

Short-Term Outcomes After Pneumatic Dilatation in Non-Achalasia Obstructive Disorders of the Esophagogastric Junction

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AIMS OF THIS STUDY

- Assess treatment efficacy of PD for the emerging non-achalasia indications of EGJOO and PF-EGJO.
- Assess attitudes regarding training in PD.

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INTRODUCTION

- Pneumatic dilatation (PD) is an established therapeutic technique which improves opening of the esophagogastric junction (EGJ).
- Evidence suggests PD could have a role in the non-achalasia obstructive disorders of the EGJ, post fundoplication esophagogastric junction obstruction (PF-EGJO), and esophagogastric junction outflow obstruction (EGJOO).

METHODS AND MATERIALS

This was a two-part study

- Main study:** A prospective single-center study comparing treatment outcome after PD in patients with EGJOO, and PF-EGJO, defined using manometry criteria, vs achalasia.
- Survey sub-study:** A 2-question survey was sent to advanced endoscopy fellowship sites in the US (n=78) regarding training in PD.

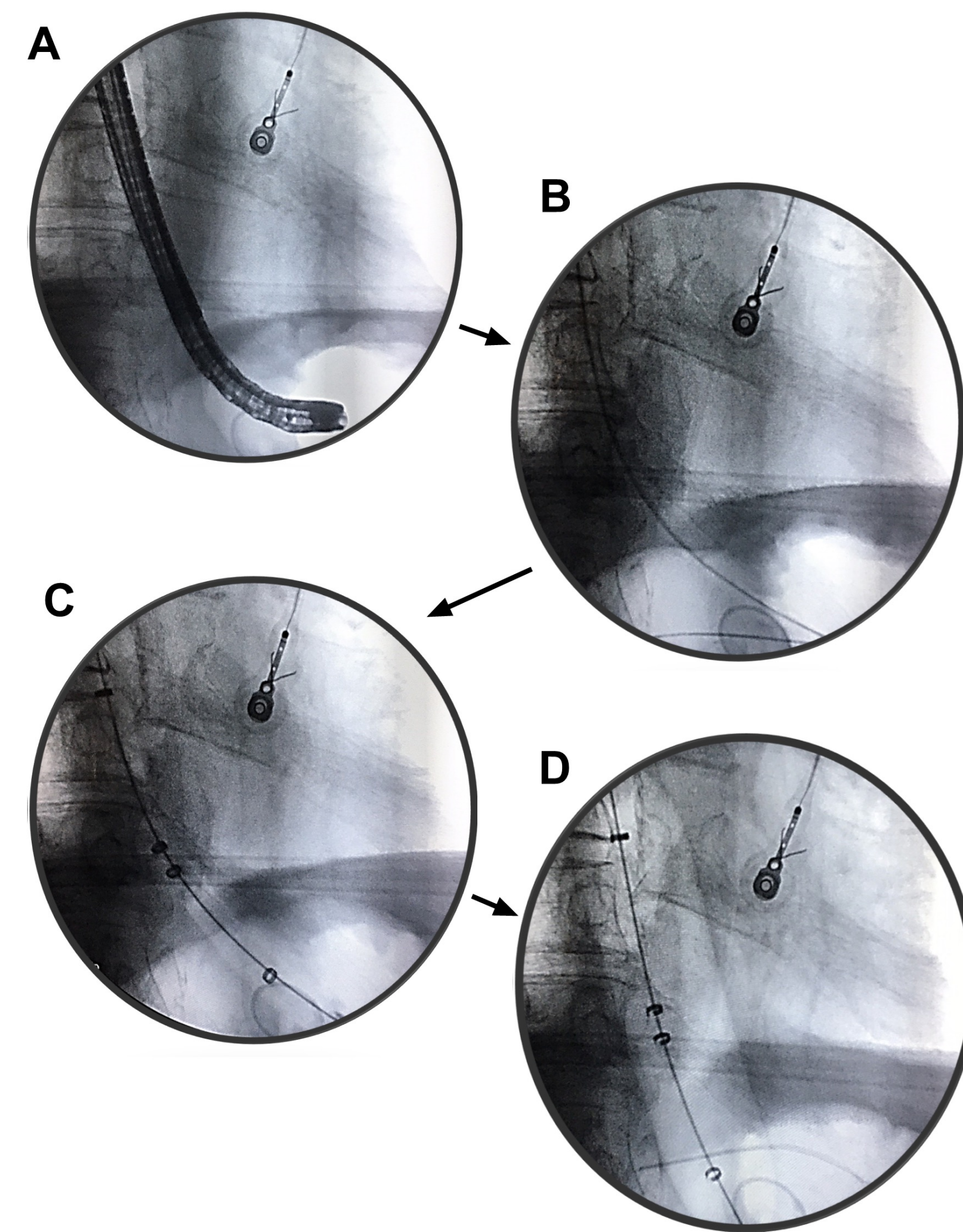


Figure 1. Technique for pneumatic dilatation:
(A) Fluoroscopic images: endoscope positioned across the EGJ
(B) Guidewire in place with sufficient wire extending beyond the EGJ
(C) Rigiflex™ balloon (30 mm size is shown) is advanced over the guidewire such that the double ringed area marking the center of the balloon is positioned at the EGJ
