Investigating the Utility of EndoFLIP as a screening tool for Pathologic Reflux

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Introduction

- Gastroesophageal reflux disease (GERD) is a common disorder with increasing prevalence in the United States.
- Our Heartburn Center protocol includes concomitant endoluminal functional lumen imaging probe (Endoflip™) with wireless pH capsule (Bravo™) at the time of endoscopy (EGD)
- Endoflip has become a valuable confirmatory test when other diagnostics are inconclusive or complimentary data is needed.
- The Updated Lyon Consensus 2.0 considers Los Angeles (LA) Grade B esophagitis or greater to be conclusive evidence of GERD, negating the need for a formal Bravo.
- Patient satisfaction, throughput, and cost of workup are all improved in this scenario.

Objective

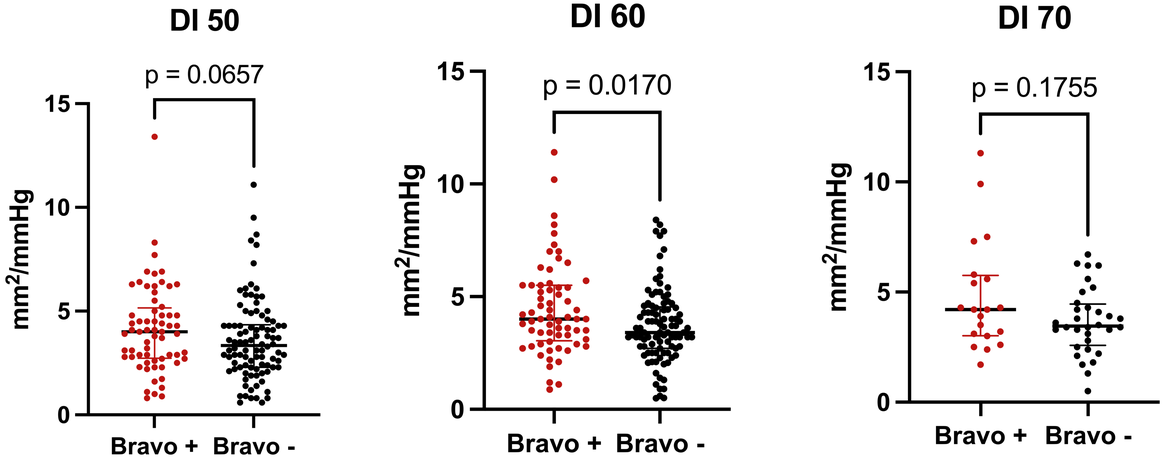
The Aim of this study is to determine if Endoflip can predict a positive Bravo study. Which would streamline diagnostic workup, decrease costs, and improve patient satisfaction.

Methods

- Single-center retrospective review of patients undergoing 96-hour Bravo (off PPI) and concomitant Endoflip at time of index EGD between Oct 2022 and Aug 2024 performed by two advanced endoscopists.
- Included subjects were adults with native gastroesophageal anatomy only.
- Patients with positive Bravo (Bravo+) were compared to patients with a negative test (Bravo-).
- Mann Whitney and Fisher's exact test were used.

Results

	Total	Bravo+	Bravo-	P-value
Patients (n)	171	64	107	-
Age (years)	55	55	55	0.3
BMI	25	26	24	**0.003**
Sex (% F)	71%	73%	66%	0.38
LA B (%)	5%	7.57%	0%	**0.007**
Hill Grade 1	18%	9.1%	23.4%	**0.02**
DI60		4 (3.05-5.5)	3.4 (2.7-4.5)	**0.017**



Discussion

- 171 patients included, 64 Bravo+ and 107 Bravo-
- Similar basic demographics including age and sex.
- Median BMI higher in the Bravo+ group
- Bravo+ patients more likely to have LA B esophagitis
- Bravo+ patients less likely to have a Hill grade 1 flap valve
- No difference in Endoflip balloon diameters or presence of repetitive antegrade contractions at any fill volume between groups.
- Distensibility index at 60 mL (DI60) is significantly higher in patients who ultimately have a positive Bravo study.
- DI at 50 mL and 70 mL trended towards higher values in Bravo+ patients.

Conclusions

Endoflip may have utility as a screening tool for pathologic reflux

Future Directions

- Increased sample size may amplify signals
- Identify DI60 value that serves as a predictive threshold for pathologic reflux
- Analyze patient and clinical factors that are relevant to screening.