

Impact of Diabetes on Postoperative Outcomes of Syndesmotic Fixation: An ACS NSQIP Analysis 2008-2016

Introduction: Diabetes mellitus is a common condition that significantly impacts patient care and can negatively affect surgical outcomes. When operating on diabetics, significant risk can be introduced while carrying out orthopedic procedures, such as syndesmotic fixations. This study aims to evaluate the impact of diabetes on syndesmotic fixations postoperatively and compare the demographics of patients who underwent syndesmotic fixation.

Methods: The American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database between 2008-2016 was evaluated for patients with diabetes who underwent syndesmotic fixations. A 1:1 propensity score match was performed to control for age, gender, and estimated probability of mortality. Univariate analysis and multivariate logistic regression models were used to assess the implications of diabetes and risk factors on postoperative complications.

Results: A total of 556 propensity score-matched patients were identified (Diabetes: n=278; no-Diabetes: n=278). Patients with diabetes had higher probabilities of experiencing adverse events (p=0.011), postoperative complications (p=0.044), wound complications (p=0.012), and bleeding requiring transfusion (p=0.007). These patients had higher probabilities of developing postoperative complications (OR 2.0 [1.0 - 4.0]; p=0.047), particularly wound complications (OR 3.1 [1.2 - 8.0]; p=0.017) and bleeding requiring transfusion (OR 6.2 [1.4 - 28.1]; p=0.017). There were no significant differences in rates of pulmonary or renal complications.

Conclusion: Among patients undergoing syndesmotic fixations, those with diabetes experienced higher rates of postoperative complications, adverse events, and associated comorbidities than those without diabetes. Due to these complications, further investigation and increased caution are necessary when operating on patients with diabetes.