. The appropriate-use criteria, in which a high level of appropriateness was given for arthroscopy, conflict with the results of this study. We hope future studies will address the important role of mechanical symptoms.

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No potential conflict of interest relevant to this letter was reported.

1. American Academy of Orthopaedic Surgeons. Appropriate use criteria on non-arthroplasty treatment of osteoarthritis of the knee. Rosemont, IL, American Academy of Orthopaedic Surgeons, December 2013 (http://www.aaos.org/research/Appropriate_Use/oakaucfull.pdf).

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TO THE EDITOR: We are concerned that the study by Sihvonen and colleagues will be interpreted by many to indicate that surgery for a meniscal tear does not work. However, five study sites required more than 5 years to enroll 205 patients. The authors did not provide the numbers of patients

who did not meet the inclusion criteria but still received medial (not lateral) meniscectomies. Also, both treatment groups had meaningful improvements; we believe this may be explained by the nature of the sham control — not a true sham, but arthroscopic lavage, which is an accepted surgical procedure. The study did not examine whether arthroscopic partial meniscectomy is effective but whether it is more effective than arthroscopic lavage without arthroscopic partial meniscectomy. Given the diagnostic difficulty in distinguishing between degenerative and acute meniscal tears clinically, as well as the low generalizability of the findings, the authors' conclusions that "these results argue against the current practice of performing arthroscopic partial meniscectomy in patients with degenerative meniscal tear" is too broad.

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THE AUTHORS REPLY: Krych et al. point out that the majority of patients in our trial had cartilage degeneration on arthroscopy. However, we disagree that our description of "no knee osteoarthritis" was misleading, since arthroscopically determined cartilage degeneration is not considered osteoarthritis by any currently used clinical criteria.

We also disagree with the notion that patients with traumatic tears or mechanical symptoms were excluded from our trial. Although true traumatic onset of symptoms was an exclusion criterion, in 16% of our patients the onset was sudden or after twisting, and 47% had preoperative mechanical symptoms. We are aware that such patients are widely considered to be the group most likely to benefit from arthroscopic partial meniscectomy. Krych et al. refer to a recent survey evaluating clinical decision making for arthroscopic partial meniscectomy among

practicing orthopedic surgeons, in which mechanical symptoms were not even included owing to the presumption that they would be unanimously considered a definite surgical indication. As noted by Jevsevar et al., the AAOS shares this stance.¹ However, compelling evidence is lacking to support the assumption that mechanical symptoms are caused by degenerative meniscal tears or that they can be alleviated by arthroscopic partial meniscectomy in these patients.

Krych et al. state that subchondral edema and chondromalacia could affect the outcome of arthroscopic partial meniscectomy. Although this is possible, to our knowledge, no conclusive evidence exists to support such assumptions in this particular patient population. Reliable testing of hypotheses like these would require that criteria for these potential prognostic factors first be accepted and validated.

In response to Lattermann et al.: we emphasize that FIDELITY was designed as an efficacy (proof-of-concept) trial with the intention of recruiting not typical patients undergoing arthroscopic partial meniscectomy but rather patients most likely to have a good response (those with a medial meniscal tear but no osteoarthritis). This also explains the lengthy recruitment period despite the participation of five high-volume centers. Although the study design has been elaborated in detail previously,² we briefly note that an efficacy trial assesses whether an intervention — here, arthroscopic partial meniscectomy — can theoretically work under the best circumstances. If the results are negative, this suggests that it is not necessary to assess effectiveness in less optimal, routine settings.³ With

respect to the concern that lavage was not an appropriate control, the existing high-quality evidence is unambiguous: tidal irrigation⁴ and arthroscopic lavage⁵ have failed to provide a benefit over sham procedures (sham irrigation and skin incisions, respectively) in randomized trials involving patients with osteoarthritis. The AAOS seems to endorse this view.¹

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Since publication of their article, the authors report no further potential conflict of interest.

1. Jevsevar DS, Brown GA, Jones DL, et al. The American Academy of Orthopaedic Surgeons evidence-based guideline on: treatment of osteoarthritis of the knee, 2nd edition. *J Bone Joint Surg Am* 2013;95:1885-6.
2. Sihvonen R, Paavola M, Malmivaara A, Jarvinen TL. Finnish Degenerative Meniscal Lesion Study (FIDELITY): a protocol for a randomised, placebo surgery controlled trial on the efficacy of arthroscopic partial meniscectomy for patients with degenerative meniscus injury with a novel 'RCT within-a-cohort' study design. *BMJ Open* 2013;3(3):pii:e002510.
3. Haynes B. Can it work? Does it work? Is it worth it? The testing of healthcare interventions is evolving. *BMJ* 1999;319:652-3.
4. Bradley JD, Heilman DK, Katz BP, Gsell P, Wallick JE, Brandt KD. Tidal irrigation as treatment for knee osteoarthritis: a sham-controlled, randomized, double-blinded evaluation. *Arthritis Rheum* 2002;46:100-8.
5. Moseley JB, O'Malley K, Petersen NJ, et al. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *N Engl J Med* 2002;347:81-8.

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Abatacept in B7-1–Positive Proteinuric Kidney Disease

TO THE EDITOR: In their Brief Report, Yu et al. (Dec. 19 issue)¹ describe the use of abatacept, an inhibitor of the T-cell costimulatory molecule B7-1, in inducing remission in five patients with focal segmental glomerulosclerosis (FSGS) resistant to rituximab and glucocorticoids (one patient with primary FSGS and four with recurrent FSGS after transplantation). The rationale for using abatacept was that B7-1 is induced in podocytes

in primary and recurrent FSGS as well as in patients with membranous nephropathy.

In an attempt to reproduce their findings with the same antibodies, we found no B7-1 signal in samples obtained from patients with recurrent FSGS after transplantation and strong staining in samples obtained from patients with membranous nephropathy, results almost identical to those reported by Yu et al. However, sec-