Cannabis Use Disorder and Perioperative Outcomes After Bariatric Surgery: a Propensity-Score Matched Analysis

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Introduction

The legalization of cannabis in several U.S. states has led to its increased use and a growing perception of safety. Cannabis use disorder (CUD), defined as problematic cannabis use that causes significant impairment or distress, is now more common among surgical patients. Its effect on outcomes after bariatric and metabolic surgery remains debated. We aimed to determine whether CUD is linked to worse perioperative outcomes following elective inpatient bariatric surgery.

Materials and Methods

Retrospective population-based cohort study using the National Inpatient Sample (2016–2021) of adults aged 18–65 undergoing elective sleeve gastrectomy or Roux-en-Y gastric bypass, identified by ICD-10 codes. National estimates incorporated NIS weights, stratification, and clustering. The primary outcome was a composite of postoperative complications (cardiac, respiratory, renal, surgical, VTE, infection, stroke, bleeding, obstruction). Secondary outcomes included individual complications, length of stay, and total charges. Baseline differences were adjusted using 1:1 propensity score matching (nearest neighbor, caliper 0.2) with 30+ preoperative variables.

Results

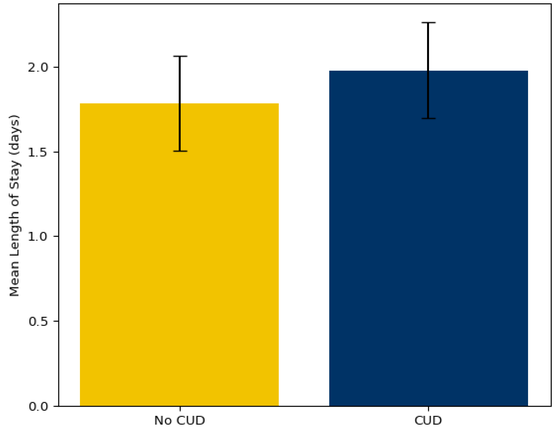

Fig. 1: Figure 2. Mean Length of Stay in Matched Patients With and Without Cannabis Use Disorder

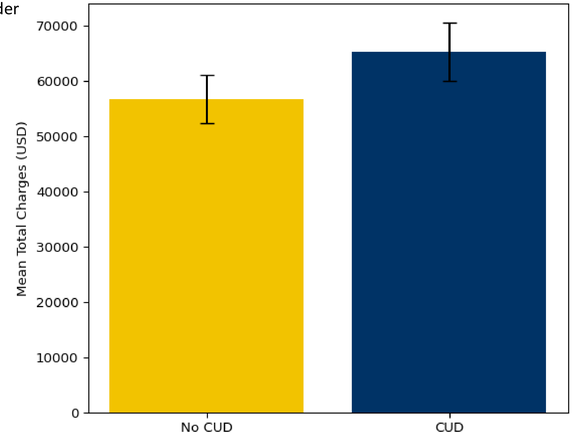

Fig. 2: Mean Total Hospital Charges in Matched Patients With and Without Cannabis Use Disorder

We identified 164,971 hospitalizations, of which 550 (0.33%) had CUD. Patients with CUD were younger (median 38 vs 43 years, P<0.001), less often female (74.0% vs 80.9%, P<0.001), and more frequently had alcohol or other drug misuse (both P<0.001). Majority of the procedures were sleeve gastrectomy (CUD 75.0% vs non-CUD 75.5%, P < 0.001)

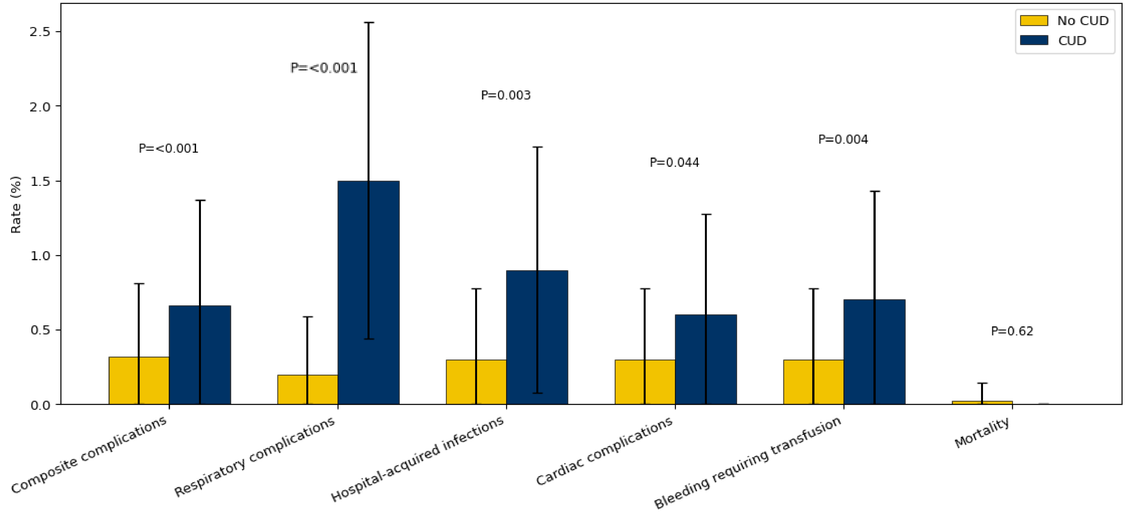

Fig. 3: Postoperative Complication Rates in Matched Patients With and Without Cannabis Use Disorder (n=503 per group)

Conclusion

In this nationally representative study, bariatric surgery in patients with CUD was safe and feasible, with no mortality and <1% major complications, but associated with higher perioperative morbidity, longer hospitalization, and greater costs, underscoring the need for targeted preoperative screening.