



Association between Defective Secondary Peristalsis Detected by Functional Lumen Imaging Probe Topography (FLIP) and GERD

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BACKGROUND

- Esophageal secondary peristalsis is a defense mechanism against GERD by clearance of refluxate.
- When secondary peristalsis is absent or defective, it may lead to increased esophageal acid exposure time (AET).
- Functional lumen imaging probe topography (FLIP) allows the assessment of secondary peristalsis induced by volumetric distension.

METHODS

- It is a retrospective analysis of data from Mayo GI Motility Database.
- FLIP was performed with a 16 cm balloon during propofol-sedated endoscopy.
- Peristaltic response was assessed at 30-40-50-60 ml.
- Peristalsis was classified as repetitive antegrade contractions (RACs), borderline contractile response, repetitive retrograde contractions (RRCs), impaired, absent, and spastic reactive.
- EGJ distensibility index (DI) was calculated at 60ml.
- Secondary peristalsis was considered intact if RACs seen at any volume.
- Abnormal AET on reflux monitoring was defined as % time pH < 4 greater than 4%.

OBJECTIVES

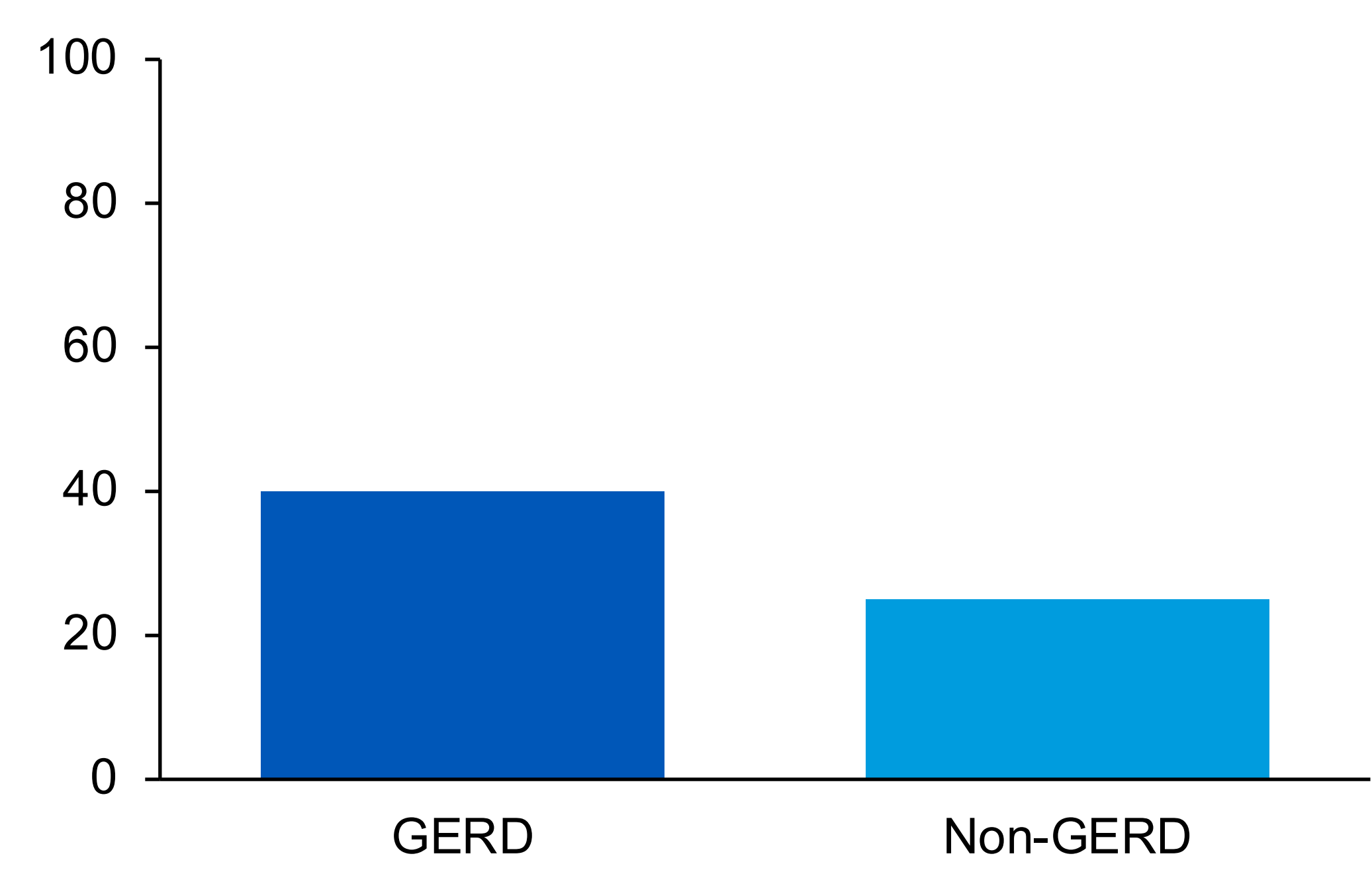
- Evaluate the association between secondary peristalsis and GERD.

