cohere HEALTH

Cohere Medical Policy - Laparoscopic Hiatal Hernia Repair

Clinical Guidelines for Medical Necessity Review

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Guideline Information:

Specialty Area: Gastroenterology **Guideline Name:** Cohere Medical Policy - Laparoscopic Hiatal Hernia Repair **Date of last literature review:** 12/05/2024 **Document last updated:** 12/19/2024 **Type:** [X] Adult (18+ yo) | [X] Pediatric (0-17yo) **Table of Contents**

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Medical Necessity Criteria

Service: Laparoscopic Hiatal Hernia Repair

Recommended Clinical Approach

Hiatal hernia (HH) is a common structural defect of the diaphragm and occurs when the anterior stomach (fundus) protrudes through the opening where the esophagus passes from the thorax to the abdomen (diaphragmatic hiatus). HH may be asymptomatic or accompanied by gastroesophageal reflux disease (GERD) and is usually diagnosed through a barium swallow test or diagnostic imaging. HH are classified into 4 types. In type I (sliding hiatal hernia), the gastroesophageal junction (GEJ) moves headward through the hiatus into the thorax. In type II (paraesophagea) hernia), the gastric fundus herniates through the hiatus into the thorax, but the GEJ remains in the abdomen. Type III is a combination of types I and II, where the GEJ and stomach herniate into the thorax. Type IV is a type III HH with herniation of other organs into the thorax, such as the colon and spleen.¹ The 3 dominant pathogenic theories for HH include: (1) intra-abdominal pressure forces the GEJ into the thorax; (2) esophageal shortening displaces the GEJ into the thorax; and (3) GEJ migrates into the chest due to a widening of the diaphragmatic hiatus due to molecular and cellular changes.²

Treatment for HH is directed at symptoms of GERD, if present. Symptomatic HH (types II-IV) may require repair using a transabdominal or transthoracic approach. Initial or revision laparoscopic HH repair may also be medically necessary during bariatric surgery. A single laparoscopic HH repair is sufficient for most patients. Laparoscopic repair with suturing of the hiatal pillars followed by fundoplication is the standard medical practice for HH. Mesh reinforcement, commonly located at the posterior esophageal hiatus, is commonly used to lower recurrence rates.³ Additionally, fundoplication is used to repair paraesophageal HH and reduce the risk of postoperative gastrointestinal reflux as well as reinforce the repair to prevent recurrence. Laparoscopic esophagogastric fundoplasty is a procedure that involves wrapping the upper part of the stomach around the lower part of the esophagus.¹ Physicians may choose this procedure for patients with gastroesophageal reflux. Laparoscopic HH surgery is generally not considered appropriate for patients with asymptomatic HH without objective evidence or a high risk of reflux or micro-aspiration.⁴

Medical Necessity Criteria

Indications

- → Laparoscopic hiatal hernia repair with or without fundoplication (e.g., Dor, Nissen, or Toupet procedures) and/or mesh placement is considered appropriate if ALL of the following are TRUE¹⁻¹²:
 - Hiatal hernia is confirmed by **ANY** of the following⁵:
 - Diagnostic imaging; **OR**
 - Radiology; **OR**
 - Esophagogastroduodenoscopy (EGD); OR
 - Manometry; **OR**
 - Detection during preoperative workup for bariatric surgery¹⁵;
 AND
 - **ANY** of the following is **TRUE**:
 - Acute rotation of the stomach (gastric volvulus), including but not limited to upside down stomach (UDS)¹; OR
 - Gastric outlet obstruction caused by the hernia; OR
 - Suspected or documented gastric strangulation; OR
 - Dysphagia or post-prandial fullness resulting from hernia-related mass effect and extrinsic compression on the lower esophagus¹⁵; OR
 - Gastroesophageal reflux symptoms or GERD complications (e.g., reflux esophagitis) not fully responsive to medical treatment (e.g., unsuccessful treatment with proton pump inhibitors (PPIs), histamine receptor antagonists, or antacids, for at least 3 successive months under the direction of a healthcare professional)⁶; OR
 - Gastroesophageal reflux symptoms present when medical treatment is contraindicated (e.g., intolerant or allergic to PPIs and/or histamine receptor antagonists); OR
 - Persistent anemia when other causes have been excluded;
 OR
 - The patient has an asymptomatic hiatal hernia and ANY of the following⁴:
 - Documented evidence of gastro-esophageal reflux (e.g., EGD evidence of reflux esophagitis or Barrett's esophagus, or abnormal parameters on ambulatory pH or impedance monitoring); OR

