Feasibility of outpatient robot assisted laparoscopic prostatectomy

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INTRODUCTION/OBJECTIVE

Research demonstrates the benefits of robotic-assisted prostatectomies (RARP) in regard to blood loss and post-operative recovery, there is a paucity in the literature regarding RARP as an outpatient procedure. With minimal operating room capacity during COVID-19, advances in minimally invasive surgical techniques and a relatively healthy patient population, outpatient RARP may be feasible. The aim of our study was to demonstrate the safety and feasibility of RARP as a same day outpatient procedure.

METHODS

A retrospective cohort study at a single institution was performed by four fellowship trained surgeons who routinely perform RARP. Patients were identified through billing records who underwent RARP between January 2019 and December 2021. Patients were divided into two cohorts, inpatient (one stay past midnight) and outpatient (defined as same day surgery with no stay past midnight). Individual surgeons admission necessity during COVID-19 limitations. We then extracted data using the electronic health record (EHR). The two groups were then compared using standard statistical methods for cohort studies. Statistical significance was defined as $p < 0.05$.

RESULTS

Over a two-year period, a total of 497 RARP were performed with 139 (28%) outpatient cases. There was no difference in baseline demographics between the cohorts. There was a statistically significant difference in estimated blood loss (142 vs 102 mLs, $p = < 0.001$) and operative time (193 vs 180 mins, $p = 0.004$) in the inpatient vs outpatient cohorts, respectively. There was no significant difference in cancer stage, prostate size, or node/margin positivity between cohorts. There was a higher rate of readmissions (5% vs 0%, $p = 0.007$) and number of ED presentations (0.15 vs 0.05, $p = 0.019$) in the inpatient group. There was no difference in complication rates between the groups. Importantly, there was no significant difference in burden on the clinical staff demonstrated by no difference in number of phone calls to clinic, number of EHR messages, or opioid prescriptions on discharge.

CONCLUSIONS

Overall, our data suggests that in a well selected patient group, RARP can safely be performed as an outpatient procedure with no significant differences on clinic staff workload or oncologic outcomes. While there was no pre-defined “algorithm” to determine outpatient vs inpatient surgery, the similarity in demographics and pre-operative characteristics between the groups lends support to performing this procedure as an outpatient with inpatient admission being reserved for select patients.