Healthy Blue

Clinical UM Guideline

Subject:	Paraesophageal Hernia Repair		
Guideline #:	CG-SURG-92	**Publish Date:**	12/16/2020
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Description

This document addresses paraesophageal hernia (PEH) repair. This document does not address sliding hiatal hernia repair or surgical procedures for the treatment of Barrett's Esophagus.

Note: For additional information, please see:

- CG-SURG-83 Bariatric Surgery and Other Treatments for Clinically Severe Obesity
- CG-SURG-101 Ablative Techniques as a Treatment for Barrett's Esophagus
- SURG.00047 Transendoscopic Therapy for Gastroesophageal Reflux Disease, Dysphagia and Gastroparesis
- SURG.00131 Lower Esophageal Sphincter Augmentation Devices for the Treatment of Gastroesophageal Reflux Disease (GERD)

Clinical Indications

Medically Necessary:

A. Paraesophageal hernia repair is considered **medically necessary** for symptomatic individuals with **all** of the following indications:
   1. A paraesophageal hernia is demonstrated on diagnostic imaging or endoscopic study; **and**
   2. One of the following conditions exists:
      i. Gastric outlet obstruction caused by the hernia; **or**
      ii. Persistent anemia without other identified causes after evaluation; **or**
      iii. Suspected or documented gastric strangulation; **or**
      iv. Gastroesophageal reflux symptoms unresponsive to medical treatment.

B. Paraesophageal hernia repair during a gastric surgical procedure, including but not limited to bariatric surgery, is considered **medically necessary** when a paraesophageal hernia has been detected.

C. Recurrent paraesophageal hernia repair is considered **medically necessary** when **all** of the criteria below are met:
   1. A paraesophageal hernia is demonstrated on diagnostic imaging or endoscopic study performed after the previous repair; **and**
   2. A condition listed in criterion A persists or recurs:

i. Gastric outlet obstruction caused by the hernia; **or**
ii. Persistent anemia without other identified cause after evaluation; **or**
iii. Suspected or documented gastric strangulation; **or**
iv. Gastroesophageal reflux symptoms unresponsive to medical treatment.

Not Medically Necessary:

Paraesophageal hernia repair is considered **not medically necessary** when the criteria above are not met and for all other indications, including but not limited to asymptomatic individuals not undergoing gastric surgery or during surgery for other than gastric indications.

Coding

The following codes for treatments and procedures applicable to this guideline are included below for informational purposes. Inclusion or exclusion of a procedure, diagnosis or device code(s) does not constitute or imply member coverage or provider reimbursement policy. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

When services may be Medically Necessary when criteria are met:
For the codes listed below only when specified that a paraesophageal hernia repair was completed

CPT	
43280	Laparoscopy, surgical, esophagogastric fundoplasty (eg, 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
43283	Laparoscopy, surgical, esophageal lengthening procedure (eg, Collis gastroplasty or wedge gastroplasty) [when performed with repair of paraesophageal hernia]
43325	Esophagogastric fundoplasty, with fundic patch (Thal-Nissen procedure)
43327	Esophagogastric fundoplasty partial or complete; laparotomy
43328	Esophagogastric fundoplasty partial or complete; thoracotomy
43330	Esophagomyotomy (Heller type); abdominal approach
43331	Esophagomyotomy (Heller type); thoracic approach
43332	Repair, paraesophageal hiatal hernia (including fundoplication), via laparotomy, except neonatal; without implantation of mesh or other prosthesis
43333	Repair, paraesophageal hiatal hernia (including fundoplication), via laparotomy, except neonatal; with implantation of mesh or other prosthesis
43334	Repair, paraesophageal hiatal hernia (including fundoplication), via thoracotomy, except neonatal; without implantation of mesh or other prosthesis
43335	Repair, paraesophageal hiatal hernia (including fundoplication), via thoracotomy, except neonatal; with implantation of mesh or other prosthesis

