285 Bradley Amazan   Advisor(s): Dr. William Urban M.D.

Impact of Diabetes on Postoperative Outcomes of ACL Reconstruction: An ACS NSQIP Analysis 2008-2016

Introduction: It is known that diabetes increases risk of complications after certain orthopaedic procedures. As diabetes becomes one of the most prevalent chronic diseases worldwide, it is important to understand the risks that it poses for patients undergoing various orthopaedic procedures including arthroscopic procedures. This study aims to address the impact of diabetes on complications and outcomes after anterior cruciate ligament (ACL) reconstruction.

Methods: The American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database was queried between 2008 and 2016 and yielded 17,629 patients with ACL Reconstruction (CPT code 29888). Patients were then divided into groups based on their diabetic status (diabetic and non-diabetic) and 1:1 propensity-score matched for age, gender, and NSQIP estimated probability of mortality. This yielded 228 patients in each of the diabetic and non-diabetic groups. Patient demographics, comorbidities, and 30-day postoperative outcomes were collected. Univariate analysis and multivariate logistic regression models were used to analyze diabetes and other risk factors for postoperative complications.

Results: Overall, 225 (1.3%) patients experienced a postoperative complication, however, there was no significant difference between the diabetic and non-diabetic groups (2.6% vs 1.3%, p=0.312). There was also no significant difference in readmission (1.3% vs. 0.9%; p=0.653) or reoperation (0.4% vs. 0%; p=0.317). Using multivariate logistic regression, diabetes was not an independent predictor of higher risk for any adverse event (OR 1.3, 95%CI [0.3 – 5.7];p=0.725) or for readmission (OR 1.8, 95%CI [0.3 – 12.3];p=0.562).

Conclusion: These data show diabetes is not a risk factor for any post-ACL reconstruction adverse events.