

Medium Term Outcomes of Hip Arthroscopy Patients with Acetabular Cysts: A Multicenter Matched Controlled Study from the [Redacted] Study Group

Dean K Matsuda, Shane Jay Nho, Andrew Barrett Wolff, John J Christoforetti, John P Salvo, Thomas H Wuerz, Richard J Silk, Robroy Lee Martin, Alyssa Ishimoto, Dominic S Carreira

INTRODUCTION: Some studies have reported more severe chondral pathology and less successful hip arthroscopic outcomes in patients with acetabular subchondral cysts. The purpose of this study is to report multicenter arthroscopic outcomes of patients with and without acetabular bone cysts.

METHODS: A multicenter matched-pair study was performed across 7 medical centers with data from a large prospectively collected database. Inclusion criteria were adult patients that had undergone primary unilateral hip arthroscopy for femoroacetabular impingement syndrome (FAIS). The study group was defined by the presence of a single superolateral acetabular subchondral cyst on preoperative imaging. 1:1 matching on age, gender, Body Mass Index (BMI), lateral center-edge angle (LCEA), Alpha angle, and rendered arthroscopic treatments of femoroplasty, acetabuloplasty, and labral treatment (i.e., repair, reconstruction, or debridement). Beck chondral grade and minimum 2-year outcomes utilizing VAS for pain, iHOT-12, MCID, SBC, and PASS scores were compared.

RESULTS: There were 82 patients of which 41 comprised the study group with 41 matched control patients. All cysts were 1 cm or less in size. The study group had a mean age of 42.16 ± 11.26 years with 48.78% women and a mean BMI of 26.51 ± 4.31 kg/m². Mean LCEA was 33.55 ± 6.30 , and mean Alpha angle was 70.22 ± 9.71 . Rendered procedures included femoroplasties in 78.05%, acetabuloplasties in 43.90%, and labral repairs in 60.98%, labral reconstructions in 31.71%, and labral debridements in 4.88%. Mean Beck chondral grade was 2.59 ± 1.27 in the study group and 2.70 ± 0.95 in the matched control group ($p=0.72$). Two-year mean postoperative iHOT-12 scores for the study and control groups were 69.49 ± 24.51 and 73.24 ± 25.16 ($p=0.38$), while mean postoperative pain VAS were 18.84 ± 18.17 and 20.74 ± 21.39 ($p=0.70$). The study group reached MCID in 82.93%, SBC in 58.54%, and PASS in 65.85%. The control group reached MCID in 78.05%, SBC in 65.85%, and PASS in 73.17%, with no significant difference between the cohorts ($p=0.57$, $p=0.49$, $p=0.47$, 38 respectively).

DISCUSSION AND CONCLUSION:

Acetabular subchondral cysts are not associated with more chondral pathology than strictly matched controls and may not be a contraindication to hip arthroscopy in patients with FAIS that would otherwise be indicated for this surgery.

Practical significance: a significant subset of patients with FAIS that were previously considered not suitable for hip arthroscopy may now benefit from this surgery.