43336	Repair, paraesophageal hiatal hernia, (including fundoplication), via thoracoabdominal incision, except neonatal; without implantation of mesh or other prosthesis
43337	Repair, paraesophageal hiatal hernia, (including fundoplication), via thoracoabdominal incision, except neonatal; with implantation of mesh or other prosthesis
43338	Esophageal lengthening procedure (eg, Collis gastroplasty or wedge gastroplasty) [when performed with open repair of paraesophageal hernia]

ICD-10 Procedure

0BQT0ZZ-0BQT4ZZ	Repair diaphragm [by approach; includes codes 0BQT0ZZ, 0BQT3ZZ, 0BQT4ZZ]
0BUT0JZ	Supplement diaphragm with synthetic substitute

ICD-10 Diagnosis

	All diagnoses, including, but not limited to:
D50.0	Iron deficiency anemia secondary to blood loss (chronic)
D64.9	Anemia, unspecified
D62	Acute posthemorrhagic anemia
K21.00-K21.9	Gastro-esophageal reflux disease
K31.1	Adult hypertrophic pyloric stenosis [gastric outlet obstruction]
K31.89	Other diseases of stomach and duodenum [gastric strangulation]
K44.0-K44.9	Diaphragmatic hernia
Q40.1	Congenital hiatus hernia
Q79.0	Congenital diaphragmatic hernia
R12	Heartburn

When services are Not Medically Necessary:
For the procedure codes listed above when criteria are not met or for situations designated in the Clinical Indications section as not medically necessary.

Discussion/General Information

PEH is a type of hiatal hernia, which is a protrusion of an abdominal structure, other than the esophagus, into the chest cavity. Hiatal hernias are categorized into Types I – IV. The Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) published guidelines for the management of hiatal hernia (Kohn, 2013) with the following classifications:

1. Type I hernias are sliding hiatal hernias, where the gastroesophageal junction migrates above the diaphragm. The stomach remains in its usual longitudinal alignment and the fundus remains below the gastroesophageal junction.
2. Type II hernias are pure paraesophageal hernias (PEH); the gastroesophageal junction remains in its normal anatomic position but a portion of the fundus herniates through the diaphragmatic hiatus adjacent to the esophagus.

3. Type III hernias are a combination of Types I and II, with both the gastroesophageal junction and the fundus herniating through the hiatus. The fundus lies above the gastroesophageal junction.
4. Type IV hiatal hernias are characterized by the presence of a structure other than stomach, such as the omentum, colon or small bowel within the hernia sac.

The majority of hiatal hernias are Type I, which are sliding hiatal hernias. Types II – IV are considered PEH with Type III being the most common and Type II being the least common.

PEH can be repaired through an open or laparoscopic transabdominal approach or through thoracotomy. Due to less postoperative pain, reduced rate of morbidity, and shorter hospital stays, SAGES recommends laparoscopic repair as the preferred method (Kohn, 2013). Several retrospective studies resulted in similar conclusions (Boushey, 2008; Dallemagne, 2011; El Khoury, 2015; Kubasiak, 2014). Other surgical procedures that are sometimes used in addition to PEH repair include hernia sac excision, reinforced repair with the use of mesh, fundoplication, mediastinal dissection of the esophagus, Collis gastroplasty, gastropexy, and gastrostomy tube insertion. The literature on these technical considerations consists of mainly low quality retrospective reports with small sample sizes and inadequate study designs.

