

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

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

**METHODS:** The New York Statewide Planning and Research Cooperative System was queried to identify patients who underwent THA 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 54 pancreatitis patients and 54 non-pancreatitis patients were identified. Pancreatitis and non-pancreatitis patients had comparable ages (63.56 vs 34.85 years) and sex (48.1% vs 57.4% female) distributions. Pancreatitis patients had overall higher rates of surgical complications, blood transfusions, medical complications, and acute renal failure (all,  $p < 0.05$ ) Table 1. These patients had a higher risk of surgical complications (2.7 [1.2–6.0];  $p = 0.013$ ), transfusion of blood (2.9 [1.3–6.5];  $p = 0.008$ ), medical complications (5.4 [1.8–16.1];  $p = 0.003$ ), and acute renal failure (4.3 [1.1–16.9];  $p = 0.035$ ).

**DISCUSSION AND CONCLUSION:** Pancreatitis patients who undergo THA, when compared to a control cohort experienced higher rates of certain surgical complications, in particular requiring more blood transfusions. These patients also experienced higher rates of medical complications, particularly acute renal failure. These findings should be taken into consideration to optimize pancreatitis patients prior to THA surgery.

Postoperative Outcome	No Pancreatitis N (%)	Yes Pancreatitis N (%)	P-Value
<b>Surgical Complications</b>	21 (38.9%)	34 (63.0%)	0.020
Wound	2 (3.7%)	4 (7.4%)	0.678
CNS	-	-	-
Malunion of Fracture	-	-	-
Nonunion of Fracture	1	0	1.000
Prosthetic Implant Joint	5 (9.3%)	8 (14.8%)	0.556
Transfusion of blood	20 (31.5%)	34 (63.0%)	0.012
<b>Medical Complications</b>	5 (9.3%)	19 (35.2%)	0.002
Altered mental status	1 (1.9%)	1 (1.9%)	1.000
Acute myocardial infarction	0 (0%)	3 (5.6%)	0.243
Pulmonary	-	-	-
Pneumonia	2 (5.6%)	6 (11.1%)	0.270
Gastrointestinal	0 (3.7%)	3 (5.6%)	0.243
Urinary tract infection	0 (0.0%)	1 (1.9%)	1.000
Acute renal failure	3 (5.6%)	11 (20.4%)	0.042
Sepsis	4 (7.4%)	2 (1.9%)	0.678
Pulmonary embolism	1 (1.9%)	0 (0.0%)	1.000
Deep venous thrombosis	3 (5.6%)	0 (0.0%)	0.243
Cerebrovascular event	2 (3.7%)	0 (0.0%)	0.495
Reoperation	9 (16.7%)	6 (11.1%)	0.579
Readmission	29 (43.3%)	38 (59.4%)	0.112
Revisions of THA	7 (13.0%)	5 (9.3%)	0.761
<b>Mortality (Hospitalization)</b>	2 (3.7%)	3 (5.6%)	1.000

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