Journal of Physiotherapy 65 (2019) 51

Journal of PHYSIOTHERAPY

journal homepage: www.elsevier.com/locate/jphys

Appraisal

Critically appraised paper: Hip arthroscopy is more effective than personalised hip therapy for improving hip-related quality of life in patients with femoroacetabular impingement syndrome

Synopsis

Summary of: Griffin DR, Dickenson EJ, Wall PDH, Achana F, Donovan JL, Griffin J, et al. Hip arthroscopy versus best conservative care for the treatment of femoroacetabular impingement syndrome (UK FASHIoN): a multicentre randomised controlled trial. *Lancet*. 2018;391:2225-2235.

Question: Does hip arthroscopy improve hip-related quality of life more than best conservative care in patients with femoroacetabular impingement syndrome? Is there a difference in health-related quality of life, adverse events, and healthcare resource use between treatment approaches? ***Design***: Pragmatic, multicentre, assessor-blind, randomised controlled trial with concealed allocation. ***Setting***: Twenty-three National Health Service hospitals in the United Kingdom. ***Participants***: Recruitment occurred at the specialist hip arthroscopy service at each hospital. Inclusion criteria were: hip pain, radiographic features of cam or pincer morphology, being aged ≥16 years, being able to give informed consent, and the treating surgeon believed that the patient would benefit from surgery. Patients with hip osteoarthritis, a history of hip pathology, or previous hip injuries or shape-changing surgery were excluded. Randomisation of 348 participants allocated 171 to hip arthroscopy and 177 to personalised hip therapy. ***Interventions***: The arthroscopy group received arthroscopic treatment of hip shape abnormalities and labral and cartilage pathology (by 1 of 27 senior surgeons), followed by outpatient physiotherapy for rehabilitation as per usual care for the treating surgeon. The personalised hip therapy group received a package of physiotherapist-led rehabilitation (6 to 10 contacts over 12 to 24 weeks): assessment of pain, function, and hip range of motion; patient education; an individualised, progressive home exercise program; and help with pain relief. ***Outcome measures***: The primary outcome was hip-related quality of life measured by the international Hip Outcome Tool (iHOT-33) at 12 months after randomisation. Secondary outcome measures were health-related quality of life (EuroQol EQ-5D-5L), health status (SF-12), adverse events, and healthcare resource use at 6 and 12 months. ***Results***: A total of 319 (92%) participants completed the study. At the 12-month follow-up, although iHOT-33 scores had improved in both groups, the intention-to-treat analyses showed a between-group difference of 6.8 (95% CI 1.7 to 12.0) in favour of hip arthroscopy, exceeding the minimum clinically important difference (6.1 units). There were no significant between-group differences in SF-12 or EQ-5D-5L scores. Adverse events were reported by 73% of patients (100/138) in the hip arthroscopy group and 60% (88/146) in the personalised hip therapy group. Adjusted incremental cost of hip arthroscopy compared with personalised hip therapy was £2372, with incremental quality-adjusted life years of −0.015 (a net loss). Personalised hip therapy was more cost-effective than hip arthroscopy at 12 months. ***Conclusion***: Hip arthroscopy was more clinically effective than personalised hip therapy in patients with femoroacetabular impingement syndrome, but was not cost-effective.

Provenance: Invited. Not peer reviewed.

Britt Elin Øiestad
Department of Physiotherapy, Oslo Metropolitan University, Norway

https://doi.org/10.1016/j.jphys.2018.08.010

Commentary

Randomised controlled trials are the highest level of evidence, very expensive and difficult studies to conduct, and the authors are commended on this major undertaking. This was a large-scale randomised controlled trial comparing hip arthroscopy to personalised hip therapy in people with femoroacetabular impingement. Importantly, the results of this paper will assist treatment planning by clinicians and patients with hip pain. At 12 months, the participants who underwent arthroscopy had improved more (6.8 points out of 100 on the International Hip Outcome Tool (iHOT-33) questionnaire) than the personalised hip therapy group. Overall, the surgery group improved by 19 points and the personalised hip therapy group by 14 points (out of 100) over 12 months.

When examining the between-group difference of the iHOT-33, it is imperative to consider the minimum clinically important difference for that score. The minimum clinically important difference of the iHOT-33 was originally reported as 6 points.[1] However, no other study has ever replicated that finding, and all subsequent studies have reported the minimum clinically important difference as > 10 points.[2–4] Therefore, readers cannot be certain whether a between-group difference of 6.8 points is clinically important. In addition, there were no significant between-group differences for the secondary outcomes. The study did not control for postoperative care provided to the surgical group. The benefits experienced by the surgical group may have been in part due to the rehabilitation provided. Without accounting for postoperative rehabilitation, it is unclear how much gained benefit was due to surgery.

Importantly, while it is unclear whether the between-group difference was clinically important, both groups clearly improved by a clinically important amount. This suggests that patients with femoroacetabular impingement are likely to gain improvement from either treatment. However, given the increased risk of adverse events in the surgical group, the greater cost of surgical treatment, and the small, questionable between-group difference reported, clinicians would be advised to first try physiotherapy interventions prior to undertaking hip arthroscopy in patients with femoroacetabular impingement.

Provenance: Invited. Not peer reviewed.

Joanne L Kemp
La Trobe Sport and Exercise Medicine Research Centre, La Trobe University, Melbourne, Australia

https://doi.org/10.1016/j.jphys.2018.08.009

References

1. Mohtadi NGH, et al. *Arthroscopy*. 2012;28:595–610.e1.
2. Kemp JL, et al. *Am J Sports Med*. 2013;41:2065–2073.
3. Tijssen M, et al. *J Orthop Sports Phys Ther*. 2018;48:289–298.
4. Baumann F, et al. *Arch Orthop Trauma Surg*. 2016;136:83–91.