Past studies have suggested PEH repair for both symptomatic and asymptomatic PEH; however, more recent studies indicate that PEH repair should only be performed in individuals with gastric outlet obstruction, severe gastroesophageal reflux, severe anemia, or possible gastric strangulation since asymptomatic PEH is safe to observe. In addition, PEH repair in asymptomatic individuals can decrease the quality-adjusted life expectancy for those aged 65 years and older (Kohn, 2013). For individuals with gastroesophageal reflux, the American College of Gastroenterology recommends non-surgical management of gastroesophageal reflux before surgical treatment. Interventions in the management of gastroesophageal reflux include weight loss counseling and attempting weight loss, head of bed elevation, avoidance of meals 2 to 3 hours before bedtime, elimination of foods that trigger reflux (for example, chocolate, caffeine, acidic foods, and spicy foods), tobacco and alcohol cessation, optimizing proton pump inhibitor therapy, excluding other etiologies, and reflux monitoring (Katz, 2013). Recurrent PEH repair is indicated when the symptoms match anatomical findings (Kohn, 2013), which occurs in 25.5% of primary PEH repairs (Rathore, 2007).

Some retrospective studies have reported gastroesophageal reflux as a complication after bariatric surgery that can lead to reoperation and concluded that hiatal hernias should be repaired if detected during these procedures (Dolan, 2003; El Chaar, 2016; Frezza, 2008). Another larger retrospective study (Gulkarov, 2008) reviewed charts of all individuals over a 5-year period who had laparoscopic adjustable gastric banding (n=1298) with an average follow-up of 24.8 months, and those who had laparoscopic adjustable gastric banding with concurrent hiatal hernia repair (n=520) with an average follow-up of 20.5 months. The authors found that adding hiatal hernia repair to laparoscopic adjustable gastric banding resulted in a significant reduction in the number of reoperations for band slippage, pouch dilation, and hiatal hernia ($p<0.001$). Based on the data from these studies, SAGES recommends to repair all detected hiatal hernias during operations for Roux-en-Y gastric bypass, sleeve gastrectomy and the placement of adjustable gastric bands (Kohn, 2013).

Definitions

Anemia: A condition of having too few red blood cells. Healthy red blood cells carry oxygen throughout the body. If the blood is low on red blood cells, the body does not get enough oxygen.

Collis gastroplasty: A surgical procedure to lengthen the esophagus.

Fundoplication: A surgical procedure designed to restore the barrier function of the lower esophageal sphincter. The most common type of fundoplication procedure is referred to as Nissen fundoplication, which is typically performed laparoscopically.

Gastric banding: This surgical procedure is intended to help a person lose weight. A band is placed around the upper part of the stomach, creating a small pouch that can hold only a small amount of food. The narrowed opening between the stomach pouch and the rest of the stomach controls how quickly food passes from the pouch to the lower part of the stomach. This system helps the person to eat less by limiting the amount of food that can be eaten at one time and increasing the time it takes for food to be digested.

Gastric bypass: This surgical procedure reduces the stomach capacity and diverts partially digested food from the duodenum to the jejunum (section of the small intestine extending from the duodenum).

Gastric outlet obstruction: A condition caused by any disease process that blocks emptying of the stomach.

Gastric strangulation: A condition caused by a hernia that cuts off blood supply to the intestines and tissues in the abdomen.

Gastroesophageal reflux: A condition caused by chronic back-flow of acid from the stomach into the esophagus, causing heartburn and leading to irritation and possible damage to the lining of the esophagus.

Gastropexy: A surgical procedure designed to suture the stomach to the abdominal wall.

Thoracotomy: A surgical procedure to open and access an individual's chest.

References

Peer Reviewed Publications:

1. Boushey RP, Moloo H, Burpee S, et al. Laparoscopic repair of paraesophageal hernias: a Canadian experience. Can J Surg. 2008; 51(5):355-360.
2. Dallemagne B, Kohnen L, Perretta S, et al. Laparoscopic repair of paraesophageal hernia. Long-term follow-up reveals good clinical outcome despite high radiological recurrence rate. Ann Surg. 2011; 253(2):291-296.
3. Davis M, Rodriguez J, El-Hayek K, et al. Paraesophageal hernia repair with partial longitudinal gastrectomy in obese patients. JSLS. 2015; 19(3):e2015.00060.

