Success of Same Day Discharge in an Ambulatory Surgical Center versus Hospital Setting

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INTRODUCTION:
Same calendar day discharge (SCDD) is becoming more common following total joint arthroplasty (TJA). While TJA is traditionally performed in the hospital setting, ambulatory surgical centers (ASC) are a desirable option for patients, surgeons, and the healthcare system alike. The aim of this study is to compare the success rate of SCDD in an ASC versus hospital setting.
METHODS:
A retrospective analysis was performed on 398 TJA patients who underwent elective TJA between 2020 and 2021 at a single institution. All patients were preoperatively selected for outpatient status according to predefined institutional guidelines. In total, 199 continuous ASC patients were selected from 2021, after our institution's surgical center opened for TJA. This ASC cohort was then matched in a one-to-one ratio by age, sex, BMI and charlson comorbidity index (CCI) to identify an inpatient hospital setting cohort of 199 patients from 2020. Demographics, length of stay (hours), recovery room stay (hours), reason for failure of SCDD, and 90-day readmissions were recorded.
RESULTS:
There was no difference in total hip or total knee arthroplasty surgeries performed between the ASC and hospital cohorts. The ASC group had a significantly shorter length of stay (6.96(1.13) vs. 8.82(2.57) hours, $p<0.001$) and spent less time in the recovery room prior to discharge (3.47(1.17) vs. 6.44(4.46) hours, $p<0.001$). One hundred percent of the ASC patients were successfully discharged on the day of the surgery versus 73.9% of the hospital patients ($p<0.001$). The main identifiable causes of failed SCDD included patient preference for overnight hospitalization (34.6%), urinary retention (15.4%), pain (7.69%), and failed physical therapy (7.69%). There was no difference in 90-day readmission rate between groups (6.03% vs. 5.03%, $p=0.826$).
DISCUSSION AND CONCLUSION:
Our study demonstrates that SCDD is safe for TJA in both the hospital and ASC setting. In addition, utilization of our ASC for outpatient TJA has allowed the length of time spent in the recovery room to be cut in half while also significantly improving the success rate of SCDD. Future research is needed to explore driving factors for successful SCDD.