



## MASSACHUSETTS

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### Medical Policy

## Peroral Endoscopic Myotomy for Treatment of Esophageal Achalasia

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### Policy Number: 451

BCBSA Reference Number: 2.01.91

NCD/LCD: N/A

### Related Policies

Surgical and Transesophageal Endoscopic Procedures to Treat Gastroesophageal Reflux Disease, #[920](#)

### Policy

#### Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO Blue<sup>SM</sup> and Medicare PPO Blue<sup>SM</sup> Members

Peroral endoscopic myotomy is considered [INVESTIGATIONAL](#) as a treatment for esophageal achalasia.

### Prior Authorization Information

#### Inpatient

- For services described in this policy, precertification/preauthorization **IS REQUIRED** for all products if the procedure is performed **inpatient**.

#### Outpatient

- For services described in this policy, see below for products where prior authorization **might be required** if the procedure is performed **outpatient**.

	Outpatient
Commercial Managed Care (HMO and POS)	This is <b>not</b> a covered service.
Commercial PPO and Indemnity	This is <b>not</b> a covered service.
Medicare HMO Blue <sup>SM</sup>	This is <b>not</b> a covered service.
Medicare PPO Blue <sup>SM</sup>	This is <b>not</b> a covered service.

### CPT Codes / HCPCS Codes / ICD Codes

*Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.*

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

There are no specific codes for this procedure.

## DESCRIPTION

### ESOPHAGEAL ACHALASIA

Esophageal achalasia is characterized by reduced numbers of neurons in the esophageal myenteric plexuses and reduced peristaltic activity, making it difficult for patients to swallow food and possibly leading to complications such as regurgitation, coughing, choking, aspiration pneumonia, esophagitis, ulceration, and weight loss. The estimated U.S. prevalence of achalasia is 10 cases per 100,000, and the estimated incidence is 0.6 cases per 100,000 per year.<sup>1</sup>

### Treatment

Treatment options for achalasia have included pharmacotherapy (eg, injections with botulinum toxin), pneumatic dilation, and laparoscopic Heller myotomy.<sup>1,2</sup> Although the latter two are considered the standard treatments because of higher success rates and relatively long-term efficacy compared with pharmacotherapy, both are associated with a perforation risk of about 1%. Heller myotomy is the most invasive of the procedures, requiring laparoscopy and surgical dissection of the esophagogastric junction.<sup>2</sup> One-year response rates of 86% and major mucosal tear rates requiring subsequent intervention of 0.6% have been reported.<sup>3</sup>

Peroral endoscopic myotomy (POEM) is a novel endoscopic procedure developed in Japan.<sup>2,4</sup> POEM is performed with the patient under general anesthesia.<sup>5</sup> After tunneling an endoscope down the esophagus toward the esophageal-gastric junction, a surgeon performs the myotomy by cutting only the inner, circular lower esophageal sphincter muscles through a submucosal tunnel created in the proximal esophageal mucosa. POEM differs from laparoscopic surgery, which involves complete division of both circular and longitudinal lower esophageal sphincter muscle layers. Cutting the dysfunctional muscle fibers that prevent the lower esophageal sphincter from opening allows food to enter the stomach more easily.<sup>2,5</sup>

Note that the acronym POEM in this review refers to *peroral endoscopic myotomy*. POEMS syndrome, which has a similar acronym, is discussed in policy #[075](#).

## Summary

Esophageal achalasia is characterized by reduced numbers of neurons in the esophageal myenteric plexuses and reduced peristaltic activity, making it difficult for patients to swallow food and possibly leading to complications such as regurgitation, coughing, choking, aspiration pneumonia, esophagitis, ulceration, and weight loss. Peroral endoscopic myotomy (POEM) is a novel endoscopic procedure that uses the oral cavity as a natural orifice entry point to perform myotomy of the lower esophageal sphincter. This procedure is intended to reduce the total number of incisions needed and thus the overall invasiveness of surgery.

For individuals who have achalasia who receive POEM, the evidence includes systematic reviews of observational studies, nonrandomized comparative studies, and case series. Relevant outcomes are symptoms, functional outcomes, health status measures, resource utilization, and treatment-related morbidity. The comparative studies have primarily reported similar outcomes for POEM and for Heller myotomy in symptom relief, as assessed by the Eckardt score. Some studies have shown shorter length of stay and less postoperative pain with POEM. However, potential imbalances in patient characteristics in these nonrandomized studies might have biased the treatment comparisons. In the case series, treatment success at short follow-up periods was reported for a high proportion of patients treated with POEM. However, the incidence of adverse events was relatively high, with POEM-specific complications, including subcutaneous emphysema, pneumothorax, and thoracic effusion, reported across studies. Additionally, a substantial proportion of patients undergoing POEM developed gastroesophageal reflux

disease and esophagitis and required treatment. Case series do not permit conclusions about the efficacy of POEM relative to established treatment, and long-term outcomes of the procedure are not well described in the literature. The evidence is insufficient to determine the effects of the technology on health outcomes.

