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Evidence base for orthopaedics and sports medicine. Is the evidence base for popular knee operations really scandalously poor? Reply

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LETTERS

EVIDENCE BASE FOR ORTHOPAEDICS AND SPORTS MEDICINE

Authors' reply to Chitnavis

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We thank Chitnavis for his response and wish to correct some misconceptions about published results.^{1 2}

At least nine published randomised controlled trials have compared the benefit of arthroscopic meniscal surgery with non-surgical management or sham surgery. The most recent systematic review and meta-analysis concludes “there is no benefit to arthroscopic meniscal debridement for degenerative meniscal tears in comparison with nonoperative or sham treatments in middle-aged patients with mild or no concomitant osteoarthritis.”³ It is difficult to justify invasive surgery to obtain an effect similar to that of sham surgery or a non-surgical treatment with lower cost and risk of harms.

The common interpretation of observational uncontrolled studies—that delayed versus early anterior cruciate ligament reconstruction increases the frequency of meniscus injuries—is confounded by indication. Our prospective randomised controlled trial found no significant difference between treatments in the number of knees having meniscus surgery over the first two or five years after anterior cruciate ligament (ACL) injury, either for the full analysis set or between the “as treated” groups.^{4 5} Our five year prospective trial showed that in young active adults with an acute ACL tear, early reconstruction plus rehabilitation did not provide better results—whether measured as patient reported outcomes, radiographic osteoarthritis, or meniscus surgery—than a strategy of initial rehabilitation with the option of later ACL reconstruction. Using the second

strategy, 50% of patients did not need reconstruction. We found no evidence of one treatment being more harmful than the other.⁵

Impressions can indeed be deceiving, not only in medicine. When high level evidence goes counter to clinical experience and impressions, cognitive dissonance results.^{1 6} Defenders of questioned treatments focus on potential flaws in the published trials to invalidate trial results, while ignoring the inherent biases of clinical experience.

A culture of best everyday practice based on systematically collected evidence and shared decision making does not exclude sound clinical judgment, it relies on it.

Competing interests: None declared.

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- 2 Lohmander LS, Roos EM. The evidence base for orthopaedics and sports medicine. *BMJ* 2015;350:g7835. (2 January.)
- 3 Khan M, Evaniew N, Bedi A, Ayeni OR, Bhandari M. Arthroscopic surgery for degenerative tears of the meniscus: a systematic review and meta-analysis. *CMAJ* 2014, published online 25 Aug.
- 4 Frobell RB, Roos EM, Roos HP, Ranstam J, Lohmander LS. A randomized trial of treatment for acute anterior cruciate ligament tear. *N Engl J Med* 2010;363:331-42.
- 5 Frobell RB, Roos HP, Roos EM, Roemer FW, Ranstam J, Lohmander LS. The five year outcome of a randomised trial for acute anterior cruciate ligament tear. *BMJ* 2013;346:f232.
- 6 Miller FG, Kallmes DF. The case of vertebroplasty trials. Promoting a culture of evidence-based procedural medicine. *Spine* 2010;35:2023-6.

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