The Impact of Pancreatitis on Postoperative Outcomes in Total Knee Arthroplasty with Minimum Two-Year Surveillance

Elver Shei-Wah Ho, Ryan Kong, Juhayer S Alam, FAISAL ELALI, Jason Rahimzadeh, Dan Monessa, Katherine Connors, Jared Newman, Qais Naziri[1]
[1]SUNY DOWNSTATE MEDICAL CENTER

INTRODUCTION: The objective of this study was to identify the impact of Pancreatitis (PA) on 2-year postoperative outcomes following total knee arthroplasty (TKA) surgery. Pancreatitis is a common condition in the western population. The relationship between pancreatitis and post-operative surgical outcomes for total knee arthroplasty is poorly characterized.

METHODS: The New York Statewide Planning and Research Cooperative System was queried to identify patients who underwent TKA surgery with at least a 2-year follow-up. Controlling for variables such as age, sex and obesity designation, differences in post-operative outcomes in a cohort diagnosed with pancreatitis were compared to a control. Demographics and rates of 2-year postoperative surgical and medical complications were compared between the 2 cohorts utilizing Chi Square, T-test and logistical regression analysis.

RESULTS: A cohort of 311 pancreatitis patients and 311 non-pancreatitis patients were identified. Pancreatitis and non-pancreatitis patients had comparable ages (64.2 vs 64.0 years) and same sex (64.3% vs 64.3% female) distributions. Pancreatitis patients within two years post-operation had overall higher rates of medical complications, acute renal failure, and readmission, but an overall decrease in rate of reoperation (all, $p<0.05$) Table 1. These patients had a higher risk of medical complications (1.6 [1.1–2.3]; p=0.013), acute renal failure (2.3 [1.3–3.9]; p=0.002), and readmission (16.2 [8.0–32.9]; $p<0.001$), but a decreased risk in reoperation (0.6 [0.4–0.9]; p=0.017).

DISCUSSION AND CONCLUSION: Pancreatitis patients who undergo TKA, when compared to a control cohort experienced higher rates of certain post-operative medical complications, particularly more acute renal failure and higher chances for readmissions. These findings should be taken into consideration to optimize pancreatitis patients prior to TKA surgery.

Postoperative Outcome	No Pancreatitis N (%)	Yes Pancreatitis N (%)	P -Value
Surgical Complications	98 (31.5%)	110 (35.4%)	0.308
Wound	21 (6.8%)	23 (7.4%)	0.876
CNS	1 (0.3%)	0 (0.0%)	0.317
Malunion of Fracture	0 (0.0%)	1 (0.3%)	0.317
Nonunion of Fracture	0 (0.0%)	1 (0.3%)	0.317
Prosthetic implant joint	9 (2.9%)	11 (3.5%)	0.821
Transfusion of blood	79 (46.7%)	90 (28.9%)	0.367
Medical Complications	66 (21.2%)	93 (29.9%)	0.017
Altered mental status	8 (2.6%)	12 (3.9%)	0.496
Acute myocardial infarction	7 (2.3%)	6 (1.9%)	1.000
Pulmonary	3 (1.0%)	5 (1.6%)	0.725
Pneumonia	19 (6.1%)	26 (8.4%)	0.353
Gastrointestinal	4 (1.4%)	8 (2.6%)	0.383
Urinary tract infection	3 (1.0%)	5 (1.6%)	0.725
Acute renal failure	22 (7.1%)	46 (14.8%)	0.003
Sepsis	16 (5.1%)	27 (8.7%)	0.113
Pulmonary embolism	7 (2.3%)	5 (1.6%)	0.772
Deep venous thrombosis	16 (5.1%)	7 (2.3%)	0.087
Cerebrovascular event	8 (2.6%)	12 (3.9%)	0.496
Reoperation	55 (17.7%)	34 (10.9%)	0.022
Revision of TKA	11 (3.5%)	9 (2.9%)	0.821
Readmission	211 (41.1%)	302 (58.9%)	0.000
Mortality (Hospitalization)	6 (1.9%)	8 (2.6%)	0.788

Table 1: Effect of Pancreatitis on Rates of Postoperative Outcomes in Patients Undergoing Total Knee Arthroplasty.