

Response and Clarification

Teppo Järvinen, MD, PhD, Raine Sihvonen, MD, PhD, and Antti Malmivaara, MD, PhD

We thank the Journal for choosing our FIDELITY trial¹ to be showcased in this prestigious forum and appreciate the opportunity to provide our point-to-point responses to Dr. Robert Brophy's summary of our trial.

First, it is indeed true that chondrosis has been shown to be a prognostic factor for outcome after arthroscopic partial meniscectomy (APM)². However, no statistically significant difference existed between the APM and sham groups on the overall prevalence of chondrosis. Moreover, the frequency for International Cartilage Repair Society grade III or IV chondral lesions³—those with the strongest proven effect on prognosis²—was similar (25.7% and 27.6%, respectively).

Second, contrary to Dr. Brophy's notion, there were no statistically significant differences in the Western Ontario Meniscal Evaluation Tool (WOMET) score, or in the score for knee pain after exercise, at two or six months. These data were reported in Table S4 (Supplementary file) of our publication.

Third, Dr. Brophy points out that four of seventy-six patients undergoing sham surgery required additional arthroscopic surgery as compared with one in seventy patients undergoing APM, suggesting that a potentially relevant difference in terms of the need for additional surgery existed. However, this finding translates to a nonsignificant 4% absolute risk difference, the clinical relevance of which can be debated.

Finally, Dr. Brophy apparently infers that because our control (sham) group included knee lavage, we cannot conclude that APM is no better than “no surgery.” However, this argument disregards the existing high-quality evidence showing that lavage has been shown to be ineffective in patients with degenerative knee disease^{4,5}. Recognizing this evidence, the only remaining potential therapeutic element of APM is the partial resection of the “torn” meniscus. When APM was found to be ineffective under the “optimized” (efficacy) circumstances used in our trial, the only appropriate conclusion—in our opinion—is that arthroscopic partial medial meniscectomy provides no significant benefit over sham surgery in patients with a degenerative meniscal tear and no knee osteoarthritis.

References

1. Sihvonen R, Paavola M, Malmivaara A, Itälä A, Joukainen A, Nurmi H, Kalske J, Järvinen TL; Finnish Degenerative Meniscal Lesion Study (FIDELITY) Group. Arthroscopic partial meniscectomy versus sham surgery for a degenerative meniscal tear. *N Engl J Med*. 2013 Dec 26;369(26):2515-24.
2. Meredith DS, Losina E, Mahomed NN, Wright J, Katz JN. Factors predicting functional and radiographic outcomes after arthroscopic partial meniscectomy: a review of the literature. *Arthroscopy*. 2005 Feb;21(2):211-23.
3. Brittberg M, Winalski CS. Evaluation of cartilage injuries and repair. *J Bone Joint Surgery Am*. 2003 Apr;85(Suppl 2):58-69.
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 Jan;46(1):100-8.
5. Moseley JB, O'Malley K, Petersen NJ, Menke TJ, Brody BA, Kuykendall DH, Hollingsworth JC, Ashton CM, Wray NP. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *N Engl J Med*. 2002 Jul 11;347(2):81-8.