Should We Expand Outpatient Total Joint Selection Criteria? Re-exploring Hard-Stop Criteria

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INTRODUCTION: The increasing adoption of same-day discharge (SDD) total joint arthroplasty (TJA) at ambulatory surgical centers (ASCs) has driven creation of selection criteria excluding patients with “Hard Stop” (HS) medical comorbidities. However, it’s believed these criteria better predict 90-day complications than identify patients who might fail SDD. Therefore, the purpose of this study was to examine 24-hour complications and complications between 1-90 days in patients undergoing TJA with HS comorbidities versus those without, evaluating their relevance for ASC candidacy.

METHODS: A retrospective review from January 21, 2021, to September 18, 2024, was performed on all patients who underwent primary TJA at an academically affiliated ASC. Demographic information, ICD-10 codes and pre-operative lab values corresponding to previously defined HS medical comorbidities, 24-hour, and 90-day complications were recorded. HS conditions included: Body mass index (BMI) >40 kg/m^2, Diabetes (with HgbA1c >8.5), Platelet count <100k on pre-operative labs, Transient Ischemic Attack (TIA) or stroke <1 year from operation, End-stage renal disease (ESRD) or creatinine >3 on pre-operative labs, History of mental illness (schizophrenia, bipolar, or recurrent major depression), alcohol/drug abuse, cognitive impairment, chronic, uncontrolled atrial fibrillation, American Society of Anesthesia (ASA) Score >3. A total of 2,368 patients met inclusion criteria. Patients were stratified into two groups: those meeting ≥1 HS criteria and those who did not. Odds ratios (ORs) for 24-hour complications and complications between 1-90 days were calculated.

RESULTS: Of 2,368 patients, 437 (18.5%) had ≥1 HS criteria. In total, 15 patients (0.63%) experienced a 24-hour complication that resulted in hospital admission from the ASC or readmission within 24 hours following discharge. One-hundred and twenty-five (5.28%) patients had at least one complication between 1-90 days. Patients with HS comorbidities showed no difference in 24-hour complication rates (OR: 0.68, 95% CI: 0.15-2.56, p >0.9) but had significantly higher odds of 90-day complications (OR: 1.71, 95% CI: 1.14-2.55, p = 0.0126) compared to those without.

DISCUSSION AND CONCLUSION:

Robust preoperative and perioperative protocols enable safe SDD for high-risk patients traditionally excluded by HS criteria. Our study demonstrates that HS criteria better predict 90-day complications than SDD failure. Further research is needed to develop tools to reliably identify patients at risk of 24-hour complications because this is crucial for selection of patients undergoing arthroplasty at an ASC.