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Comment on: Making Lemonade with Lemons: A multicenter effort to improve outpatient sleeve gastrectomy amid the COVID-19 pandemic

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The main reason for the popularity of Laparoscopic sleeve gastrectomy (LSG) resides in its balance between effectiveness, safety, and technical simplicity. This apparent technical simplicity and the moderate postoperative physiologic derangements, make LSG a potential candidate for a same-day (SD) surgery procedure. In addition, the implementation of enhanced recovery after surgery (ERAS) protocols has contributed to the feasibility of SD LSG. In fact, pain and nausea are one of the most common reasons for delayed discharge after such procedures. Although not commonly, the option of performing LSG as same-day procedure has increased in the last few years, and its incidence is now estimated to be around 3%². As expected, the key elements for a successful SD include primarily good patient selection. Commonly patients with higher BMI (>60 Kg/m²), OSA, uncontrolled hypertension or diabetes, and older age, are excluded from SD practice.

The most recent addition to the literature on this topic entitled: "Making Lemonade with Lemons: A multicenter effort to improve outpatient sleeve gastrectomy amid the COVID-19 pandemic" is the result of multicenter quality initiative to increase outpatient sleeve gastrectomy and standardize the workflow. In this retrospective analysis within a large healthcare system including 5 hospitals and 16 surgeons from February 2020 to August 2021, the authors compare a cohort of 427 SD LSG vs. 211 inpatient in the midst of the COVID pandemic. Only patients discharged on postoperative day zero, one, or two were included. Differently than previous reports, the authors extended the indications of SD LSG to age < 65 years old, and BMI < 60 Kg/m². Although the cohorts were not matched, the only differences in the populations were the age, and the expected higher incidence of obstructive sleep apnea in the inpatient group. Interestingly, the authors did not use ASA criteria to screen candidates for the SD group. The criteria for discharge described by the authors were well established and included hemodynamic stability (normal heart rate and blood pressure), absence of nausea and vomiting, ability to tolerate adequate oral intake (five ounces of fluids with three ounces in a single hour, and a postoperative hemoglobin with less than a 1.5 g/dL decrease from the patient's preoperative baseline value. Overall the authors found no statistical difference in 7-day emergency department visit, hospital readmission, reoperation, or 30-day mortality. However, SD surgeries had a non-statistical higher rate of 7-day ED readmission (9% vs 8%, p=0.641). Their 30-day ED readmission was quite high, especially for the inpatient cohort (13% vs 20%).

The higher readmission for the SD LSG was also noted by Aryaie et al. in their analysis of 7,825 SD LSG from the MBSAQIP database³.

The authors identified the extended post-anesthesia care unit (PACU) recovery as the critical point to the success of the SD protocol. In fact, during the COVID pandemic, the authors modified their protocol and discharged patients directly from the PACU. This modification of the protocol determined a significant increase in the time spent by the patient in PACU (3-5 hours), and motivated significantly the patients to go home. However, this practice required significant changes in the internal organization of surgical operation, and, as such, difficult to reproduce when high volume of surgical operations is in effect. It is important to emphasize that the motivation to go home was also determined by the fear of COVID-19 infection, as the patient were eager to leave the hospital as early as possible. It is surprising how, by the end of their study period, 71% of the LSG were done as SD within their medical system. It is not clear if this was determined by the Covid pandemic restrictions, or by the particular patient population treated. As described by other authors, all the patients received a postoperative phone call to assess clinical status (hydration in particular) and preempt need for diagnostic or therapeutic interventions. This is a key factor for the success of SD LSG. For instance, Surve A. et al.⁴, in their retrospective multicenter retrospective study on 3,162 patients, the largest cohort study on this topic, routinely encouraged their patients to return to clinic on postoperative day 2 or 3 for intravenous fluid supplementation, which kept their emergency room visit among the lowest in the literature (0.6%). Dehydration with oral intolerance, is in fact, the most common reason for emergency room visit after LSG.

The majority of the data on this topic derives from retrospective data of well selected patients cohorts. The only RTC currently available in the literature, analyzes the factors that might be contributing to the timing of discharge after LSG in 93 patients⁵. The authors found that type of anesthesia (totally intravenous anesthesia (TIVA) vs. standard), degree of nausea or pain, and previous abdominal surgery were not associated with significant differences in same day discharge vs. overnight stay.

In spite of this positive evidence, caution is necessary when the data is reported and interpreted. First of all, other reports exist of the higher morbidity, readmission rates and reoperation in SD LSG⁶. Secondly, as elucidated by other authors, the challenge of deeming safe the practice of SD LSG resides on the very low chance of morbidity and mortality of the procedure itself. In fact, in order to demonstrate equivalency of SD LSG to standard stay LSG it would require a large number of patients⁷.

In conclusion, this study primarily demonstrate the successful collaborative efforts within a medical system. The unique circumstances of the pandemic

facilitated the implementation of the changed pathway. However, although LSG seems to be a safe and amenable to SD, careful patient selection, close postoperative follow up, and early recognition of possible complications remain paramount. The generalization of OD LSG might result in higher readmissions and complications, and should be carefully further evaluated.

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