

POEM Results in More Frequent and More Severe Reflux than LHM

Jason Nasser, MD | Department of Internal Medicine, Cleveland Clinic, Cleveland, Ohio
 Siva Raja, MD, PhD | Digestive Disease & Surgery Institute, Cleveland Clinic, Cleveland, Ohio
 Madhusudhan Sanaka, MD | Digestive Disease & Surgery Institute, Cleveland Clinic, Cleveland, Ohio
 Scott Gabbard, MD | Digestive Disease & Surgery Institute, Cleveland Clinic, Cleveland, Ohio

Background

- Achalasia is an esophageal motility disorder that is characterized by abnormal lower esophageal sphincter (LES) relaxation due to disrupted neuromodulatory responses.
- Relieving this outflow obstruction simultaneously disrupts the barrier against gastroesophageal reflux (GER).

Objective

- We aimed to study the comparative incidence of GER including both pH testing and esophagogastroduodenoscopy (EGD) findings.

Methods

- The charts of patients who underwent LHM with Dor fundoplication or POEM across 2 years (2017-2019) at our institution were reviewed, and patients who had completed a 2-month post-treatment EGD or esophageal pH study off acid-lowering agents were included.
- Patients with a history of prior myotomy were excluded.

39% of POEM patients developed severe GERD compared to 15% of LHM

Results

- Of the 236 patients included, 85 (36%) had undergone POEM while 151 (64%) had undergone LHM.
- The prevalence of abnormal GER using pH testing (TAE >4%) was 62% for POEM and 21% for LHM. When including abnormal EGD's, the prevalence of abnormal GER (TAE >4% or reflux esophagitis or esophageal ulcer) becomes 72% and 28%, respectively.
- The incidence of severe reflux (defined by more than 10% time in reflux overall or Grade C/D esophagitis or esophageal ulcer) was 38.8% for POEM and 15.2% for LHM.

Table – Comparison of reflux patterns

Characteristic	POEM	LHM	p-value
TAE time > 4%	62.4%	20.5%	<0.001
TAE time > 10%	35.3%	10.3%	<0.001
Grade A/B esophagitis	17.6%	9.3%	NS
Grade C/D esophagitis	2.4%	6.6%	0.03
Esophageal ulcer	1.2%	0.7%	NS
Gastritis/gastroduodenal ulcer	2.4%	10.6%	0.022
Abnormal GER *	72%	28%	<0.001
Severely abnormal GER **	38.8%	15.2%	<0.001

NS = p value > 0.05
 TAE = total acid exposure
 *Abnormal GER = TAE >4% or esophagitis
 ** Severely abnormal GER = TAE >10% or grade C/D esophagitis or esophageal ulcer

Discussion

- POEM is associated with a significantly higher incidence of abnormal GER (72% vs 28%, p<0.001), and severe GER (38.8% vs 15.2%, p<0.001), when accounting for both esophageal pH testing and upper endoscopy findings.
- POEM patients should be cautioned accordingly and followed closely.