- Documented evidence of micro-aspiration; OR
- High risk for complications of micro-aspiration (e.g., lung transplant recipient); **OR**
- Detection during bariatric surgery.^{8,15}

Non-Indications

- → Laparoscopic hiatal hernia repair with or without fundoplication (e.g., Dor, Nissen, or Toupet procedures) and/or mesh placement is not considered appropriate if ANY of the following is TRUE⁹:
 - The patient has an asymptomatic hiatal hernia and no objective evidence of GERD or GERD complications; OR
 - The patient does not meet the criteria as outlined above; OR
 - The patient is scheduled for open surgery for hiatal hernia repair, including ANY of the following:
 - 90° anterior partial fundoplication; **OR**
 - Hill repair.

Level of Care Criteria Inpatient or outpatient.

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description	
43280	Laparoscopy, surgical, esophagogastric fundoplasty (e.g., Nissen, Toupet procedures)	
43281	Laparoscopy, surgical, repair of paraesophageal hernia, includes fundoplasty, when performed; without implantation of mesh	
43282	Laparoscopy, surgical, repair of paraesophageal hernia, includes fundoplasty, when performed; with implantation of mesh	

Medical Evidence

Daly et al. (2024) conducted systematic reviews to evaluate (i) surgical treatment of asymptomatic hiatal hernia versus surveillance, (ii) the use of mesh versus not, (iii) performing a fundoplication versus no fundoplication; and (iv) Roux-en-Y gastric bypass (RYGB) versus repeat fundoplication for recurrent hiatal hernia, with the aim of providing guidance regarding surgical decision making in the treatment of hiatal hernia. The expert panel suggested that select asymptomatic patients may be offered surgical repair when objective evidence exists of reflux or micro-aspiration or when patients are at high-risk for complications of micro-aspiration even in the absence of objective findings, such as lung transplant patients. The panel also suggested that conversion to RYGB for the management of recurrent hiatal hernia may be appropriate in certain patients without obesity and with recurrent type II, III, or IV hiatal hernia. The evidence for the routine use of mesh in hiatal hernia repair was inconclusive and the panel did not make a recommendation in this regard.⁴

Bhatt et al. (2023) systematically reviewed the perioperative outcomes of robotic and laparoscopic paraesophageal hernia (PEH) repair. Robotic surgery for large PEHs may offer benefits over standard laparoscopic approaches in decreasing conversion rates and duration of hospital stay. Some studies found a decrease inthe need for esophageal lengthening procedures and fewer long-term recurrences. The perioperative complication rate is similar between the two techniques in most studies; however, one large study of nearly 170,000 patients in the early years of robotics adoption demonstrated a higher rate of esophageal perforation and respiratory failure in the robotic group (2.2% increase in absolute risk). Cost is another disadvantage of robotic repair when compared to laparoscopic repair. Limitations of this systematic review include the non-randomized and retrospective nature of the studies.¹³

Geerts et al. (2023) reviewed the anatomic location of hiatal hernia recurrences to assess the high rates of recurrence despite mesh reinforcement. A retrospective analysis of video clips from the procedure in 54 patients who underwent revision hiatal hernia surgery revealed that the left-anterior quadrant of the esophageal hiatus was involved in 43 patients (80%), the right-anterior quadrant in 21 patients (39%), the left-posterior quadrant in 21 patients (39%), and the right-posterior quadrant in 10 patients (19%). Based on these findings, the authors hypothesized that both posterior and anterior hiatal reinforcement might lower the recurrence rate of hiatal hernia.³

Analatos et al. (2020) report the results of a randomized, double-blind clinical trial (NCT04436159) that compares clinical outcomes and postoperative mechanical complications of para-oesophageal hernia repair employing total (Nissen) versus posterior partial (Toupet) fundoplication in 70 patients who had undergone hernia reduction and crural repair. Ogilvie dysphagia scores were stable at the 3- and 6-month follow-up in the Nissen group but significantly improved in the Toupet group at 6 months. At 6 months, Dakkak dysphagia scores were significantly higher in the Nissen group than in the Toupet group. Although quality of life (QoL) scores improved throughout the follow-up, at 3 and 6 months postoperatively, the absolute median improvement in the mental component of the QoL questionnaire was significantly higher in the Toupet group. At 6 months, radiologically confirmed recurrence of hernias occurred in 46% of patients in the Nissen group and 47% of patients in the Toupet group. Based on these findings, the authors conclude Toupet fundoplication shows reduced obstructive complications and improved QoL compared with Nissen fundoplication following para-oesophageal hernia repair.¹⁴

