Heller Myotomy Has A Higher Likelihood of Post-Operative Intervention than POEM

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INTRODUCTION

- Eckardt score is a subjective measure of symptoms used in motility disorders
- Laparoscopic Heller myotomy with partial fundoplication (LHM) and per-oral endoscopic myotomy (POEM) are effective surgical treatment options with comparable outcomes
- 20% of patients have recurrent symptoms requiring additional treatment
- The difference in frequency of follow up interventions between these two procedures is unknown
- This study was designed to report differences in post-surgical interventions as one of the major discussion points with the patient

METHODS

- IRB approved prospectively gathered database of patients with an esophageal motility disorder undergoing surgery with LHM or POEM
- Post-operative interventions included esophageal dilation, botox, repeat myotomy, or addition of a fundoplication
- Logistic regression analysis used to estimate risk factors associated with return for additional post-operative intervention

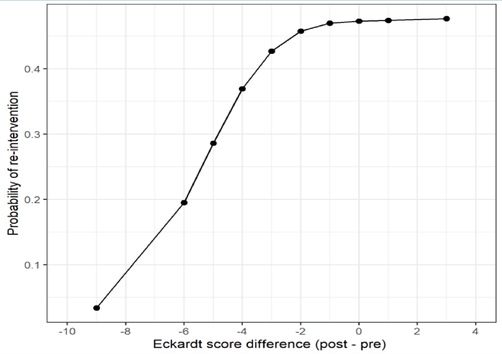
RESULTS

Table 1. Summary Statistics for type and number of reinterventions

	Heller (N=33)	POEM (N=106)	P-value
Reintervention type			
EGD Dilation	11 (33.3%)	16 (15.1%)	0.04[1]
Botox	3 (9.1%)	4 (3.8%)	0.36[1]
Repeat myotomy	6 (18.2%)	2 (1.9%)	< 0.01[1]
Fundoplication	0 (0.0%)	1 (0.9%)	1.00[1]
Number of interventions			< 0.01[1]
0	19 (57.6%)	87 (82.1%)	
1	6 (18.2%)	14 (13.2%)	
2	7 (21.2%)	4 (3.8%)	
3	1 (3.0%)	1 (0.9%)	
Postop PPI	8 (28.6%)	56 (62.9%)	< 0.01[1]
Time to reintervention (years) - median (IQR)			0.38[2]
N	14	19	
Median (Q1, Q3)	1.0 (0.0, 4.0)	1.0 (0.5, 1.0)	

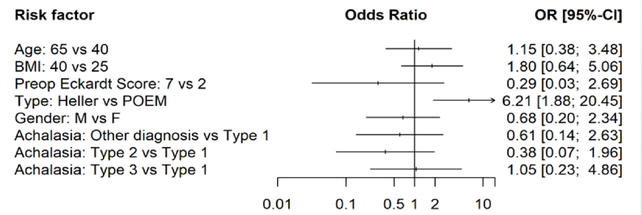
IQR-Interquartile range; P-value based on: Fisher's exact test[1]; Kruskal-Wallis rank sum test[2]

Figure 1. Probability of re-intervention vs change in Eckardt score



- 200 patients identified, 139 met inclusion criteria
  - 33 LHM and 106 POEM patients
- LHM had higher rate of post-operative intervention (45% vs 18%, p < 0.01), EGD dilation (33 vs 15 %, p = 0.04), and higher rate of repeat myotomy (18 vs 2%, p < 0.01) compared to POEM
- No difference in proportion of patients receiving botox (LHM 9%, POEM 4%, p = 0.36)
- No difference in time to post-operative intervention for either group.
  - If re-intervention were to occur, median time was within the first year
- Age, BMI, gender, or type of achalasia were not shown to increase risk of re-intervention (Figure 2)
- Patients with a change in their pre- to post-operative Eckardt score of 4 or greater decreased their chance of having a post-operative intervention. P < 0.01 (Figure 1)

Figure 2. Adjusted results of risk factors for re-intervention



CONCLUSIONS

- Patients undergoing LHM have a higher likelihood of post-operative intervention and higher rate of repeat myotomy compared to POEM
- Greater changes in a patients pre- to post-operative Eckardt score decreases likelihood of reintervention
- This is a chronic disease process and surgical therapy is not curative. Our results emphasize the importance of long-term follow up in patients with an esophageal motility disorder