(D) After inflation to ~3 pounds per square inch (psi) to confirm that the midpoint of the balloon is capturing the site of obstruction, indicated by visualization of a “waist,” the balloon is inflated until the EGJ is completely effaced, in this example this occurred at 12 psi

PATIENT SAMPLE

Baseline Clinical Data by Subgroup (61 patients)

	Achalasia (n = 15)	EGJOO (n = 32)	PF-EGJO (n = 14)	p value
Age (Years)	64.4 ± 3.9	61 ± 2.2	62.8 ± 1.9	p = 0.659
% Male	60	34.4	28.6	p = 0.158
BMI (kg/m ²)	23.4 ± 1.2	29.4 ± 1.3	28.7 ± 1.8	p = 0.015*
Supine IRP (mmHg)	28.1 ± 3.3	21.5 ± 1.0	23.1 ± 1.7	p = 0.043*
BLESP (mmHg)	42.5 ± 4.2	44.1 ± 2.3	33.8 ± 1.6	p = 0.046*
Distensibility Index (mm ² /mmHg)	1.6 ± 0.30	1.1 ± 0.11	2.2 ± 0.28	p = 0.0012*
Barium tablet retention (%)	66.7	28.1	42.9	p = 0.043*
Eckardt Score	7.3 ± 0.7	5.9 ± 0.5	6.0 ± 2.4	p = 0.255
BEDQ Score	31.7 ± 3.9	29.1 ± 2.4	26.9 ± 4.4	p = 0.667

Means with SEM are shown. Abbreviations: BEDQ – Brief esophageal dysphagia questionnaire, BLESP – basal lower esophageal sphincter pressure, BMI – body mass index, IRP – integrated relaxation pressure

Table 1. Baseline Patient Characteristics: Symptom severity measured by Eckardt score or BEDQ score was not different between the 3 groups. The achalasia group had highest barium tablet retention and IRP with a low BMI suggestive of higher severity obstruction.

RESULTS: MAIN STUDY

Across all groups: (1) mean ES decreased from 6.30 to 2.89 (p < 0.001), (2) ES ≤ 2 in 33/61 patients (54.1%), and (3) mean subjective percentage improvement in symptoms: 55.3%

