

Functional lumen imaging probe (FLIP) for follow-up after per-oral endoscopic myotomy (POEM)

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INTRODUCTION

- Reliable methods to assess physiologic success following POEM are needed
- Eckardt Score (ES) only measures symptoms improvement, and patients are often reluctant to undergo esophageal manometry especially if symptoms have resolved
- FLIP has a potential role in post-POEM follow-up to provide objective parameters for assessment of physiologic success

AIMS

- To assess the rate of physiologic success (using esophagostric junction distensibility index, EGJ-DI, on FLIP) after POEM and its utility during follow up
- To evaluate correlation between ES and EGJ-DI after POEM

METHODS

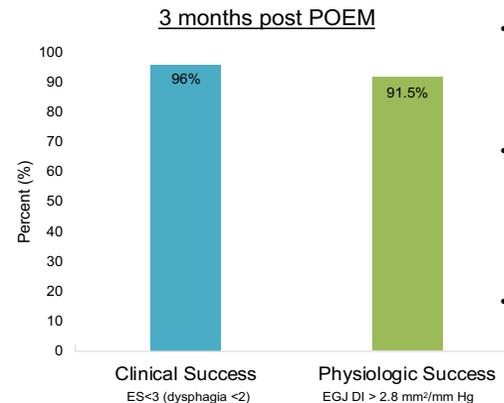
- Prospective study of adult patients who underwent FLIP for 3 month follow up after POEM
- Study period: 11/2017– 3/2020
- Physiologic success defined as EGJ-DI > 2.8 mm²/mmHg
- Clinical success defined as post-POEM ES ≤ 3
- Pre and post-POEM ES compared using a paired t-test
- Pearson's correlation to evaluate the association of EGJ-DI and ES post-POEM



RESULTS

Baseline characteristics of patients pre-POEM (n=47)

Female sex, n (%)	26 (55.3)
Age, years, mean (range)	55.1 (22-82)
Indication, n (%)	
Type I achalasia	6 (12.8)
Type II achalasia	28 (59.6)
Type III achalasia	7 (14.9)
EGJOO	5 (10.6)
IRP, mm Hg, median (IQR)	27 (19.9, 34.3)
Prior Achalasia Treatment, n (%)	
None	33 (70.2)
Pneumatic dilation	2 (4.3)
Botulinum toxin injection	7 (14.9)
Pneumatic dilation + Botox	4 (8.5)
Surgical Heller myotomy	1 (2.1)
Eckardt Score, mean	6.5 ± 2.2



- Mean ES: 6.5 ± 2.2 pre and 0.83 ± 1.0 post-POEM, p<0.001
- Among the 2 patients not meeting criteria for clinical success, DI was 6 and 6.7mm²/mmHg
- Among the 4 patients not meeting criteria for physiologic success, EGJ-DI was 2.5-2.6 mm²/mmHg (borderline)

RESULTS

Post POEM outcomes and endoscopic findings

Eckardt Score, mean	0.83 ± 1.0
Time to EndoFLIP, days, median (IQR)	91 (90,100)
EGJ-DI at 60mL, mm ² /mm Hg, mean ± SD	6.1 ± 2.5
Reflux esophagitis (LA Grade), n (%)	
None	27 (57.5)
A	7 (14.9)
B	7 (14.9)
C	2 (4.3)
D	4 (8.5)
Candida	3 (6.4)

- Significant Grade C/D esophagitis in 6 patients (12.8%)
- EGJ-DI was similar in patients with and without significant esophagitis (5.9 mm²/mm Hg ± 1.5 versus 6.1 ± 2.6, p=0.44)
- There was no correlation between post-POEM EGJ-DI and ES (r=-0.2231, p=0.1317)

CONCLUSIONS

- Majority of patients do extremely well clinically post POEM and FLIP findings at 3 months indicate adequate myotomy in most
- Endoscopy at 3 months post POEM provides opportunity for evaluation of esophagitis and to assess physiology across the EGD
- There is no association between EGJ-DI and ES at 3 months
- Future studies assessing “ideal” DI post-POEM are warranted

Multidisciplinary Collaboration. Personalized Treatment Strategies. Patient Advocacy.