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SHORT-TERM OUTCOMES OF CONSERVATIVE TREATMENT FOR FEMOROACETABULAR IMPINGEMENT: A SYSTEMATIC REVIEW AND META-ANALYSIS

Emma Mallets, PT[1]
Ann Turner, PT[1]
Jeremy Durbin, PT[1]
Alexander Bader, SPT[1]
Leigh Murray, PT, PhD[1]

ABSTRACT

Background: Femoroacetabular Impingement (FAI) is becoming increasingly more common with noted impairments in physical function, increased pain, and decreased quality of life. Typically, a conservative approach is used through physical therapy or intra-articular injections before an invasive surgical approach is utilized. Identifying the proper course of conservative care by the clinician will aid in improving outcomes.

Purpose: The purpose of this systematic review and meta-analysis was to investigate short-term effects of conservative physical therapy and intra-articular injections on pain and physical function measures in patients with FAI.

Study Design: Systematic Review & Meta-Analysis.

Methods: A systematic review and meta-analysis were completed using Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines and registered with the International Prospective Registry of Systematic Reviews. A literature review was performed in May 2018 using Pubmed, CINAHL, Proquest, and Scopus. Inclusion criteria included humans classified as having femoroacetabular impingement, conservative rehabilitation, and utilization of outcome measures in the domains of pain or function. Exclusion criteria included absence of skilled interaction and study protocols that were not completed.

Results: Seven studies were included that summarized physical therapy or intra-articular injection outcomes for femoroacetabular impingement management. Results showed that conservative interventions for short-term periods are effective in reducing pain and improving function for femoroacetabular impingement. Overall, physical therapy revealed moderate to large effect sizes and statistically significant differences in both pain (SMD, 0.91, CI: 0.07, 1.76, $p = 0.030$) and function (SMD, 0.80, CI: 0.34, 1.28, $p = 0.001$) for femoroacetabular impingement. Intra-articular injection demonstrated small effect sizes for pain outcomes (SMD, 0.29, CI: -1.25, 1.83, $p = 0.710$) and small to moderate effect size for improvement in function (SMD, 0.49, CI: 0.03, 0.96, $p = 0.040$).

Conclusions: Physical therapy demonstrated positive results to self-reported pain and function and may hold more promise than intra-articular injection alone. Common treatments that were associated with improved outcomes were patient education, activity modification, manual therapy, and strengthening. There are a limited number of high-quality articles on this topic, which should be addressed in future research.

Level of Evidence: 1a.

Keywords: conservative management, femoroacetabular impingement, pain, physical function, physical therapy

CORRESPONDING AUTHOR
Dr. Leigh K Murray, PT, PhD
Professor, Physical Therapy Program
Walsh University
2020 East Maple St.
North Canton, OH 44720
E-mail: Lmurray@walsh.edu

[1] Walsh University; North Canton, OH, USA

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