

Comprehensive Evaluation of Hip Arthroscopy for Elite Athletes with Femoroacetabular Impingement and Associated Pathology

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ABSTRACT

Femoroacetabular impingement (FAI) is a recognized source of debilitating hip pain among elite athletes. Hip arthroscopy, including labral repair, and FAI lesion correction have been gaining notoriety as methods to mitigate pain and enable athletes to return to their respective sports. **PURPOSE:** To provide a comprehensive understanding of the clinical presentation, surgical intervention, and outcomes of elite athletes suffering from hip pain attributed to FAI and associated pathology. **METHODS:** Elite athletes ($n = 35$; females = 12) from various sports, including basketball, soccer, martial arts, water polo, and weightlifting, participated. Following unsuccessful conservative management (e.g., analgesic medications, physical therapy), all participants consented to undergo hip arthroscopy. The surgical procedures were conducted under epidural anesthesia with patients in the supine position. We assessed the modified Harris hip score (MHHS) both preoperatively and at the 12-week postoperative mark. After surgery, athletes followed individualized physical therapy programs with physician supervision. **RESULTS:** The intraoperative findings revealed labral detachment in all 35 athletes, alongside various FAI lesions and cartilage defects. Surgical interventions included labral repair using bioabsorbable anchors, burring pincer and cam lesions, and inducing subchondral bone microfractures where necessary. Postoperatively, athletes exhibited statistically significant improvements, with a mean preoperative MHHS of 69 (at 1 week) rising to a mean postoperative MHHS of 92 (at 12 weeks) ($t(34) = -9.62, p < .001, \text{Cohen's } d = 2.29$). Notably, 29 athletes (83%) reported being pain-free and returning to pre-surgical activity levels within 12 weeks. Three athletes (8.5%) endured residual pain due to iliopsoas tendinitis but resumed full activity between 15-18 weeks postoperatively. Three athletes (8.5%) developed heterotopic ossification but did not require reoperation. **CONCLUSION:** Hip arthroscopy involving classic labral and FAI lesion repair provides a successful approach for correcting hip pathology in elite athletes. This intervention, although continually evolving, remains a potent tool in the arsenal of sports medicine, allowing for the restoration of hip joint biomechanical function.