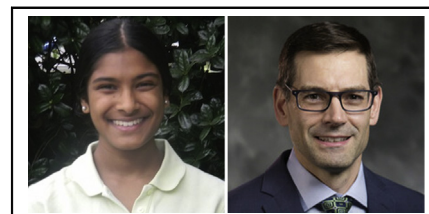


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Commentary: Are we wrapping up the debate on repair of giant paraesophageal hernia?

Arya Pontula, BSPH, and
Matthew G. Hartwig, MD, MHS



Arya Pontula, BSPH (left), and Matthew G. Hartwig, MD, MHS (right)

Herein, Alicuben and colleagues¹ describe their experience with repair of giant paraesophageal hernia (GPEH) and provide 10 key steps of their surgical technique. The authors continue to refine their approach since their first report in 2000,² summarizing the overarching principles of the procedure to optimize outcomes for operative repair of GPEH. Specifically, the authors advocate 3 key principles: (1) aggressive mediastinal mobilization, (2) assessment of esophageal length, and (3) preservation of the crural lining.¹ Low recurrence rate and optimal outcomes are also attributed to “careful selection” of adjunct techniques, such as fundoplication, gastropexy, and gastroplasty.¹

Alicuben and colleagues¹ perform fundoplication to prevent reflux. However, the decision to routinely provide a fundoplication remains debatable. Recent work evaluating the physiologic impact of hernia repair suggests that the vast majority of the antireflux mechanism is accomplished by the crural closure, rather than by the fundoplication.³ This indicates that fundoplication may not be routinely needed if gastroesophageal reflux disease is not a presenting symptom or if fundoplication does not decrease recurrence rate compared with primary repair alone.⁴ When fundoplication is selected, many surgeons prefer a total fundoplication. However, evidence does not suggest an advantage among fundoplication types in reflux and dysphagia prevention,⁵ and preoperative manometry in the setting of a large hernia is notoriously inaccurate. Therefore, it may be

CENTRAL MESSAGE

Careful, evidence-based selection of adjunct techniques, particularly fundoplication, gastropexy, and Collis gastroplasty, is key to reducing recurrence rates in laparoscopic repair of GPEH.

prudent to select fundoplication as an adjunctive technique less frequently, particularly in those with obstructive symptoms, as Alicuben and colleagues¹ recommend.

Regardless of symptomatology, anterior gastropexy may reduce recurrence rate,⁶ and thus may be an important consideration for all patients. In addition, for patients at high operative risk due to severe medical comorbidities, gastropexy alone may be a reasonable alternative to formal GPEH repair.⁷ Thus, we should consider how gastropexy is used to reduce recurrence rate of GPEH repair for all patients, remembering that not all gastropexy techniques are equal.

The authors suggest wedge-type Collis gastroplasty for patients with a foreshortened esophagus.¹ This choice aligns with earlier reports of gastroplasty in GPEH repair.⁸ However, esophageal shortening has been attributed to the stomach pushing the esophagus into the chest, rather than to chronic reflux esophagitis, scarring, or pulling of the stomach into the chest. Regardless, gastroplasty should be uncommonly required if repair focuses on correcting the anatomy of the gastroesophageal junction and mediastinal mobilization allows appropriate abdominal esophageal length.⁶

Alicuben and colleagues¹ describe their standard practice to complete fundoplication before cruraplasty, although many surgeons tend to perform cruraplasty first to estimate esophageal length. The authors also describe their method of creating a floppy diaphragm in reapproximation of the crura by inducing a carbon dioxide pneumothorax. Evidence does not yet exist for the implication of this technique

From the Division of Cardiovascular and Thoracic Surgery, Duke University Medical Center, Durham, NC.

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Address for reprints: Matthew G. Hartwig, MD, MHS, Division of Cardiovascular and Thoracic Surgery, DUMC, Box 3863, Durham, NC 27710 (E-mail: matthew.hartwig@duke.edu).

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on recurrence, but it does provide significant tension release during crural closure. An alternative method, the diaphragm-relaxing incision, has been associated with low recurrence rate, but can also be associated with an alternative site of diaphragmatic weakness.⁹ In summary, Alicuben and colleagues¹ carefully detail the steps of their operative technique as well as their considerations in choosing adjunct procedures to optimize outcomes for patients suffering with GPEH.

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