- Inclusion Criteria:**
- Patients with esophageal symptoms who underwent FLIP topography and reflux monitoring (wireless pH or catheter-based pH-impedance). Off PP ≥ 7 days.
 - High-resolution esophageal manometry (HRM) findings (LES pressure, ineffective esophageal motility, absent contractility) were added for secondary analysis when available.
- Exclusion Criteria:**
- Patients with achalasia
 - Patients with prior significant gastroesophageal surgery
 - Botox injection within 6 months of FLIP and reflux study.
 - Patients with borderline contractility on FLIP.

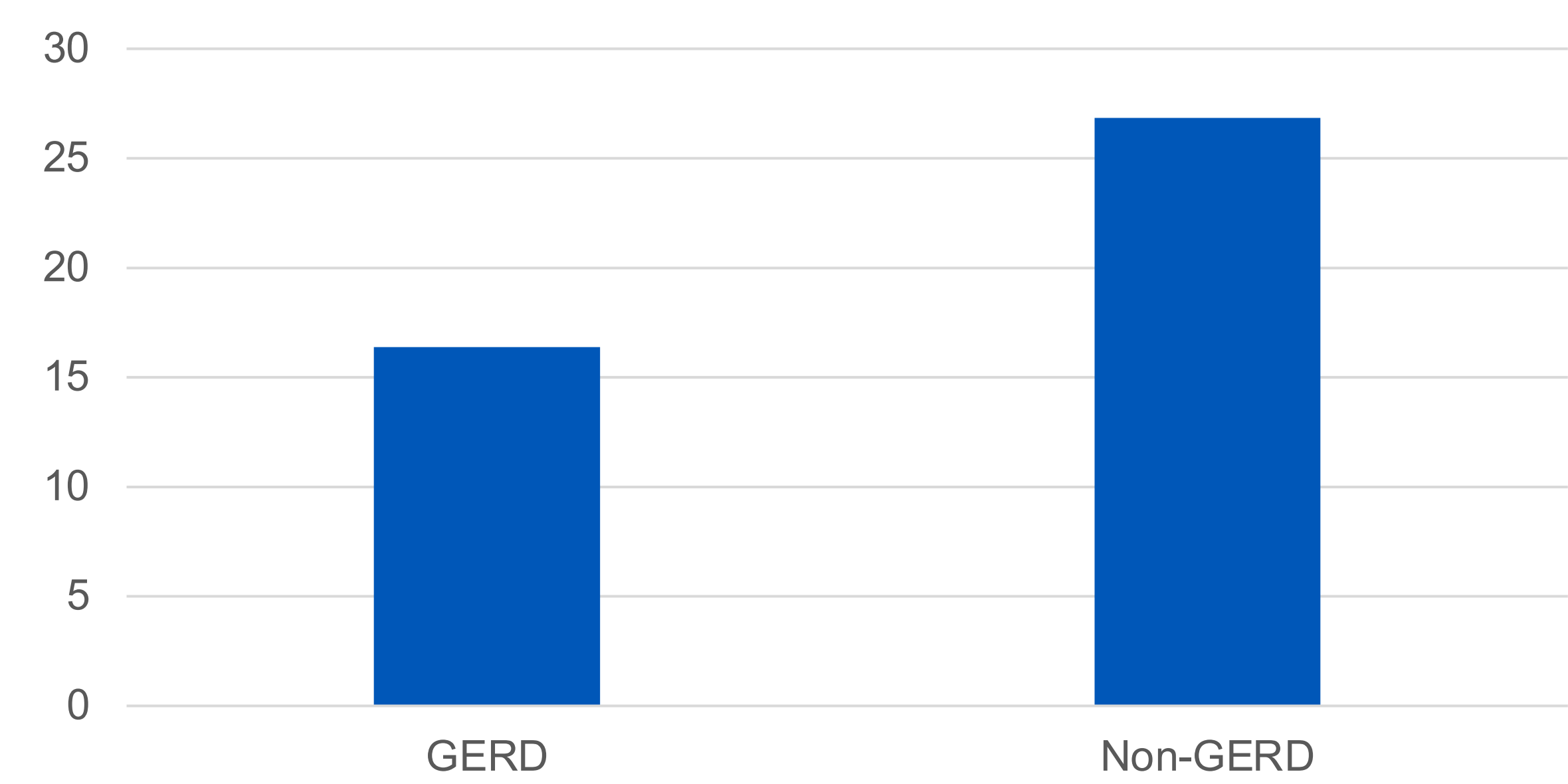
RESULTS

- 37 patients included (23, 62% female), mean age 58.45 years, mean BMI was 25.7
- GERD present in 15 (40.5%) patients
- Absent secondary peristalsis was more frequent in patients with versus without GERD (40% vs 25%, $p=0.18$), but statistical significance was not reached
- There was no association between GERD and DI or any HRM measures.

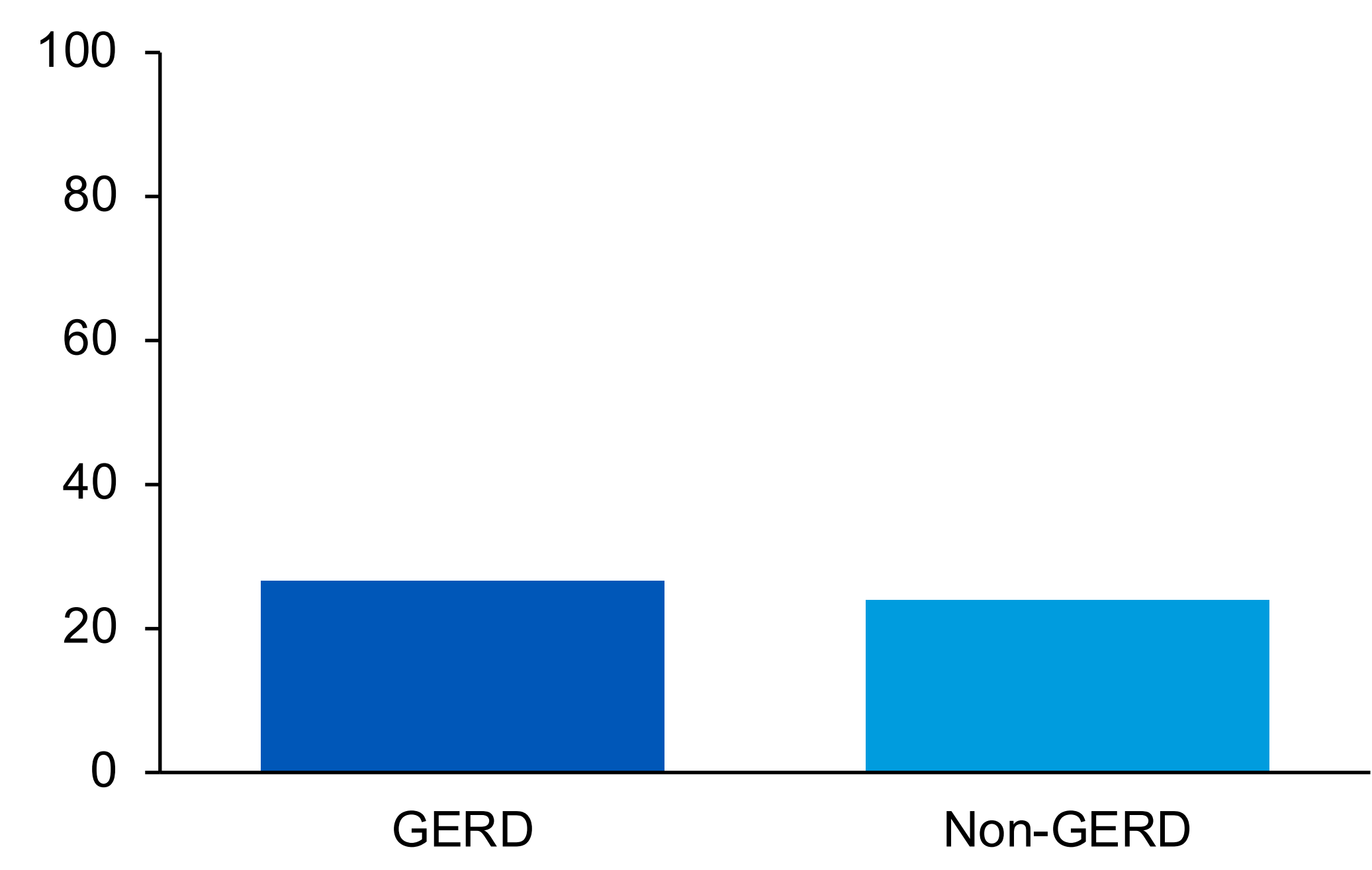
Percentage of Absent Secondary Peristalsis



