CORRELATION OF INTRAOPERATIVE FINDING OF HIATAL HERNIA WITH PREOPERATIVE HIATAL HERNIA ON UPPER ENDOSCOPY IN BARIATRIC PATIENTS UNDERGOING LAPAROSCOPIC SLEEVE GASTRECTOMY

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Introduction

Upper endoscopy (EGD) is commonly used for upper gastrointestinal evaluation preoperatively for patients undergoing bariatric surgery and the finding of hiatal hernia (HH) is frequently made. Gastroesophageal reflux disease (GERD) is also more commonly reported in the bariatric population and has been attributed to the increased prevalence of HH in the obese population. A significant HH is often repaired concomitantly with bariatric surgery particularly in those patients undergoing laparoscopic sleeve gastrectomy (LSG) with the theoretical benefit of preventing the long term complication of GERD . The literature remains unclear as to the accuracy of EGD in identifying significant HH. The objective of this study was to correlate preoperative identification of hiatal hernia on EGD with the intraoperative findings of and need for repair of HH during LSG.

Methods

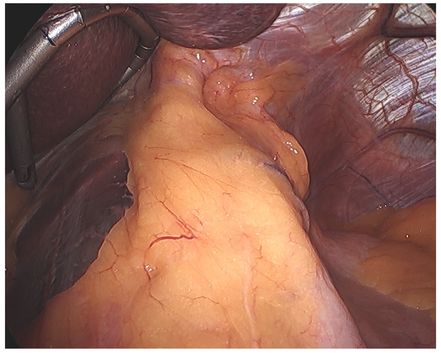
A retrospective chart review was carried out on 100 consecutive patients who underwent laparoscopic sleeve gastrectomy at our high volume MBSAQIP-accredited center. Pre-operative upper endoscopy was performed on all patients. Preoperative presence of hiatal hernia on upper endoscopy was compared with the presence of hiatal hernia and the need for operative repair during LSG. The decision for HH repair was made by the operating surgeon based on their visual identification of moderate to severe indentation of the gastro-esophageal (GE) junction into the hiatus.

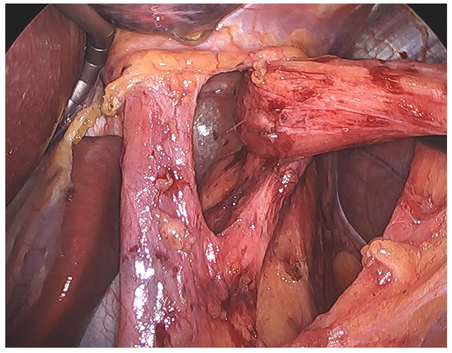
Results

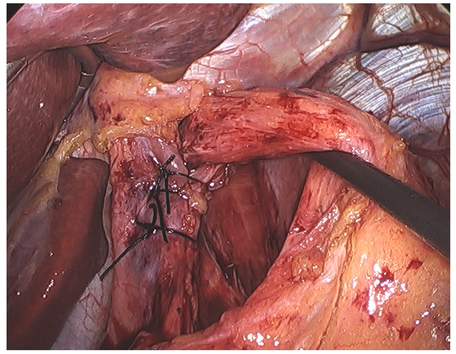
Of the 100 patients 24 were males and 76 females. The mean age was 41.15 +/- 12.04 years and the mean BMI was 45.32 +/- 8.34 kg/m2. Preoperative EGD showed HH in 39 patients (39%). 25 of these 39 patients also had intraoperative HH requiring repair the remaining 14 patients had no intraoperative HH. Of the 61 patients who did not exhibit an HH on EGD 41 patients were diagnosed with a HH intraoperatively and had their HH repaired. The remaining 20 patients had no HH on either EGD or intraoperative findings. In total 66 patients (66%) had hiatal hernia identified intraoperatively and repaired concomitantly during laparoscopic sleeve gastrectomy. The sensitivity and specificity of EGD for assessing presence of hiatal hernia in this study were 37.9% and 58.8% respectively.

HH	+ Intra-Op	- Intra-Op	Total
+ EGD	25	14	**39**
- EGD	41	20	**61**
Total	**66**	**34**	**100**

Table 1. Number of patients with and without HH on endoscopy and intraoperatively







Discussion

At our center, EGD is routinely performed as part of the preoperative work-up for bariatric surgery. It is used to assess the presence and severity of gastritis, intestinal metaplasia and dysplasia, masses, ulcers, and hiatal hernia. It also allows for identification of active H. pylori infection and the need for eradication treatment prior to surgery. Hiatal hernias are common among high BMI patients with some studies suggesting a prevalence of up to 40%.[1].

Our findings suggest that identification of HH on EGD is poorly correlated with intraoperative findings. This is consistent with other studies which reported a similarly low sensitivity and specificity ranging from 47.4 - 64.71% and 74.38 - 81.4%.[2,3] respectively. The primary limitation of this study is the subjective nature of both the EGD and intraoperative findings. There unfortunately does not exist an accepted and objective schema for measuring and characterizing the severity of HH either endoscopically or intraoperatively. Even more challenging, is that often the full extent of the hiatal defect is only recognized once the hiatus is fully mobilized, particularly when the HH is primarily located in the posterior aspect of the hiatus. These issues contribute to the ongoing controversy regarding the need and utility of aggressive HH repair in the prevention of GERD complications in patients undergoing LSV.

Conclusion

Preoperative upper endoscopic diagnosis of hiatal hernia in obese patient undergoing laparoscopic sleeve gastrectomy correlates poorly with intraoperative findings and indications for repair. Better diagnostic modalities are needed to identify and classify HH so as to improve planning and patient outcomes.

References

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