# Per Oral Endoscopic Myotomy (POEM) Provides Sustained Efficacy in Patients with Achalasia: Long-term Patient-reported Outcomes

University Hospitals Cleveland Medical Center

Natalie N Chakraborty MD[1,2]; Emily F Simon MD[1,2]; Joshua Lyons, MD[1,2], Ayesha Siddiq MD; Maham Babur, MD; Kayvan Barekatain, MD[1,2]; **Patrick Wieland, MD[1,2]**; Kallie Wynens, MD[1,2]; Nicolette Winder, MD[1,2]; Christina Boutros, MD[1,2]; Saher-Zahra Khan, MD[1,2]; Jamie Benson, MD[1,2]; Hamza Nasir Chatha, MD[1,2]; Samuel Zolin, MD[1,2]; Jeffrey Marks, MD[1,2]

[1]University Hospitals Cleveland Medical Center – Cleveland, OH, [2]Case Western Reserve University – Cleveland, OH

Case Western Reserve University EST. 1826

## Introduction

- POEM is a well-established, minimally invasive treatment for achalasia.
- Long-term durability, including patient-reported symptom relief is not well characterized.
- Aim: To assess long-term patient- reported symptoms and predictors of procedural durability after POEM.

## Methods

- Single center retrospective identification of adult patients who underwent POEM from Jan 2011 – Mar 2024.
- Prospective administration of standardized survey including Eckardt questionnaire via email or phone call.
- Statistical analysis was performed with descriptive analysis and multivariable logistic regression (MVLR).

**Table 1. Predictors of Long-Term Clinical Failure (Eckardt Score > 3) after Peroral Endoscopic Myotomy**

| Variable | n (%) | Odds Ratio | 95% Confidence Interval | p-value |
|---|---|---|---|---|
| **Sex** | | | | |
| Female | 46 (54.8%) | Ref. | | |
| Male | 38 (45.2%) | 1.79 | 0.58 – 5.53 | 0.309 |
| **Age** | | | | |
| 18 – 54 | 41 (48.8%) | Ref. | | |
| 55 – 69 | 35 (41.7%) | 1.07 | 0.13 – 8.86 | 0.953 |
| 70+ | 8 (9.5%) | 0.69 | 0.05 – 10.59 | 0.793 |
| **Charlson Comorbidity Index** | | | | |
| 0 | 29 (34.5%) | Ref. | | |
| 1 – 2 | 23 (27.4%) | 0.75 | 0.14 – 4.06 | 0.734 |
| 3+ | 32 (38.1%) | 0.83 | 0.06 – 11.79 | 0.888 |
| **Preoperative BMI** | | | | |
| Underweight to normal BMI | 23 (27.4%) | Ref. | | |
| Overweight | 41 (48.8%) | 5.45 | 1.23 – 24.02 | 0.025 |
| Obese | 19 (22.6%) | 2.99 | 0.51 – 17.51 | 0.224 |
| Unknown | 1 (1.2%) | | | |
| **Preoperative Symptom Length** | | | | |
| < 1 year | 27 (32.1%) | Ref. | | |
| 1 – 3 years | 26 (31.0%) | 2.60 | 0.65 – 10.35 | 0.175 |
| 4+ years | 25 (29.8%) | 1.00 | 0.25 – 4.11 | 0.996 |
| Unknown | 6 (7.1%) | 2.02 | 0.26 – 15.92 | 0.505 |
| **Preoperative Eckardt Score** | | | | |
| ≤ 3 | 15 (17.9%) | Ref. | | |
| > 3 | 50 (59.5%) | 1.05 | 0.24 – 4.58 | 0.946 |
| Unknown | 19 (22.6%) | 4.70 | 0.85 – 25.86 | 0.076 |
| **Myotomy Location** | | | | |
| Anterior | 73 (86.9%) | Ref. | | |
| Posterior | 7 (8.3%) | 3.31 | 0.50 – 21.75 | 0.214 |
| Unknown | 4 (4.8%) | 2.06 | 0.10 – 40.96 | 0.635 |

## Results

- 84 patient (27.5%) completed the questionnaire.
- Median follow-up of 6 years.
- 54 patients (69.2%) with post-POEM Eckardt score of ≤ 3.
- 58 patients (77.3%) had recurrent dysphagia or reflux after POEM.
- 26 patient (31.0%) required reintervention.
- Overweight preoperative BMI (OR 5.45; 95% CI 1.23 – 24.02) associated with clinical failure on MVLR.
- No preoperative factors were associated with long-term clinical failure.

## Conclusion

- POEM provided long-term symptom improvement for most patient as shown by Eckardt scores ≤ 3.
- These findings support POEM as a durable therapeutic option for achalasia.
- The recurrence of dysphagia and need for reintervention highlight the lack of definitive cure for achalasia.

11100 Euclid Avenue
Cleveland, Ohio 44106-5047
216-844-7874
Patrick.Wieland@UHHospitals.org