

Same Day Discharge from an Ambulatory Surgery Center after Total Joint Arthroplasty in Patients with Obesity is Safe

Zachary Robert Diltz¹, Zachary Andrew Mosher, Andrew David Gailey, William Michael Mihalko, Marcus Christopher Ford
¹University of Tennessee Health Science Center - Campbell Clinic

INTRODUCTION:

Total joint arthroplasty (TJA) is increasingly performed in the outpatient setting, with equivalent safety and satisfaction when compared to inpatient procedures. However, careful patient selection is used to avoid potential complications in those with co-morbidities. Obesity is a major risk factor for osteoarthritis, and obese patients have also been shown to have increased complication rates in TJA. At the same time, TJA utilization by obese patients has increased substantially. There is a paucity of data regarding the safety and outcomes of TJA performed in the ambulatory setting on obese patients. Our study aimed to evaluate the safety of TJA performed at an ambulatory surgery center (ASC) with planned same day discharge (SDD) in patients with a body mass index (BMI) of 35 or greater.

METHODS:

This study is a retrospective review of all patients with a BMI of 35 or greater who underwent total hip arthroplasty (THA) or total knee arthroplasty (TKA) at 2 free-standing ASCs from June 2013 through December 2020. The medical records were queried to collect demographic variables and pre-operative co-morbidities, as well as day of surgery data and post-operative complications. The primary outcome was successful SDD. Secondary outcomes included 90-day unplanned emergency department (ED) visits, readmissions, and re-operations.

RESULTS:

A total of 645 patients were included, 443 underwent TKA and 202 underwent THA. The average age and BMI for the included patients were 57.5 years (range 27-78) and 38.7 (range 35.0-55.2). 327 patients (50.7%) were female and 318 (49.3%) were male. 14 patients (2.2%) were ASA class I, 372 (57.7%) were ASA class II, and 259 (40.2%) were ASA class III. The most common medical co-morbidities were hypertension (HTN; 68.4%), obstructive sleep apnea (OSA; 27.0%), and diabetes mellitus (DM; 21.7%). Sub-analysis results for TKA versus THA demonstrated significant differences with respect to age, BMI, and total number of pre-operative co-morbidities. Age and BMI were greater in the TKA group. Number of co-morbidities was higher in the THA group. Only 2 patients (0.3%) were kept overnight the day of surgery for a next day discharge (NDD), one for urinary retention requiring indwelling foley catheter and the other due to provider preference. All others underwent SDD. There were 9 total unplanned ED visits (1 THA and 8 TKA), 14 hospital readmissions (3 THA and 11 TKA), 25 re-operations (4 THA and 21 TKA), and 43 total post-operative complications (5 THA and 38 TKA).

DISCUSSION AND CONCLUSION: Carefully selected patients with a BMI of 35 or greater may safely undergo TJA in an ASC with reliable SDD and similar or lower re-admission, surgical site infection, and overall complication rates compared to inpatient TJA. TKA's in our study had an increased number of post-operative complications. Importantly, morbid obesity alone does not preclude patients from safe ambulatory total joint surgery.