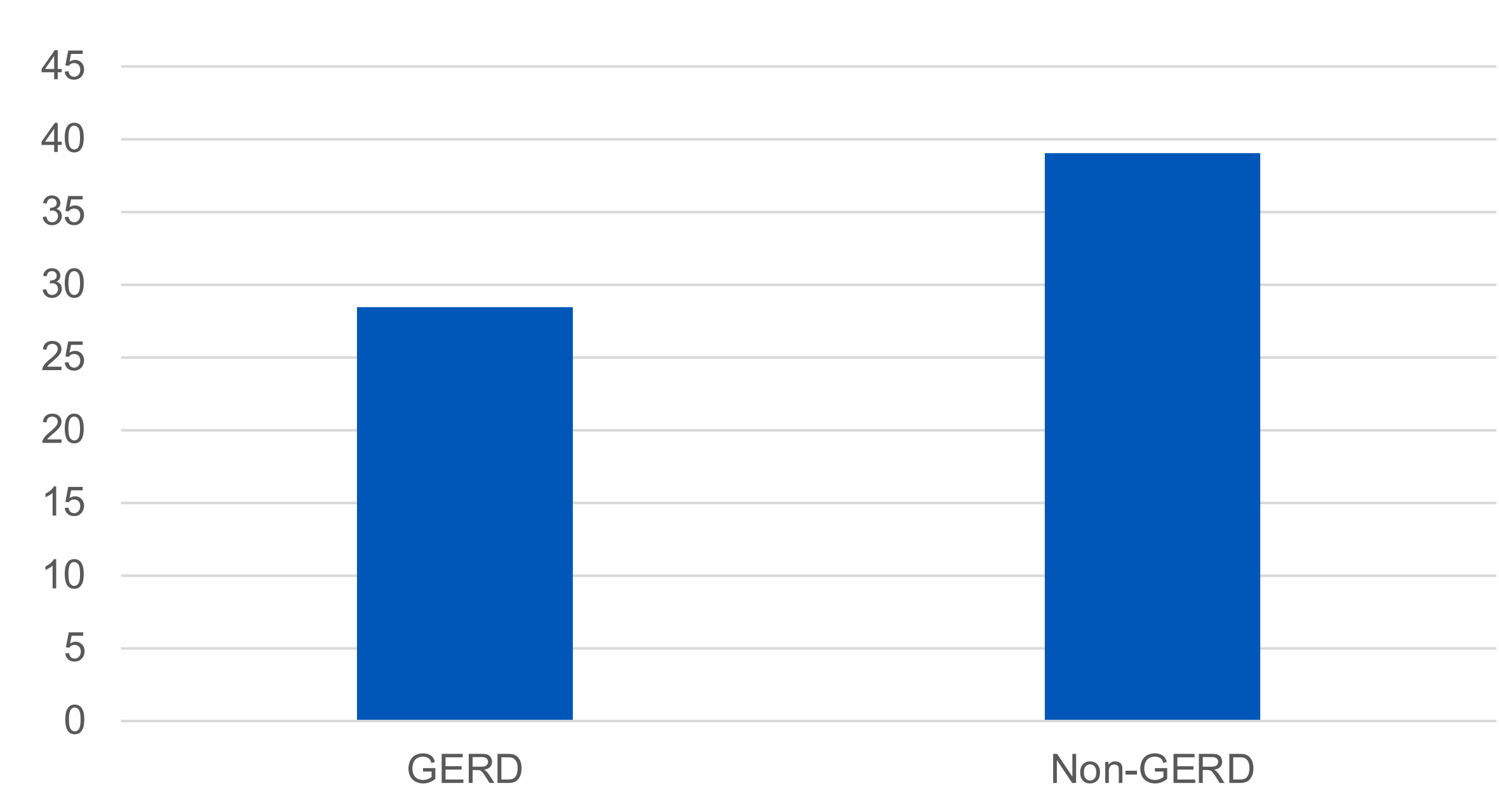
Lower LES Minimum Pressure GERD vs. Non-GERD (mmHg)



Percentage of Abnormal Distensibility Index



Mean LES Pressure GERD vs. Non-GERD



DISCUSSION AND CONCLUSION

- Our data suggests that **defective secondary peristalsis is more frequent in GERD patients** and is thus an important contributing factor to reflux.
- Lack of significance may be due to small sample size and type II error, but a larger number of patients is needed to clarify this and data collection is ongoing.

REFERENCES

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