control group and also compared with the OTT findings for OGJ obstruction (>1.64 mins) which were previously published.²

All patient selected in this study had essentially normal endoscopy and radiology that could not explain patients’ dysphagia.

Results Total of 76 patients were selected (F:M=49:27, aged 20–77 years old) and 51.3% (39/76) were complaining of dysphagia.

The 5%-95% confidence interval of OTT was significantly higher in the patient group compared to the control group (1.89 – 3.91 mins vs 0.32 - 0.41 mins, p<0.0001). The OTT in all 39/39 dysphagia patients exceeded the 95% of normal range (0.41 mins) and 59% (23/39) of dysphagia patients had OTT exceeding 1.64 mins which is comparable to the diagnosis of OGJ obstruction.²

Conclusion This study demonstrated MIIT testing to be a valuable complementary tool to assess patients’ OTT and was able to explain patients’ dysphagia. Majority of the dysphagia patients demonstrated OTT compatible to that of OGJ obstruction diagnosis.

REFERENCES

Abstract P336 Table 1 oesophageal transit time (minutes) in control and patients groups

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean (median)</th>
<th>Standard deviation</th>
<th>5%-95%CI</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>38</td>
<td>0.37 [0.32]</td>
<td>0.14</td>
<td>0.32 – 0.41</td>
<td>0.15–0.78</td>
</tr>
<tr>
<td>OGJOO</td>
<td>40</td>
<td>2.53 [2.6]</td>
<td>0.88</td>
<td>2.26 – 2.81</td>
<td>0.73–3.90</td>
</tr>
<tr>
<td>Achalasia</td>
<td>42</td>
<td>37.7 [36]</td>
<td>21.12</td>
<td>34.4 – 47.3</td>
<td>5.6–84</td>
</tr>
</tbody>
</table>

Statistical differences were also found OGJOO and achalasia patient groups (p<0.0001). The descriptive statistical data can be found in table 1.

According to the ROC analysis, oesophageal transit time >0.76 mins will differentiate from normal to OGJOO disorder (sensitivity=91.2%-100%, specificity=86.2%-99.9%) (LR=38)(p<0.0001). Oesophageal transit time of >3.9 mins will differentiate from OGJOO to achalasia (sensitivity=91.6%-100%, specificity=86.8%-99.95)(p<0.0001) (LR=40).

Conclusion MIIT can differentiate between normal oesophageal motility and patients with obstructive disorders. Therefore, there is a provision for using this method which is readily available during reflux monitoring.

REFERENCES

MULTICHANNEL INTRALUMINAL IMPEDANCE TRANSIT IN PATIENTS WITH OBSTRUCTIVE DISORDERS

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Introduction We previously showed multichannel intraluminal impedance transit (MIIT) can be performed during a 24-hour pH-impedance monitoring to assess the oesophageal transit.¹ The oesophageal transit in patients’ was not always assessed during the patient’s fasting period to determine critical cutoff thresholds between normal and poor oesophageal transit. The current investigates the question.

Method Patients were selected between January 2018 and December 2019 who underwent two investigations in their fasting period:

i. High-resolution manometry (HRM) with Chicago Classification diagnosis.¹
ii. MIIT assessment with 200 ml of saline²

Based on [1], patients with normal HRM without dysphagia were grouped into control and dysphagia patients grouped into OGJ outflow obstruction (OGJOO) and achalasia.

Receiver operating curve (ROC) was plot to ascertain critical oesophageal transit time thresholds in normal motility and in patients with OGJOO and achalasia. The likelihood ratio (LR) for critical thresholds was computed and t-test & Fisher exact tests were employed appropriately to assess for statistical significance.

Results Total number of 117 patients were selected (F:M=74:43, age 18–84 years old). There was statistical significant differences in the oesophageal transit time between the control group compared with the OGJOO group (p<0.0001) and when compared with the achalasia group (p<0.0001),...
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 32.4%, $p=0.0002$) 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.

REFERENCES

P338 ASSESSING OESOPHAGEAL CLEARANCE IN POST PERORAL ENDOSCOPIC MYOTOMY: INTRODUCING A NOVEL TECHNIQUE
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Introduction The novel technique to assess the oesophageal clearance using multichannel intraluminal impedance transit (MIIT) technique seems promising which has not been utilised in post-surgical 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 ≥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. 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 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 1999;68:A214. [https://gut.bmj.com/content/68/Suppl_2/ A214.2 ]