## Policy History

Date	Action
1/2019	BCBSA National medical policy review. Description, summary and references updated. Policy statements unchanged.
1/2018	New references added from BCBSA National medical policy.
12/2016	New references added from BCBSA National medical policy.
1/2016	New references added from BCBSA National medical policy.
3/2014	New medical policy describing investigational indications. Effective 3/1/2014.

## Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:

[Medical Policy Terms of Use](#)

[Managed Care Guidelines](#)

[Indemnity/PPO Guidelines](#)

[Clinical Exception Process](#)

[Medical Technology Assessment Guidelines](#)

## References

- Cheatham JG, Wong RK. Current approach to the treatment of achalasia. *Curr Gastroenterol Rep.* Jun 2011;13(3):219-225. PMID 21424734
- Pandolfino JE, Kahrilas PJ. Presentation, diagnosis, and management of achalasia. *Clin Gastroenterol Hepatol.* Aug 2013;11(8):887-897. PMID 23395699
- Yaghoobi M, Mayrand S, Martel M, et al. Laparoscopic Heller's myotomy versus pneumatic dilation in the treatment of idiopathic achalasia: a meta-analysis of randomized, controlled trials. *Gastrointest Endosc.* Sep 2013;78(3):468-475. PMID 23684149
- Inoue H, Minami H, Kobayashi Y, et al. Peroral endoscopic myotomy (POEM) for esophageal achalasia. *Endoscopy.* Apr 2010;42(4):265-271. PMID 20354937
- Hungness ES, Teitelbaum EN, Santos BF, et al. Comparison of perioperative outcomes between peroral esophageal myotomy (POEM) and laparoscopic Heller myotomy. *J Gastrointest Surg.* Feb 2013;17(2):228-235. PMID 23054897
- Eckardt AJ, Eckardt VF. Treatment and surveillance strategies in achalasia: an update. *Nat Rev Gastroenterol Hepatol.* Jun 2011;8(6):311-319. PMID 21522116
- Schlottmann F, Luckett DJ, Fine J, et al. Laparoscopic Heller myotomy versus peroral endoscopic myotomy (POEM) for achalasia: a systematic review and meta-analysis. *Ann Surg.* Mar 2018;267(3):451-460. PMID 28549006
- Crespin OM, Liu LWC, Parmar A, et al. Safety and efficacy of POEM for treatment of achalasia: a systematic review of the literature. *Surg Endosc.* May 2017;31(5):2187-2201. PMID 27633440
- Akintoye E, Kumar N, Obaitan I, et al. Peroral endoscopic myotomy: a meta-analysis. *Endoscopy.* Dec 2016;48(12):1059-1068. PMID 27617421
- Patel K, Abbassi-Ghadi N, Markar S, et al. Peroral endoscopic myotomy for the treatment of esophageal achalasia: systematic review and pooled analysis. *Dis Esophagus.* Oct 2016;29(7):807-819. PMID 26175119
- Marano L, Pallabazzer G, Solito B, et al. Surgery or peroral esophageal myotomy for achalasia: a systematic review and meta-analysis. *Medicine (Baltimore).* Mar 2016;95(10):e3001. PMID 26962813
- Zhang Y, Wang H, Chen X, et al. Per-oral endoscopic myotomy versus laparoscopic Heller myotomy for achalasia: a meta-analysis of nonrandomized comparative studies. *Medicine (Baltimore).* Feb 2016;95(6):e2736. PMID 26871816

