

The Diagnostic Capability of FLIP Compared to Barium Esophagram for Esophageal Pathologies

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BACKGROUND

- High Resolution Manometry (HRM) and Timed Barium Esophagram (TBE) current modalities for esophageal evaluation.
- Functional Luminal Imaging Probe (FLIP) is able to characterize the esophageal contractile response and lower esophageal sphincter distensibility through panometry and the distensibility index (DI).
- Few prior studies evaluating clinical role of FLIP compared to TBE

AIMS

- Evaluate the relationship of FLIP with TBE
- Determine diagnostic level of DI

METHODS

- Retrospective review of FLIP and TBE findings
- Calculated accuracy of accepted FLIP diagnostic metrics compared to TBE findings as standard
 - Normality for TBE defined as <5cm column at 5min and no tablet arrest
- Compared accuracy of isolated DI measurement cutoffs found with ROC curve

POPULATION

Patient Characteristics	
N	242
Avg. Age (years)	60.2
Sex	51% Female
Dysphagia	100%

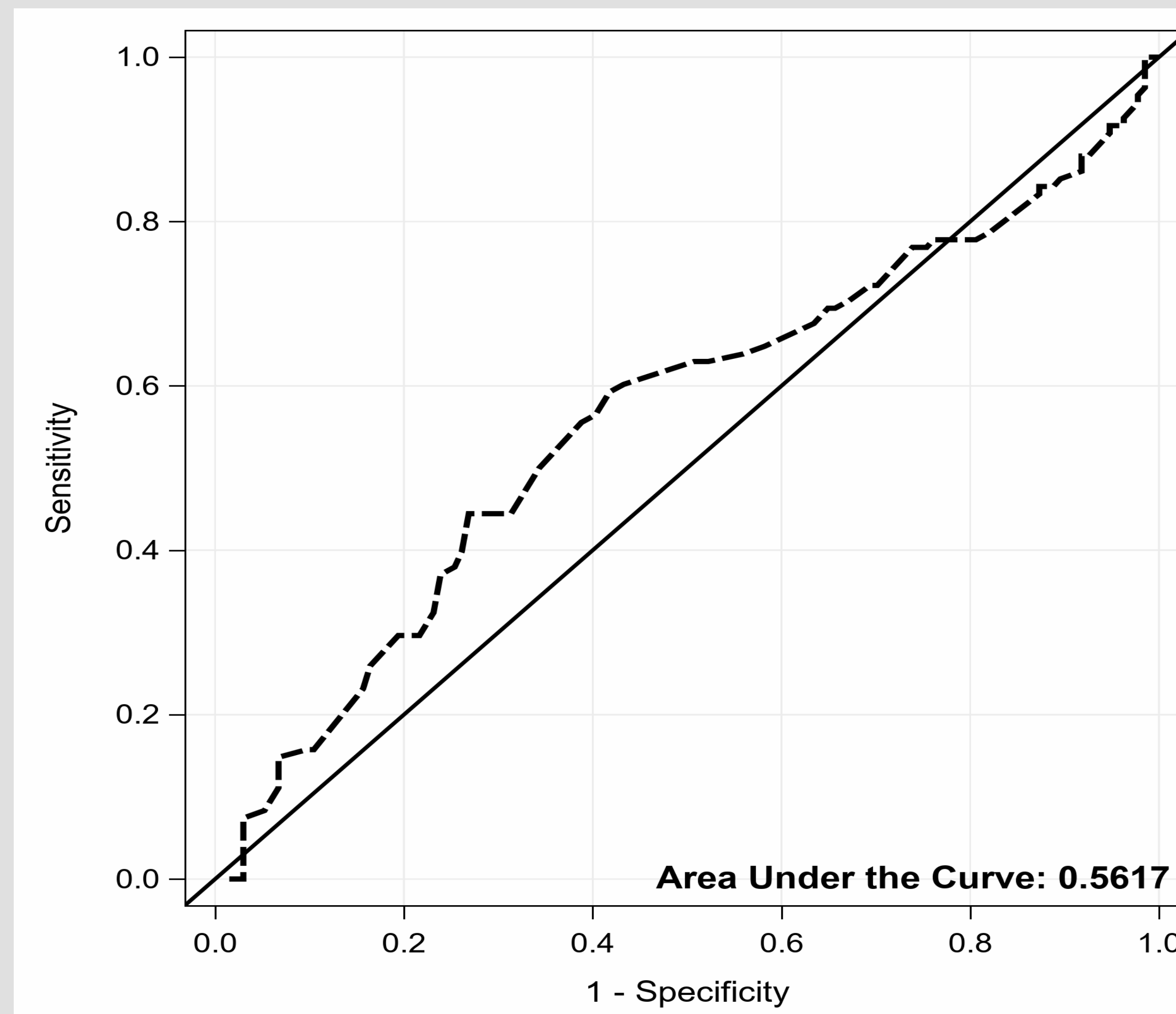
- FLIP and TBE performed at WFBH from 2017
- All patients pre-intervention, including myotomy or pneumatic dilation

RESULTS

Accuracy of FLIP diagnostic criteria vs. TBE normality criteria

FLIP Metric	Sensitivity	Specificity	Agreement	k
Full Criteria	0.976	0.347	0.451	0.14
DI<2.8	0.632	0.555	0.567	0.103
DI<1.9	0.500	0.683	0.654	0.124

ROC Curve for Most Effective DI Cutoff Value



CONCLUSIONS

- High sensitivity for detecting esophageal pathologies
- Poor specificity decreasing diagnostic power
- Higher accuracy required full diagnostic criteria
- Prior studies found higher agreement with TBE, surprising due to less specific diagnostic criteria
- When assessing single DI measurement, poor accuracy compared to TBE
- Single DI measurement insufficient to predict pathology
- Future study to expand assessment of all measurements for correlation to standards
- Increase power of our study

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