



Abstract P333 Figure 1 ROC for BMI predicting pathological reflux on WBM

and the NPV for absence of GORD on WBM when BMI>2100Ω is 90.7%.

Conclusion Patients with normal ZPM and a BMI ≤2100Ω increases the likelihood of pathological reflux on WBM monitoring. We recommend this category of patients to be considered for WBM.

REFERENCES

- Chia C, Miah I, Koumoutsos I, *et al.* Extended Bravo Studies (>48 HRS) Improves Diagnostic Yield of Gastro-Oesophageal Reflux Disease (GORD) In Patients with Normal Multichannel Intraluminal Impedance-PH (MII-PH) Studies. *BMJ Gut* 2016;**65**:A115.
- Ayazi S, Lipham J, Portale G, *et al.* Bravo catheter-free H monitoring: normal values, concordance, optimal diagnostic thresholds and accuracy. *Clinical gastroenterology and Hepatology* 2009;**7**:p60–67

P334

MEASURING OESOPHAGEAL TRANSIT WITH MULTICHANNEL INTRALUMINAL IMPEDANCE; AN ALTERNATIVE TO BARIUM SWALLOW

^{1,2}Ismail Miah*, ^{1,2}Terry Wong, ²Jeremy Sanderson, ²Peter Irving, ¹Jafar Jafari. ¹Guy's and St Thomas' NHS Foundation Trust, London, UK; ²Faculty of Life Sciences and Medicine, King's College London, London, UK

10.1136/gutjnl-2020-bsgcampus.408

Introduction Barium swallow is a common investigation to assess oesophageal transit. However, the technique is affiliated with radiation exposure and indigestion of barium sulphite contrast. Unlike barium swallow technique, the multichannel intraluminal impedance transit (MIIT) offers quantitative measure and may be overall cost-effective.

This study assesses the oesophageal transit time using MIIT in normal oesophageal motility and obstructive oesophageal disorders.

Method Patients were selected between January 2018 and December 2019 who underwent two investigations during fasting periods:

- High-resolution manometry (HRM) study based on Chicago Classification diagnosis.¹
- MIIT assessment with drinking 200 ml of saline and measuring the oesophageal transit time for clearance²

Based on,¹ patients with normal HRM without dysphagia were categorised to control group and dysphagia patients were categorised into OGJ outflow obstruction (OGJOO) and achalasia groups.

Abstract P334 Table 1 oesophageal transit time (minutes) in control and patients groups

Group	N	Mean [median]	Standard deviation	5%-95%CI	Range
Control	38	0.37 [0.32]	0.14	0.32 – 0.41	0.15–0.78
OGJOO	40	2.53 [2.6]	0.88	2.26 – 2.81	0.73–3.90
Achalasia	42	37.7 [36]	21.12	34.4 – 47.3	5.6–84

Statistical Prism software was used to plot receiver operating curve (ROC) to ascertain critical oesophageal transit time between control group and patient groups. Appropriate *t*-test and Fisher exact tests were employed to assess 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 MIIT comparing the control group against OGJOO group ($p<0.0001$) and against the achalasia group ($p<0.0001$). Statistical differences were also found by comparing OGJOO and achalasia patient groups ($p<0.0001$). The descriptive statistical data are documented in table 1.

According to the ROC analysis, oesophageal transit time of 0.76 mins will differentiate between normal and OGJOO disorder (sensitivity=91.2%-100%, specificity=86.2%-99.9%). Oesophageal transit time of 3.9 mins will differentiate between OGJOO and achalasia (sensitivity=91.6%-100%, specificity=86.8%-99.95%).

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

REFERENCES

- Kahrilas P, *et al.* *Neurogastroenterol Motil* 2015;**27**(2):160–174.
- Miah I, *et al.* *BMJ Gut* 2019;**68**:A214.

P335

MULTICHANNEL INTRALUMINAL IMPEDANCE TRANSIT TESTING IN PATIENTS WITH FUNCTIONAL DYSPHAGIA

^{1,2}Ismail Miah*, ^{1,2}Terry Wong, ²Jeremy Sanderson, ²Peter Irving, ¹Jafar Jafari. ¹Guy's and St Thomas' NHS Foundation Trust, London, UK; ²Faculty of Life Sciences and Medicine, King's College London, London, UK

10.1136/gutjnl-2020-bsgcampus.409

Introduction Dysphagia symptoms cannot always be explained by endoscopy or radiology investigations and clinicians may refer their patients for high-resolution manometry (HRM) when suspecting motility related dysphagia. There are a cohort of patients for whom HRM also could not explain their dysphagia.

In this study, we perform the multichannel intraluminal impedance transit (MIIT) study to assess the oesophageal transit time (OTT) in patients with unexplained dysphagia.

Method Patients were selected between January 2018 and December 2019 who had normal oesophageal motility testing according to Chicago Classification (CC)¹ and underwent MIIT testing by drinking 200 mL of saline to measure the OTT.²Patients were then categorised into dysphagia group (patient group) and asymptomatic of dysphagia group (control group). The OTT of the patient group were compared to the