13. Sanaka MR, Hayat U, Thota PN, et al. Efficacy of peroral endoscopic myotomy vs other achalasia treatments in improving esophageal function. *World J Gastroenterol*. May 28 2016;22(20):4918-4925. PMID 27239118
14. Wang X, Tan Y, Lv L, et al. Peroral endoscopic myotomy versus pneumatic dilation for achalasia in patients aged  $\geq$  65 years. *Rev Esp Enferm Dig*. Oct 2016;108(10):637-641. PMID 27649684
15. Kumbhari V, Tieu AH, Onimaru M, et al. Peroral endoscopic myotomy (POEM) vs laparoscopic Heller myotomy (LHM) for the treatment of Type III achalasia in 75 patients: a multicenter comparative study. *Endosc Int Open*. Jun 2015;3(3):E195-201. PMID 26171430
16. Bhayani NH, Kurian AA, Dunst CM, et al. A comparative study on comprehensive, objective outcomes of laparoscopic Heller myotomy with per-oral endoscopic myotomy (POEM) for achalasia. *Ann Surg*. Jun 2014;259(6):1098-1103. PMID 24169175
17. Patti MG, Fisichella PM. Controversies in management of achalasia. *J Gastrointest Surg*. Sep 2014;18(9):1705-1709. PMID 24972973
18. Ujiki MB, Yetasook AK, Zapf M, et al. Peroral endoscopic myotomy: A short-term comparison with the standard laparoscopic approach. *Surgery*. Oct 2013;154(4):893-897; discussion 897-900. PMID 24074429
19. Hungness ES, Sternbach JM, Teitelbaum EN, et al. Per-oral endoscopic myotomy (POEM) after the learning curve: durable long-term results with a low complication rate. *Ann Surg*. Sep 2016;264(3):508-517. PMID 27513156
20. Ramchandani M, Nageshwar Reddy D, Darisetty S, et al. Peroral endoscopic myotomy for achalasia cardia: Treatment analysis and follow up of over 200 consecutive patients at a single center. *Dig Endosc*. Jan 2016;28(1):19-26. PMID 26018637
21. Inoue H, Sato H, Ikeda H, et al. Per-oral endoscopic myotomy: a series of 500 patients. *J Am Coll Surg*. Aug 2015;221(2):256-264. PMID 26206634
22. Teitelbaum EN, Soper NJ, Santos BF, et al. Symptomatic and physiologic outcomes one year after peroral esophageal myotomy (POEM) for treatment of achalasia. *Surg Endosc*. Dec 2014;28(12):3359-3365. PMID 24939164
23. Ling T, Guo H, Zou X. Effect of peroral endoscopic myotomy in achalasia patients with failure of prior pneumatic dilation: A prospective case-control study. *J Gastroenterol Hepatol*. Aug 2014;29(8):1609-1613. PMID 24628480
24. Ling TS, Guo HM, Yang T, et al. Effectiveness of peroral endoscopic myotomy in the treatment of achalasia: A pilot trial in Chinese Han population with a minimum of one-year follow-up. *J Dig Dis*. Jul 2014;15(7):352-358. PMID 24739072
25. Von Renteln D, Fuchs KH, Fockens P, et al. Peroral endoscopic myotomy for the treatment of achalasia: an international prospective multicenter study. *Gastroenterology*. Aug 2013;145(2):309-311 e303. PMID 23665071
26. Ren Z, Zhong Y, Zhou P, et al. Perioperative management and treatment for complications during and after peroral endoscopic myotomy (POEM) for esophageal achalasia (EA) (data from 119 cases). *Surg Endosc*. Nov 2012;26(11):3267-3272. PMID 22609984
27. Onimaru M, Inoue H, Ikeda H, et al. Peroral endoscopic myotomy is a viable option for failed surgical esophagocardiomyotomy instead of redo surgical Heller myotomy: a single center prospective study. *J Am Coll Surg*. Oct 2013;217(4):598-605. PMID 23891071
28. Zhou PH, Li QL, Yao LQ, et al. Peroral endoscopic myotomy for failed Heller myotomy: a prospective single-center study. *Endoscopy*. Mar 2013;45(3):161-166. PMID 23389963
29. Li QL, Chen WF, Zhou PH, et al. Peroral endoscopic myotomy for the treatment of achalasia: a clinical comparative study of endoscopic full-thickness and circular muscle myotomy. *J Am Coll Surg*. Jul 25 2013;217(3):442-451. PMID 23891074
30. Kahrilas PJ, Katzka D, Richter JE. Clinical Practice Update: the use of per-oral endoscopic myotomy in achalasia: expert review and best practice advice from the AGA Institute. *Gastroenterology*. Nov 2017;153(5):1205-1211. PMID 28989059
31. Pasha SF, Acosta RD, Chandrasekhara V, et al. The role of endoscopy in the evaluation and management of dysphagia. *Gastrointest Endosc*. Feb 2014;79(2):191-201. PMID 24332405
32. Vaezi MF, Pandolfino JE, Vela MF. ACG clinical guideline: diagnosis and management of achalasia. *Am J Gastroenterol*. Aug 2013;108(8):1238-1249; quiz 1250. PMID 23877351
33. Stefanidis D, Richardson W, Farrell TM, et al. SAGES guidelines for the surgical treatment of esophageal achalasia. *Surg Endosc*. Feb 2012;26(2):296-311. PMID 22044977

34. Zaninotto G, Bennett C, Boeckxstaens G, et al. The 2018 ISDE achalasia guidelines. *Dis Esophagus*. Aug 30 2018. PMID 30169645