labral tears, chondral delamination, subpine impingement, cam lesions, pincer lesions, and mixed-type FAI. Global acetabular retroversion was assessed on AP views using three radiographic signs: ischial spine, posterior wall, and crossover signs. Other radiographic measures included alpha angle measured on three views (AP, 45° Dunn, 90° Dunn) via the center edge angle (LCEA), and Tonnis grade.

RESULTS We identified 124 primary hip arthroscopy patients who had minimum 5-year follow-up with adequate imaging and complete 5-year PROs. Preoperative X-rays demonstrated presence of ischial spine sign in 65 patients (52.4%), posterior wall sign in 61 patients (49.2%), and crossover sign in 75 patients (60.5%). Mean alpha angle was highest on AP view (62.2°), followed by 45° Dunn view (55.9°) and 90° Dunn view (50.9°) and mean LCEA was 38.5°. A baseline comparison demonstrated no significant differences between groups in age, sex, BMI, preoperative symptom length, Tonnis grade, Outerbridge grade, and preoperative mHHS or NAHS (p > 0.05). At 5-year follow-up, patients reported significant improvement in both mHHS (mean 50.4 to 82.7, p < 0.001) and NAHS (49.4 to 85.5, p < 0.001). Achievement rates were high for MCID (90.3%), SCB (80.7%), and PASS (79.0%) for the mHHS. Three-way frequency comparison of acetabular retroversion signs found that all three signs tended to be present together (40 patients, 32.3%) or absent together (31 patients, 25.0%). Pairwise comparisons and PASS (79.0%) for the mHHS. Three-way frequency comparison of acetabular retroversion signs found that all three signs tended to be present together (40 patients, 32.3%) or absent together (31 patients, 25.0%). Pairwise comparisons with tetrachoric correlation testing found all three signs to be significantly correlated with one another: ischial spine sign versus posterior wall (ret = 0.65, corrected p < 0.001), ischial spine sign versus crossover sign (ret = 0.74, corrected p < 0.001), and posterior wall sign versus crossover sign (ret = 0.51, corrected p < 0.001). Multivariable analysis did not find any of the three signs to be significant independent predictors of 5-year improvement in mHHS or NAHS (p > 0.05). Posterior wall sign was associated with lower odds of achieving the MCID (OR = 0.25, 95% CI [0.06 to 1.09]) but this did not achieve significance (x2 = 3.39, p = 0.07). Overall, achievement rates for MCID, SCB, and PASS did not significantly differ between the cohorts with respect to each sign (p > 0.05).

CONCLUSIONS Clinical outcomes and achievement rates at 5-year follow-up. There were 64 females (70.3%) and 27 males (29.7%) with mean age 40 years to patients aged > 40 years was 75.8%, and there was significant improvement in all PROs and VAS from baseline to minimum ten-year follow-up. Patients achieved MCID/PASS at high rates for all PROs and VAS. Sixty-nine patients aged > 40 years were propensity matched to 107 patients < 40 years. Patients aged > 40 years demonstrated lower survivorship (78.3% vs. 91.6%), but lower rates of secondary hip arthroplasty (2.9% vs. 14.0%). Conclusion: Patients aged > 40 years who underwent primary hip arthroplasty with labral repair demonstrated a survivorship of 75.8%, significant improvement in PROs, and achieved MCID/PASS at high rates at minimum ten-year follow-up. Sub-analysis revealed comparable PROs, but patients > 40 years demonstrated lower survivorship and lower rates of secondary hip arthroplasty compared to patients < 40 years.

Category: Hip/Groin/Thigh

Low Rates of Five-Year Secondary Surgery and Postoperative Complications after Primary Hip Arthroplasty in over 30,000 Patients

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Summary:
In this large national study of primary hip arthroplasty, 90-day adverse events were low at 1.28%, and the five-year secondary surgery rate was 4.9%; age less than 20 years, female sex, and obesity were risk factors for secondary surgery, suggesting the need for increased surveillance in these patient groups.

Data:
Background: Hip arthroplasty is frequently used to treat femoroacetabular impingement (FAI) and labral tears. However, large cross-sectional studies documenting rates and predictors of revision surgery at midterm follow-up after primary hip arthroplasty are lacking. Purpose: To evaluate 90-day complications, five-year secondary surgery rates, and risk factors for secondary surgery following primary hip arthroplasty performed for FAI and/or labral tears using a large national dataset. Methods: A retrospective analysis was conducted using the PearlDiver Mariner151 database. Patients with International Classification of Diseases (ICD)-10 diagnosis codes for FAI and/or labral tear undergoing primary hip arthroplasty with femoroplasty, acetabuloplasty, and/or labral repair between 2015 and 2021 were identified. Those with concomitant ICD-10 codes for infection, neoplasm, or fracuture were excluded, as were patients with a history of prior hip arthroplasty or total hip arthroplasty (THA), or age > 70 years. Rates of complications within 90 days of surgery were assessed. Five-year rates of secondary surgery—revision hip arthroplasty or conversion to THA—were determined by Kaplan-Meier analysis, and risk factors for secondary surgery were identified by multivariable logistic regression. Results: A total of 31,623 patients underwent primary hip arthroplasty from October 2015-April 2021, with annual volumes ranging from 5,340 to 6,343 surgeries per year. Femoroplasty was the most frequent surgical procedure (performed in 81.1% of surgical encounters), followed by labral repair (72.6%) and acetabuloplasty (33.0%). Ninety-day postoperative complication rates were low, with 1.28% of patients experiencing any complication. The five-year secondary surgery rate was 4.9% (N = 915 patients). Multivariable logistic regression identified age < 20 years (OR, 1.50; P = 0.02), female sex (OR, 1.33; P = 0.001), class I obesity (BMI 30-34.9 kg/m2; OR, 1.30; P = 0.04), and class II/III obesity (BMI >35.0 kg/m2; OR, 1.29; P = 0.02) as independent predictors of secondary surgery. Conclusion: In this study of primary hip arthroplasty, 90-day adverse events were low at 1.28%, and the five-year secondary surgery rate was 4.9%. Age less than 20 years, female sex, and obesity were risk factors for secondary surgery, suggesting the need for increased surveillance in these patient groups.

Category: Hip/Groin/Thigh

Timing From Symptom Onset to Hip Arthroscopy for Treatment of Femoroacetabular Impingement in Adolescent Patients

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