

Presented 2020

Safety of the Addition of a Perioperative Electrolyte Drink to an Enhanced Recovery After Spine Surgery Protocol

Introduction

Advances in perioperative care and minimally invasive surgery have moved inpatient procedures to the outpatient setting. Enhanced anesthesia and recovery protocols are validated in the literature. No attention was given to NPO status for patients and its impact on perioperative recovery and patient satisfaction in minimally invasive spine surgery. We suggest perioperative electrolyte drink (ED) on the day of outpatient spine surgery has potential physiologic benefits and minimal risk for aspiration.

Hypothesis

An electrolyte drink is safe on the day of surgery for spine patients in the outpatient setting.

Methods

We performed a retrospective chart review on 35 consecutive spine patients that were given a 32 oz ED prior to midnight the day before surgery and 8 oz of ED on the day of surgery. 12 patients underwent

lumbar laminectomy/discectomy, 8 anterior cervical discectomy with instrumented fusion, 15 posterior lumbar minimally invasive fusions. We reviewed each chart for demographic data including age, sex, BMI, and comorbidities as well as complications including nausea/vomiting, aspiration, 30 day readmission rate, hospital transfer and rescue antiemetic doses. All cases were performed by the senior author at the same institution with the same nurse anesthesiologist.

Results

35 patient charts (26 male, 9 female) undergoing outpatient spine procedures were reviewed. The average age was 47.5, the average BMI was 31.5, comorbidities included: HTN, DM types 1 and 2, smoking, CAD, PVD, and thyroid disease. The highest ASA score was 3. 27 patients were found to have a gastric volume < 5 mL, and 8 were found to have GV > 5mL but < 10mL. 2 patients complained of post-operative nausea/vomiting required rescue antiemetics (ondansetron, metoclopramide). No aspirations were observed. No patients required a blood transfusion, required hospital transfer, or a 30 day readmission.



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Discussion

Many different strategies including regional blocks, indwelling pain catheters, and preoperative medications have been validated in literature to allow for a larger group of patients to be treated in the outpatient setting. This has significant cost savings and safety advantages for patients and payors. Spine surgical patients can be challenging due to the prone positioning required for posterior

procedures and concerns for airway control after anterior cervical procedures. We have demonstrated the safety of utilizing this cost-effective addition to the perioperative anesthesia protocol. Further study will need to be performed in a larger prospective multicenter trial for both hospital based and outpatient spine surgery to further validate the patient satisfaction and safety profile of this strategy.