

Editorial Commentary: The Gain in Pain After Hip Arthroscopic Surgery: What Is Clinically Relevant, and Is Pain Related to Function in Patients With Femoroacetabular Impingement Syndrome?



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Abstract: Hip arthroscopic surgery improves patient-reported outcomes in patients with femoroacetabular impingement syndrome and/or hip chondropathy. The minimal clinically important change on a pain visual analog scale has now been calculated in this patient group, and the pain level 1 year after surgery has been related to function. Next step: identifying what causes pain and decreased function 1 year after surgery.

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Since hip arthroscopic surgery began in patients with femoroacetabular impingement syndrome (FAIS) and/or hip chondropathy, the focus has been on what the outcome of surgery was, but no one calculated the actual patient-important change for visual analog scale (VAS) pain and related it to function!

Pain is the main symptom in patients with FAIS, according to the Warwick Agreement.¹ To evaluate treatment of this patient group, in both clinical practice and research, it is therefore of great importance to know what changes in pain can be expected in this patient group. I would like to thank Martin, Kivlan, Christoforetti, Wolff, Nho, Salvo, Ellis, Van Thiel, Matsuda, and Carreira² for investigating this important topic in their article, “Minimal Clinically Important Difference and Substantial Clinical Benefit Values for a Pain Visual Analog Scale after Hip Arthroscopy.”

Martin and colleagues² found that in 733 patients (mean age 35 ± 13 years) with FAIS and/or hip chondropathy undergoing hip arthroscopic surgery, the minimal clinically important difference was 15.0 mm (VAS pain), and the substantial clinical benefit was

22.7 mm (VAS pain). Furthermore, a mean of 1 year after surgery, patients scoring ≤ 10.4 mm (VAS pain) rated their hip function as “normal,” and patients scoring ≥ 29.0 mm rated their hip function as “abnormal.”

I congratulate the authors for a brilliant explanation of the relation between the terms minimal clinically important difference, patient-acceptable symptom state, and substantial clinical benefit in the article. These terms are difficult to understand, as is how they are to be calculated.

In my 2017 systematic review³ on pain before and after hip arthroscopic surgery, a VAS pain score of ~ 20 points was found 3 months and up to 4 years after surgery. This was similarly found in the study of Martin et al.² As discussed in their study, a score of ~ 20 points on a VAS pain scale is not reaching normal hip function (< 10.4 mm), neither is it characterized as abnormal hip function (> 29.0 mm). Hence, the mean patient is somewhere in between. Improvements in scores, but remaining functional problems and reduced quality of life compared with people without hip pain, were also found in 3 recent randomized controlled trials investigating hip arthroscopy versus conservative care.⁴⁻⁶ And when looking at hip muscle strength after surgery, patients still experience deficits.^{7,8} In their study,² Martin et al. suggest that there is a correlation between pain and decreased function after surgery. If patients’ functional level is decreased after surgery because of pain, then we need to focus on what creates

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pain 1 year after surgery in this patient group. My clinical experience with these patients is that many of them, 1 year after surgery, expressed the following: "The deep pain inside my hip joint is gone but now I have pain...." The descriptions of where patients had pain 1 year after surgery related to multiple different sites. Hence, it is of great importance to further investigate the origin of pain after surgery to target why only 30% of patients experience normal hip function 1 year after surgery.

Finally, I congratulate the authors on the brilliant Table 3, which gives a great overview of the percentage of patients experiencing normal, nearly normal, abnormal, and severely abnormal hip function. This we may apply directly in our practice and use to guide our patients regarding what functional level they can expect 1 year after surgery.

So what's next? We need to identify what causes pain, decreased function, and decreased quality of life 1 year after surgery to further optimize our treatment of patients undergoing hip arthroscopic surgery. Are the non-normal scores caused by lack of rehabilitation, overly high expectations from patients, or something else entirely? Martin et al.² have provided us with cutoff values we can apply in our clinical practice and research setting to identify which patients experience clinically important improvement or still experience functional problems 1 year after surgery.

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