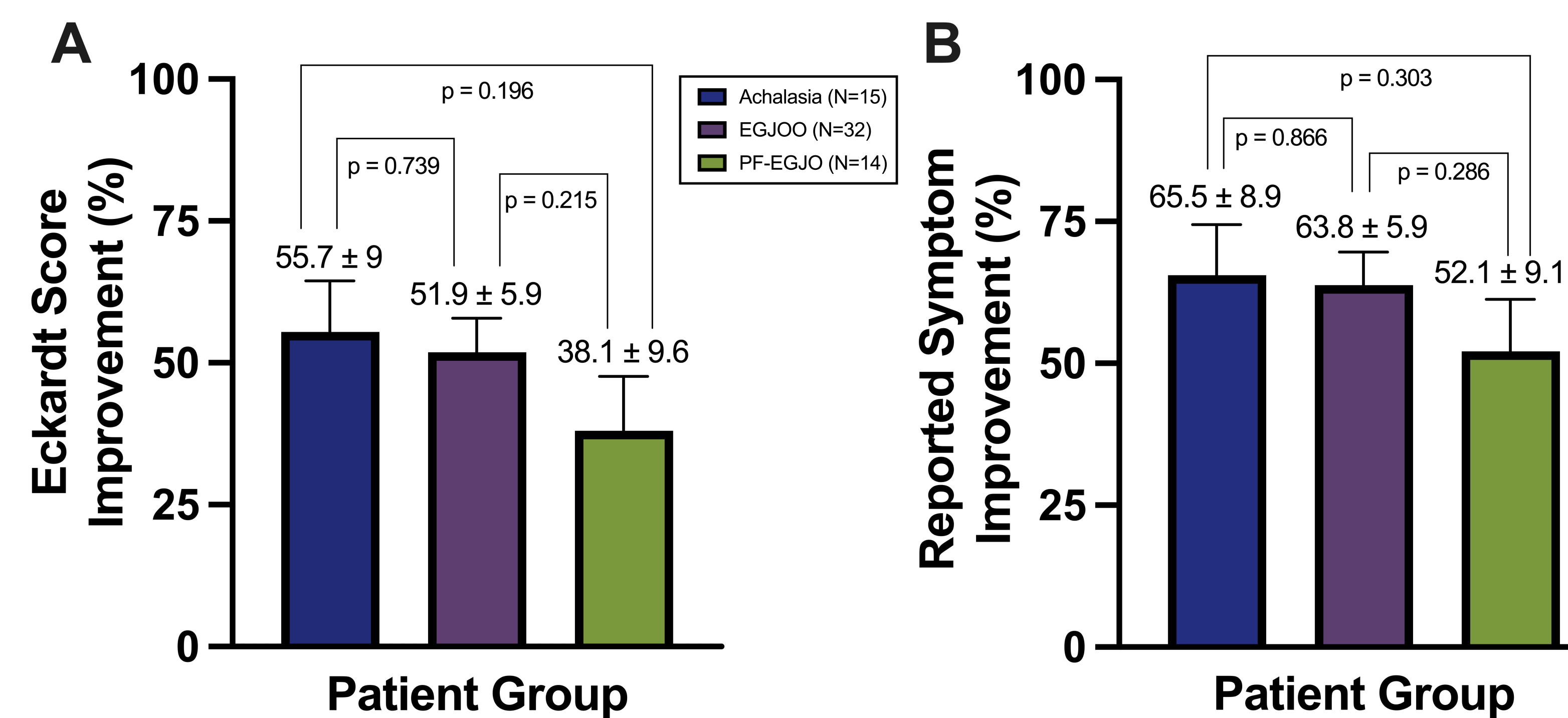


Figure 2. Outcome of pneumatic dilatation protocol is shown for each esophageal diagnosis. Panel A shows the magnitude of improvement in Eckardt score. Panel B shows the patient-reported % symptom improvement. Means with SEM are shown. No statistically significant differences were noted between groups.

