

**Impact of Diabetes Mellitus on Postoperative Outcomes of Tibial Plateau Open Reduction Internal Fixation: An ACS NSQIP Analysis 2008-2016**

**Introduction:** Diabetes Mellitus (DM) is an increasingly common comorbidity that must be considered when planning surgeries. Therefore, this study investigates the impact of DM on tibial plateau open reduction and internal fixation (ORIF) postoperative outcomes.

**Methods:** The American College of Surgeons National Surgical Quality Improvement Program database was queried via CPT codes between 2008 and 2016 for tibial plateau ORIF procedures. Patients were categorized into two groups based on diabetes status. A 1:1 propensity score matching was used to control for age, gender, and estimated probability of morbidity. Patient demographics, comorbidities, and 30-day post-operative outcomes were collected. Univariate analysis and multivariable logistic regression models were used to analyze DM as a risk factor for postoperative complications.

**Results:** Out of 3621 patients that underwent tibial plateau ORIF between 2008 and 2016 identified, patients with diabetes were found to have a higher estimated probability of morbidity. Furthermore, multivariable logistic regression found diabetes to be an independent predictor of higher risk for adverse events (OR: 1.8, 95%CI:1.1-2.9, p=0.010), bleeding requiring transfusion (OR: 2.3, 95%CI:1.2-4.3, p=0.013), and renal complications (OR: 7.1, 95%CI:1.6-32.3, p=0.011) (Table 1). Patients with diabetes were also at higher risk for readmission (OR: 2.1, 95%CI:1.1-4.2, p=0.034) (Table 1).

**Conclusion:** Diabetes is a significant risk factor for postoperative complications among patients undergoing tibia plateau repair and is associated with a higher risk of readmission. Expectations should be considered and communicated before performing tibial plateau ORIF on patients with diabetes.