PWE-125

ASSESSMENT OF TOLERANCE, SAFETY AND EFFICACY OF AMBULATORY OESOPHAGEAL PH MONITORING USING THE CATHETER-FREE BRAVO SYSTEM IN A SCOTTISH POPULATION

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Introduction Limitations of catheter-based oesophageal pH monitoring are discomfort, inconvenience and interference with normal daily activities. The wireless Bravo pH system is an alternative method, using catheter-free technology to assess oesophageal pH exposure. This study assesses the tolerance, safety and efficacy of the Bravo pH system in a Scottish population and compares the results with previously published data.

Methods Patients with symptoms of gastro-oesophageal reflux disease (GORD) with an indication for 24 h pH assessment were recruited. The wireless Medtronic Bravo pH capsule was placed 6 cm above the squamocolumnar junction using endoscopic measurement. After 48 h, studies were uploaded from the receiver and analysed. Completion (48 h recordings), concordance and complication rates were evaluated.

Results A total of 40 patients were recruited; 18 (45%) men, mean age 52±11 years. 13 (33%) subjects were possible surgical candidates and 5 (13%) had GORD symptoms postsurgery. Capsules were successfully placed in all cases (100%) and 27 (68%) patients required no sedation. In all 37 of 40 studies were complete (93%). Complications occurred in 2 (5%) cases; both complained of chest pain, repeat endoscopy was normal in one case and the other revealed a small oesophageal ulcer that did not require intervention. In all 31 (78%) of studies were positive with overall 24 h pH of >4.2%. Comparison between 24 and 48 h data showed discordance in 5 (14%) studies, in all cases day 1 readings were within normal limits and day 2 consistent with a diagnosis of GORD.

Table 1 PWE-125

Study	Number	Capsule attachment	Complete tests	Complications	No sedation
Pandolfino 2003	85	82 (96%)	76 (89%)	3 (4%)	
Diaz 2004	11	11 (100%)	11 (100%)	4 (36%)	
Ch 2004	30	30 (100%)	29 (97%)	1 (3.3%)	26 (87%)
Wenner 2005	50	50 (100%)	48 (96%)	0 (0%)	
Ahlawat 2006	90	90 (100%)	81 (90%)	4 (4%)	
Macdonald 2010	40	40 (100%)	37 (93%)	2 (5%)	27 (68%)

Conclusion This study shows that ambulatory wireless Bravo pH tests are safe and effective in this population and results compare favourably with reported studies. Of note is the beneficial effect of 48 h readings, resulting in an additional positive diagnosis in 14% of the patient population.

Competing interests None.

Keywords Bravo, pH monitoring, wireless pH monitoring.