References

- 1. Gryglewski A, Kuta M, Pasternak A, et al. Hiatal hernia with upside-down stomach. Management of acute incarceration: case presentation and review of literature. *Folia Med Cracov.* 2016;56(3):61-66. PMID: 28275272.
- 2. Weber C, Davis CS, Shankaran V, et al. Hiatal hernias: a review of the pathophysiologic theories and implication for research. *Surg Endosc.* 2011;25(10):3149-3153. doi: 10.1007/s00464-011-1725-y. PMID: 21528392.
- 3. Geerts JH, de Haas JWA, Nieuwenhuijs VB. Lessons learned from revision procedures: a case series pleading for reinforcement of the anterior hiatus in recurrent hiatal hernia. *Surg Endosc.* 2024;38(5):2398-2404. doi: 10.1007/s00464-024-10703-3. PMID: 38565689.
- Daly S, Kumar SS, Collings AT, et al. SAGES guidelines for the surgical treatment of hiatal hernias. Surg Endosc. 2024;38(9):4765-4775. Doi: 10.1007/s00464-024-11092-3. PMID: 39080063.
- Sfara A, Dumitrascu DL. The management of hiatal hernia: an update on diagnosis and treatment. *Med Pharm Rep.* 2019;92(4):321-325. doi: 10.15386/mpr-1323. PMID: 31750430. PMCID: PMC6853045.
- 6. Expert Panel on Gastrointestinal Imaging, Vij A, Zaheer A, et al. ACR appropriateness criteria epigastric pain. *J Am Coll Radiol.* 2021;18(115):S330-S339. doi: 10.1016/j.jacr.2021.08.006. PMID: 34794592.
- Hider AM, Bonham AJ, Carlin AM, et al. Impact of concurrent hiatal hernia repair during laparoscopic sleeve gastrectomy on patient-reported gastroesophageal reflux symptoms: a state-wide analysis. Surg Obes Relat Dis. 2023;19(6):619-625. doi: 10.1016/j.soard.2022.12.021. PMID: 36586763.
- Lewis KH, Callaway K, Argetsinger S, et al. Concurrent hiatal hernia repair and bariatric surgery: outcomes after sleeve gastrectomy and Roux-en-Y gastric bypass. Surg Obes Relat Dis. 2021;17(1):72-80. doi: 10.1016/j.soard.2020.08.035. PMID: 33109444. PMCID: PMC8116048.
- Małczak P, Pisarska-Adamczyk M, Zarzycki P, et al. Hiatal hernia repair during laparoscopic sleeve gastrectomy: systematic review and meta-analysis on gastroesophageal reflux disease symptoms changes. *Pol Przegl Chir.* 2021;93(5):1-5. doi: 10.5604/01.3001.0014.9356. PMID: 34552030.
- Carrera Ceron RE, Oelschlager BK. Management of recurrent paraesophageal hernia. J Laparoendosc Adv Surg Tech A. 2022;32(11):1148-1155. doi: 10.1089/lap.2022.0388. PMID: 36161967.
- Addo AJ, Fatunmbi AM, Ramdeen SL, et al. Revision paraesophageal hernia repair outcomes in patients with typical and atypical reflux. Surg Endosc. 2023;37(6):4947-4953. doi: 10.1007/s00464-022-09635-7. PMID: 36192657.
- 12. Addo A, Carmichael D, Chan K, et al. Laparoscopic revision paraesophageal hernia repair: a 16-year experience at a single

institution. *Surg Endosc.* 2023;37(1):624-630. doi: 10.1007/s00464-022-09359-8. PMID: 35713721.

- 13. Bhatt H, Wei B. Comparison of laparoscopic vs. robotic paraesophageal hernia repair: a systematic review. *J Thorac Dis.* 2023;15(3):1494-1502. doi: 10.21037/jtd-22-819. PMID: 37065589.
- Analatos A, Lindblad M, Ansorge C, et al. Total versus partial posterior fundoplication in the surgical repair of para-oesophageal hernias: randomized clinical trial. *BJS Open*. 2022;6(3):zrac034. doi: 10.1093/bjsopen/zrac034. PMID: 35511051.
- Kohn GP, Price RR, DeMeester SR, et al. Guidelines for the management of hiatal hernia. Surg Endosc. 2013;27(12):4409-4428. doi: 10.1007/s00464-013-3173-3. PMID: 24018762.

Clinical Guideline Revision History/Information

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