

Overall 59/69 patients on ZPM-GORD diagnosis had positive treatment response and 20/43 patients with BPM-GORD had positive treatment response ( $p < 0.0001$ ). Patients' with ZPM-GORD diagnosis also showed positive treatment response for HB (81.8% vs 36.5%,  $p < 0.0001$ ), RG (82.0% vs 36.6%,  $p < 0.0001$ ) and NCCP (82.8% vs 23.0%,  $p = 0.0004$ ).

Complete resolution of all reflux symptoms was found in 10/69 patients from ZPM-GORD diagnosis and 2/43 patients on the BPM-GORD diagnosis ( $p = 0.0500$ ). When assessing each symptom, patients with ZPM-GORD diagnosis showed significantly higher prevalence in the eradication of HB (22.7% vs 5.1%,  $p = 0.0182$ ). Conversely patients with BPM-GORD diagnosis showed higher prevalence of no symptomatic changes in HB (4.5% vs 15.4%,  $p = 0.0276$ ), RG (6.1% vs 32.45,  $p = 0.0002$ ) and NCCP (10.3% vs 30.85,  $p = 0.0503$ ) during PPI therapy

**Conclusion** The findings of this study showed that ZPM based GORD diagnosis to have higher therapeutic yield to standard PPI therapy.

We recommend ZPM to be the first choice for reflux monitoring assessment and utilising BPM as complementary testing for reflux.

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P338

#### ASSESSING OESOPHAGEAL CLEARANCE IN POST PERORAL ENDOSCOPIC MYOTOMY: INTRODUCING A NOVEL TECHNIQUE

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10.1136/gutjnl-2020-bsgcampus.412

**Introduction** The novel technique to assess the oesophageal clearance using multichannel intraluminal impedance transit (MIIT) technique seems promising<sup>1</sup> which has not been utilised in postsurgical outcomes. This study investigates the clinical usefulness of this novel technique in patients undergone peroral endoscopic myotomy (POEM) with respect to treatment outcome.

**Method** Patients were selected between January 2018 and December 2019 who had POEM procedure for achalasia and a post-POEM MIIT assessment.

Patients gauged their severity of their dysphagia prior to POEM and again at the post POEM MIT assessment day using visual analogue scale. A reduction in dysphagia severity by  $\geq 50\%$  was considered a successful POEM which was also satisfactory outcome to patients. Statistical *t*-test, Fisher Exact tests and odd ratio (OR) were employed to assess for significant difference between treatment outcomes of POEM. A receiver operating curve (ROC) was used to assess the cut-off of oesophageal transit with respect to POEM treatment outcome.

**Results** Total of 45 patients were selected (F:M=16:29, aged=25-76 years). 20/45 patients had a successful POEM and their IRPs were significantly lower than patients with failed POEM (5.7 mmHg vs 10.6 mmHg,  $p = 0.0093$ ).

The Oesophageal transit time was also significantly reduced in the successful POEM outcome cohort of patients (5.3 mins vs 78.8 mins,  $p = 0.0002$ ). The ROC revealed that oesophageal transit time of  $< 10$  mins was satisfactory outcome for successful POEM (sensitivity =81.3%, specificity =93.1%) (Youden's J index=0.74)(area under curve coverage 94%)(OR=54,  $p < 0.0001$ ).

**Conclusion** This novel technique successfully correlated with oesophageal clearance transit with respect to the POEM outcome and may be a suitable post-surgical assessment.

Preliminary testing indicate oesophageal clearance within 10 minutes is satisfactory response to patients and thus would be considered successful POEM. This initial study is limited by small sample size.

#### REFERENCE

1. Miah et al, *Gut* 2019;**68**:A214. [ [https://gut.bmj.com/content/68/Suppl\\_2/A214.2](https://gut.bmj.com/content/68/Suppl_2/A214.2) ]

P339

#### NOVEL APPROACH TO ASSESS RETENTION IN DYSPHAGIA PATIENTS WITH POST ANTI-REFLUX SURGERY

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10.1136/gutjnl-2020-bsgcampus.413

**Introduction** There are no high-resolution manometry (HRM) classification guidelines to assess patients' dysphagia occurring post anti-reflux surgery. In this study we will explore the use of multichannel intraluminal impedance transit (MIIT) to explain patients' post-surgical dysphagia.

**Method** Subjects were selected between January 2018 and December 2019 who underwent HRM with normal motility findings<sup>1</sup> followed by MIIT study.<sup>2</sup>

Subjects were grouped into (i) patients asymptomatic of dysphagia with treatment-naïve oesophagus (control group) and (ii) patients with dysphagia and intact post antireflux operation (patient group).

The oesophageal transit times in the patient group was compared with the control group and then compared with the oesophageal transit observed in OGJ obstruction ( $> 1.64$  mins) that was previously published.<sup>2</sup>

**Results** Total of 59 subjects were selected (F:M=38:21, aged 20-75 years old). 32.2% (19/59) were post-surgical patients complaining of dysphagia (15 Nissen fundoplication and 4 LINX procedure) (these patients had mean integral relaxation pressure of 12.4 mmHg).

The 5%-95% confidence interval in oesophageal transit time demonstrated in the patient group and control group were respectively 2.57 - 12.06 mins and 0.32 - 0.41 mins ( $p = 0.0051$ ). The oesophageal transit time in 63.2% (12/19) patients exceeded 1.64 mins which is consistent with oesophageal transit time found in OGJ obstruction.

**Conclusion** This novel MIIT technique may explain patients' post-surgical dysphagia which HRM failed to capture. Notably, the majority of patients actually show oesophageal transit time comparable to OGJ obstruction who may benefit from dilatation or BoTox.

#### REFERENCES

1. Kahrilas P, et al. *Neurogastroenterol Motil* 2015;**27**(2):p160-174.
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