

High Return to Sport Rate for Collegiate Athletes Following Hip Arthroscopy for Femoroacetabular Impingement

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INTRODUCTION: Athletic participation has been increasingly associated with symptomatic femoroacetabular impingement (FAI). High-intensity and, repetitive sporting activities, especially those involving “at-risk” hip positions, can increase the risk of developing FAI. Numerous studies have shown that elite athletes can return to play at the professional level after undergoing hip arthroscopy. However, there is minimal data on return to sport rate and outcomes at the collegiate level. This study aims to determine the return to sport (RTS) rate of collegiate athletes following arthroscopic treatment for FAI.

METHODS: Patients who were collegiate athletes and underwent hip arthroscopy surgery for treatment of FAI between January 2009 and June 2020 were included. The surgery was performed by a single surgeon. Patients who were in their final year of eligibility, graduated, retired, or had plans to retire from collegiate play prior to surgery were excluded. Publicly available data was collected regarding each patient’s collegiate team and division, RTS status after surgery, and level of play after surgery. Comparisons were made based on gender and whether or not the athlete returned to sport.

RESULTS SECTION: Of the 181 hips (148 athletes) who met the inclusion criteria, there were 114 male (63%) and 67 female (37%) hips with a median age of 20.4 (Range: 18.0-24.5). Most athletes played at the Division I level (140 hips, 79%). Eighty-six percent (155 hips) returned to sport at the collegiate level following hip arthroscopy. No RTS group was composed of more males (81% vs 60%, $p=0.04$) and had a significantly higher postoperative alpha angle (48 vs 45, $p=.01$) compared to the RTS group. Males were significantly less likely to return to sport compared to females (82% vs 93%, OR = 2.8, 95% CI [1.003, 7.819], $p=0.042$). Males participated in more contact sports (26% vs 1.5%, $p < 0.001$), and had more mixed-type FAI (95.6% vs 80.6%, $P=0.003$) compared to females. In addition, males had more grade 3/4 chondral defects (28% vs 13%, $p=0.023$) and underwent microfracture more frequently (11% vs 3%, $p=0.047$). Further, males had significantly larger postoperative alpha angles (46.2 vs 43.6, $p < .001$).

DISCUSSION: Collegiate athletes were found to have a high return to sport rate of 86% following arthroscopy for the treatment of FAI. However, males were less likely to return to sport compared to females due to differences in FAI pathology. This study is not without limitations. The RTS data was sourced from public websites, which could introduce bias. Similarly, the RTS rate and timing may not be accurately reported for seasonal sports as the first competition played may not reflect the real moment of ability to return to play. Motivation to maintain scholarships and inherent drive to compete as well as resources not available to the general public may result in higher RTS rates than recreational athletes.

SIGNIFICANCE/CLINICAL RELEVANCE: This study provides direction for the surgical treatment of collegiate athletes with FAI. Improved understanding regarding the treatment FAI in this population will help to return athletes to their sports faster and lengthen their careers.