

## **Surgical Treatment of Femoroacetabular Impingement: Arthroscopy vs. Surgical Hip Dislocation - A Propensity Matched Analysis**

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**Introduction:** Surgical treatment of femoroacetabular impingement (FAI) has continued to evolve. Hip arthroscopy is increasingly utilized for treatment of typical FAI deformities, while open surgical hip dislocation is reserved for complex or severe cases. The purpose of the current study was to compare the outcomes of surgical treatment of FAI between hip arthroscopy and open surgical hip dislocation utilizing a propensity analysis.

**Methods:** A prospective multicenter cohort undergoing primary surgical treatment of FAI was assessed. Follow-up at a minimum of one year was available in 621 hips (81.7%). Propensity scores reflect the likelihood of surgical treatment with arthroscopy versus surgical hip dislocation for a given set of covariates and allow subsequent matching to identify similar patients at baseline to include in the analysis. After propensity matching, a total of 256 patients are included in the current study. The primary outcome was a composite failure defined as total hip arthroplasty (THA), revision surgery, or clinical failure. Clinical failure was defined as improvement in mHHS less than 8 (MCID) and mHHS less than 74 (PASS).

**Results:** The mean mHHS was similar at baseline between the two groups (60.2 HA vs. 60.7 SD). Both groups demonstrated statistically significant improvements in all PROs. The final mHHS was not statistically different between the two groups (81.2 vs. 80.2,  $p=0.67$ ). Similarly, the HOOS pain subscale was similar at final follow-up (80.6 vs. 77.7,  $p=0.32$ ). The rates of THA (0% and 3.1%,  $p=0.409$ ) and revision surgery (7.8% and 10.9%,  $p=0.34$ ) in the HA and SD groups. Overall rates of failure (revision surgery or clinical failure) were 21.9% for HA and 25.0% for SD ( $p=0.54$ ).

**Conclusions:** Patients undergoing surgical treatment of FAI with either hip arthroscopy and surgical hip dislocation demonstrate significant improvements in PRO which are similar for patients undergoing hip arthroscopy or surgical hip dislocation.