# The Impact of Medical Comorbidities on the Development of Complications after Hip Arthroscopy

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INTRODUCTION: Hip arthroscopy is a growing field, with arthroscopic approaches to the hip gaining popularity for the treatment of femoral acetabular impingement, labral injury, and acetabular dysplasia. While a relatively safe procedure, there is little research on the association between patient factors and comorbidities and their impact on adverse outcomes after hip arthroscopy. The purpose of this study is to evaluate the association between patient comorbidities and the likelihood total 30-day complications following arthroscopic procedures of the hip.

METHODS: The National Surgical Quality Improvement Program (NSQIP) database was queried to identify all patients who underwent hip arthroscopy between 2005 and 2019 utilizing Current Procedural Terminology (CPT) codes 29860, 29861, 29862, 29863, 29914, 29915, and 29916. Patient demographics, comorbidities, and outcomes including 30-day complications were collected. Univariate analysis of readmission rates across patients was conducted using chi-square analysis. Multivariate logistic regression models were utilized to identify associations between patient factors and comorbidities status and the risk of complications.

RESULTS: 2,935 patients underwent arthroscopy of the hip and met inclusion criteria. Of those, 44 (0.02%) experienced complications within 30 days after their procedure. 2,104 (71.69%) of the overall patient population were white, while 166 (5.66%) were black, of patients who experienced complications 40 (90.90%) were white while 4 (9.09%) were black. The median age of the overall population and the readmitted population was 40-49. Logistic regression revealed that patients with COPD, hypertension on medication, or who were undergoing concomitant dialysis treatment had a significantly higher rate of total complications (OR= 7.2, CI: 2.3-22.6, P<0.001; OR=2.1, CI: 1.1-4.1, P=0.027; OR= 69.6, CI: 4.3-1141.9, P=0.003). Other comorbidities were not found to be associated with a higher rate of total complications.

DISCUSSION AND CONCLUSION: Patients with COPD, hypertension or who were undergoing dialysis treatment at the time of an arthroscopic procedure of the hip demonstrated a higher rate of total 30 day complications. Patients with a chronic condition should be counseled on the increased risk of 30-day complications and should be optimized with regards to their comorbidities prior to surgery. Further research is needed to explore the risk of post-surgical complications in patients with comorbid status.