4. Dolan K, Finch R, and Fielding G. Laparoscopic gastric banding and crural repair in the obese patient with a hiatal hernia. Obes Surg. 2003; 13(5):772-775.
5. El Chaar M, Ezeji G, Claros L, et al. Short-term results of laparoscopic sleeve gastrectomy in combination with hiatal hernia repair: experience in a single accredited center. Obes Surg. 2016; 26(1):68-76.
6. El Khoury R, Ramirez M, Hungness ES, et al. Symptom relief after laparoscopic paraesophageal hernia repair without mesh. J Gastrointest Surg. 2015; 19(11):1938-1942.
7. Frezza EE, Barton A, and Wachtel MS. Crural repair permits morbidly obese patients with not large hiatal hernia to choose laparoscopic adjustable banding as a bariatric surgical treatment. Obes Surg. 2008; 18(5):583-588.
8. Furnée EJ, Draaisma WA, Simmermacher RK, et al. Long-term symptomatic outcome and radiologic assessment of laparoscopic hiatal hernia repair. Am J Surg. 2010; 199(5):695-701.
9. Gulkarov I, Wetterau M, Ren CJ, and Fielding GA. Hiatal hernia repair at the initial laparoscopic adjustable gastric band operation reduces the need for reoperation. Surg Endosc. 2008; 22(4):1035-1041.
10. Jones R, Simorov A, Lomelin D, et al. Long-term outcomes of radiologic recurrence after paraesophageal hernia repair with mesh. Surg Endosc. 2015; 29(2):425-430.
11. Kao AM, Otero J, Schlosser KA, et al. One more time: redo paraesophageal hernia repair results in safe, durable outcomes compared with primary repairs. Am Surg. 2018; 84(7):1138-1145.
12. Kubasiak J, Hood KC, Daly S, et al. Improved patient outcomes in paraesophageal hernia repair using a laparoscopic approach: a study of the national surgical quality improvement program data. Am Surg. 2014; 80(9):884-889.
13. Latzko M, Borao F, Squillaro A, et al. Laparoscopic repair of paraesophageal hernias. JSLS. 2014; 18(3).
14. Lazar DJ, Birkett DH, Brams DM, et al. Long-term patient-reported outcomes of paraesophageal hernia repair. JSLS. 2017; 21(4).
15. Lidor AO, Steele KE, Stem M, et al. Long-term quality of life and risk factors for recurrence after laparoscopic repair of paraesophageal hernia. JAMA Surg. 2015; 150(5):424-431.
16. Nason KS, Luketich JD, Qureshi I, et al. Laparoscopic repair of giant paraesophageal hernia results in long-term patient satisfaction and a durable repair. J Gastrointest Surg. 2008; 12(12):2066-2077.
17. Rathore MA, Andrabi SI, Bhatti MI, et al. Meta-analysis of recurrence after laparoscopic repair of paraesophageal hernia. JSLS. 2007; 11(4):456-460.
18. Targarona EM, Grisales S, Uyanik O, et al. Long-term outcome and quality of life after laparoscopic treatment of large paraesophageal hernia. World J Surg. 2013; 37(8):1878-1882.

Government Agency, Medical Society, and Other Authoritative Publications:

1. Katz PO, Gerson LB, Vela MF. Guidelines for the diagnosis and management of gastroesophageal reflux disease. Am J Gastroenterol. 2013; 108(3):308-328.
2. Kohn GP, Price RR, DeMeester SR, et al. Guidelines for the management of hiatal hernia. Surg Endosc. 2013; 27(12):4409-4428.

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History

Status	Date	Action
Reviewed	11/05/2020	Medical Policy & Technology Assessment Committee (MPTAC) review. Updated Reference Section. Reformatted Coding section.
	10/01/2020	Updated Coding section with 10/01/2020 ICD-10-CM changes; added K21.00 replacing K21.0 deleted 09/30/2020.
Revised	11/07/2019	MPTAC review. Revised Medically Necessary Clinical Indications for paraesophageal hernia repair during gastric surgical procedures. Updated Description and Coding sections.
New	01/24/2019	MPTAC review. Initial document development.