

## ORIGINAL RESEARCH

## PRE-OPERATIVE LOW BACK PAIN NEGATIVELY AFFECTS SELF-REPORTED FUNCTION IN INDIVIDUALS UNDERGOING HIP ARTHROSCOPY

Lindsay C. Becker, PT, DPT, SCS, CSCS<sup>1</sup>Stephanie Carter-Kelley, PT, PhD, OCS<sup>2</sup>Thomas Ellis, MD<sup>3</sup>Kathleen Cenkus, MPH<sup>4</sup>Stephanie L. Di Stasi, PT, PhD, OCS<sup>2,5</sup>

## ABSTRACT

**Background/Purpose:** Low back pain (LBP) is a common source of disability in adults and highly prevalent in patients with painful hip pathology. Persistent LBP after hip arthroplasty is associated with lower self-reported function, however, the effect of pre-operative LBP in patients undergoing hip arthroscopy for FAI has not been evaluated. The purpose of this study was to determine whether improvements in self-reported hip function following arthroscopic surgery for femoroacetabular impingement (FAI) differed between those with and without reports of pre-operative low back pain.

**Study Design:** Cohort

**Methods:** Three hundred eighteen subjects undergoing primary hip arthroscopy for clinically and radiographically-confirmed FAI were recruited and consented. One hundred fifty-six of these subjects completed the International Hip Outcomes Tool (iHOT-33) and the Hip Outcome Score Activities of Daily Living Subscale (HOS-ADL) before, and six and 12 months after surgery. Subjects were grouped based on the self-reported presence or absence of LBP prior to arthroscopy. A repeated measures analysis of variance was used to determine the effects of time and low back pain on iHOT-33 and HOS-ADL scores.

**Results:** Seventy-five of 156 subjects (48.1%) reported LBP prior to surgery. A main effect of time was found for both outcome measures ( $p < 0.001$ ), demonstrating improvement in self-reported outcomes over the testing period. There was a main effect of group for the iHOT-33 (LBP: 52.0 [47.9,56.0]; no LBP 57.9 [53.9,61.8];  $p = 0.043$ ) but not for the HOS-ADL (LBP: 75.2 [72.2,78.2]; no LBP 78.8 [75.9,81.7];  $p = 0.088$ ) indicating that subjects with pre-operative LBP had poorer self-reported function per the iHOT-33 compared to those without LBP.

**Conclusion:** Self-reported hip function scores improved regardless of the presence of pre-operative LBP; however subjects with LBP reported poorer self-reported function per the iHOT-33 as compared to those without LBP up to 12 months post-operatively.

**Level of Evidence:** 3c

**Key Words:** Femoroacetabular impingement, low back pain, outcomes

<sup>1</sup> Buckeye Performance Golf, Columbus, OH, USA

<sup>2</sup> OSU Sports Medicine at The Ohio State University Wexner Medical Center, Columbus, OH, USA

<sup>3</sup> Orthopedic One, Columbus, OH, USA

<sup>4</sup> Department of Plastic Surgery at The Ohio State University Wexner Medical Center, Columbus, OH, USA

<sup>5</sup> Department of Orthopedics at The Ohio State University Wexner Medical Center, Columbus, OH, USA

## CORRESPONDING AUTHOR

Lindsay Becker PT, DPT, SCS, CSCS

Buckeye Performance Golf

6897 Dublin Center Dr.

Dublin, OH 43017

E-mail: Lindsay.becker11@gmail.com