

Peer review file

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**Comment 1: on page three, discussion of asymptomatic PEH repair it might be nice to cite the nice Markov model paper by David Rattner & Co**

Thank you for this suggestion. We have updated the manuscript to include this citation.

Changes in Text: Added citation, "Paraesophageal hernias: operation or observation?" to Page 3 discussion of asymptomatic PEH repair (line 101).

**Comment 2: on page 4, Not sure the authors present a balanced view of the robot "controversy". supporting their conclusion with a single, single center retrospective uncontrolled series probably isn't enough to make conclusion, especially as the vast majority of the universally poor studies on the subject show equivalent outcomes, higher cost, and longer operating times**

Thank you for this important critique. We have updated the manuscript to include the prospective series from Gerull and colleagues demonstrating excellent long-term outcomes with robotic repair, as well as the retrospective analysis from Soliman and colleagues demonstrating favorable short-term robotic assisted outcomes as compared to laparoscopy. We have also revised the text to clarify similar lengths of stay and outcomes as compared to traditional laparoscopy.

Changes in Text: Added in-text citations for the aforementioned Gerull et al. and Soliman et al. reviews. Clarified similar short-term outcomes for robotic approaches versus laparoscopy, "Recent analyses suggest a similar length of stay, operative times, and outcomes as compared to traditional laparoscopy." (lines 125-126)

**Comment 3: on page 4,5 regarding sack "excision", I think the authors fall prey to the common confusion between sack dissection/reduction and sack excision. The papers cited are really about dissecting and reducing the sack (the Edye, Salky paper as well even though their title is resection). It is almost certain that it is the complete reduction of the sack that is good technique and reduces recurrence - whether or not it is excised is more of a cosmetic thing as it lies below where the fundoplication will be.**

Thank you for this nuanced, but important, point. We have changed "sac excision" to "reduction of the sac from the mediastinum, with excision only if the resultant sac interferes with visualization or fundoplication construction.

Changes in Text: "Sac excision" exchanged for "sac reduction from the mediastinum" (lines 127, 130, 133-134, 139-142).

**Comment 4: In the crural closure section one might mention different suture patterns proposed, figure of 8, pledgets, etc.**

Thank you for this suggestion. We have updated the manuscript to include primary suture techniques for crural closure.

Changes in Text: “Various suture patterns for primary suture cruroplasty have been proposed and include simple interrupted, figure-of-8, and pledgeted repair.” (lines 227-229)

**Comment 5: on page 7, mesh types, I think you meant absorbable synthetic, permanent synthetic and biologic?**

Thank you for this question. We have clarified this distinction in text to more appropriately describe the various mesh types.

Changes in Text: “As routine mesh reinforcement of the hiatus remains controversial, so too does the appropriate type of mesh material to be used. Generally, mesh materials may be classified as absorbable synthetic, permanent synthetic, or biologic.” (line 212)

**Comment 6: As the authors title this report "controversies" - you might want to include a brief comment on PEH repair in the morbid obese patient, and perhaps a bit more on indications for reoperative PEH**

Thank you for this comment. We have updated the manuscript to include a brief comment on PEH in the morbidly obese patient and considerations for combined weight loss surgery. We have also included more indications for re-operative PEH repair.

Changes in Text: “Recurrence rates are indeed higher in the obese patient [25]. Combined weight loss and hernia repair surgeries, including PEH repair with Roux-en-Y gastric bypass or sleeve gastrectomy, should be considered. However, the best approach in this patient population is not definitively answered in the current literature. Similarly, management controversies surround the re-operative PEH repair. While a standardized definition of PEH recurrence remains elusive, many consider repair in patients with radiographic recurrence of >2 cm with worsening symptoms of dysphagia, reflux, and regurgitation [26]. A thorough pre-operative work-up to include endoscopic evaluation, barium esophagram, and esophageal manometry should be performed and surgical approach tailored to each individual patient’s needs.” (lines 209-219)

## **Reviewer B**

**The review article, " Narrative Review of Management Controversies for Paraesophageal Hernia" is reviewed. The manuscript is well written and detail all the important management issues when repairing paraesophageal hernias. Please add the following two references as they represent some of the largest and important publications looking at outcomes of open and minimally invasive repair of paraesophageal hernia.**

1. Massive Hiatal Hernia: Evaluation and Surgical Management, Maziak er al 1998, JTCVS

2. Outcomes after a decade of Laparoscopic giant paraesophageal hernia repair. Luketich et al, 2009- JTCVS

Thank you for this important comment. We have updated the manuscript to include these citations.

Changes in Text: Included references on lines 103 and 114, respectively.