

Effect of Having a Prior Colectomy on Post-Operative Outcomes of Total Knee Arthroplasty Patients

Introduction: The impact of a colectomy on postoperative outcomes of patients undergoing total knee arthroplasty (TKA) is poorly understood. The aim of this study was to characterize incidence rates and postoperative outcomes between colectomy patients and a control cohort undergoing TKA.

Methods: A retrospective cohort study was conducted using the National Inpatient Sample identifying patients who underwent TKA from the years 2005 – 2012. Demographics and incidence rates of patients that underwent a prior colectomy were reported from 2005-2012. Multivariate logistic regression analysis controlling for age, sex and obesity status was performed to determine rates and risks of postoperative complications between the two groups.

Results: A cohort of 2013 colectomy patients and 2013 non-colectomy patients were identified. Both cohorts had similar sex, age and obesity distributions. The average incidence rate of patients who had undergone a colectomy from 2005 – 2012 was 8.16 per 1,000,000 person-year. Incidence rates of colectomy patients increased by 138.56% from the years 2005 – 2012. Colectomy patients who underwent a TKA procedure had higher rates of overall surgical complications, medical complications, gastrointestinal complications, acute renal failure, sepsis, and hospital mortality ($p < 0.05$). Colectomy was found to be an independent predictor to have increased risk of surgical complications, medical complications, gastrointestinal complications, acute renal failure, sepsis and hospital mortality.

Conclusions: Colectomy patients who undergo TKA experienced higher rates of post-operative surgical complications, medical complications, gastrointestinal complications, acute renal failure, sepsis, and hospital mortality. These findings should be taken into consideration to optimize these patients prior to TKA.