ASRA PAIN MEDICINE
49th Annual Regional Anesthesiology and Acute Pain Medicine Meeting
March 21-23, 2024 | San Diego, California | #ASRASPRING24

Abstract: 5488

Scientific Abstracts > Emerging Technology

Preoperative GLP-1 agonist use is not associated with perioperative aspiration or pneumonia: a national observational study

Jashvant Poeran, Yhan Colon Iban, Haoyan Zhong, Crispiana Cozowicz, Lisa Reisinger, Jiabin Liu, Stavros Memtsoudis

Icahn School of Medicine at Mount Sinai

Introduction

There has been an increased frequency of prescription of glucagon-like peptide-1 (GLP-1) agonist medications in recent years, commonly for diabetes management and weight loss. This is likely to result in an increase in patients scheduled for surgery that are on these medications. Given the potential impact of GLP-1 agonists on gastric emptying and the associated aspiration risk, this may have an impact on peri-procedural management. However, the evidence to provide guidance for preoperative management of these drugs to prevent regurgitation and pulmonary aspiration of gastric contents is sparse limited only to several case reports. In this study we aim to add to the current evidence base in terms of impact on aspiration and subsequent pneumonia risk among patients undergoing various surgical procedures.

Materials and Methods

This retrospective cohort study using deidentified data was exempt from full IRB review. In a cohort (using MarketScan commercial claims 2017-2021 data) of lower extremity joint replacement, hysterectomy, appendectomy and cholecystectomy surgery we first identified preoperative use of GLP-1 agonist drugs (dulaglutide, exenatide, liraglutide, semaglutide). Subsequently, multivariable regression models assessed the association between preoperative GLP-1 agonist use and 1) aspiration and 2) pneumonia. Aspiration (J69, J95) and pneumonia (J13-J16, J18) were identified using International Classification of Diseases tenth Edition (ICD-10) Codes, which appeared in the discharge diagnosis but were not present at the time of admission. This was additionally estimated in a propensity score matching analysis. We report odds ratios and 95% confidence intervals (CI).

Results/Case Report

Among n=186,975, n=174,277, n=116,234, and n=219,110 lower extremity joint replacement, hysterectomy, appendectomy and cholecystectomy surgeries, respectively, the preoperative use of GLP-1 agonists varied between 0.6% and 2.0%. Overall, aspiration risk was 0.20% (n=1,426 cases); this was 0.68% for pneumonia (n=4,737). In multivariable models preoperative GLP-1 use was not significantly associated with odds of aspiration (OR 1.08 CI 0.76-1.54 p=0.668) or pneumonia (OR 0.96 CI 0.78-1.17 p=0.668). A propensity score analysis yielded similar

results: aspiration OR 1.38 CI 0.81-2.33 p=0.235; pneumonia OR 1.07 CI 0.80-1.42 p=0.660.

Discussion

In this observational national dataset, preoperative GLP-1 use appears not to be associated with odds of perioperative aspiration or pneumonia. Two main limitations include the use of 2021 as the most recent data and coding errors; however, we do not expect coding errors to differently affect those with and without preoperative GLP-1 use. Despite these limitations, we believe that these data add to the current sparse evidence base. Given the very recent increases in their use continued monitoring will be prudent.

References

N/A

Disclosures

No

Tables / Images