RESULTS: SURVEY

Rationale for not training in pneumatic dilatation (2/3 of total respondents)

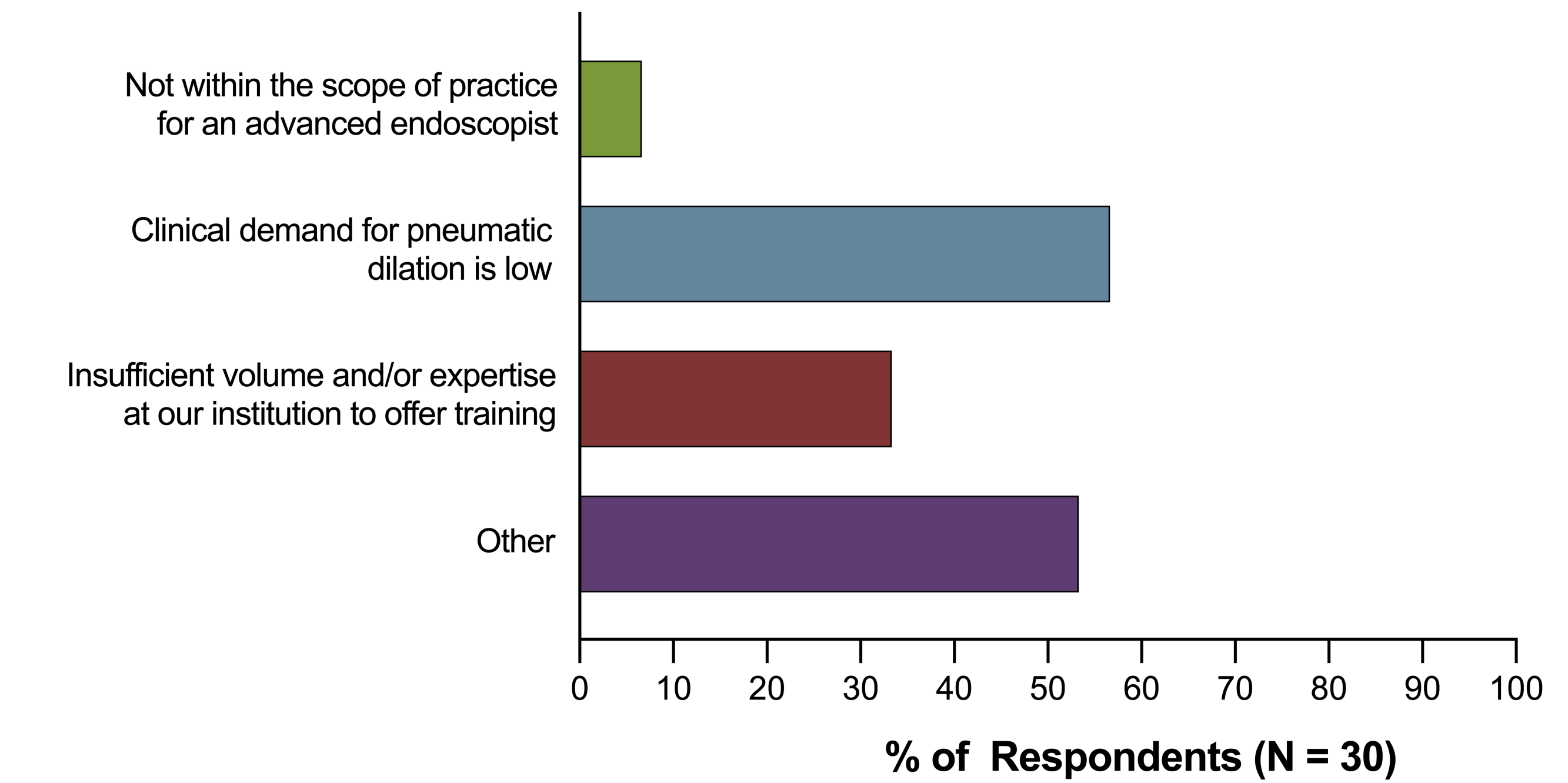


Figure 3. Results from Advanced Endoscopy Program Director's survey (list obtained from the American Society of Gastrointestinal Endoscopy). 15/45 reported training in PD, 30/45 programs do not offer training in PD because of low perceived clinical utility of PD.

CONCLUSION

- Pneumatic Dilatation is an **effective and safe therapy** for non-achalasia disorders of the EGJ (EGJOO, PF-EGJO).
- There would be benefit in more **widespread training in PD**, likely best delivered to advanced endoscopy fellowship trainees.

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