Literature Review

Bravo Wireless pH Monitoring

Title

Patient Acceptance and Clinical Impact of Bravo Monitoring in Patients with Previously Failed Catheter-Based Studies

Sweis R, Fox M, Anggiansah R, Anggiansah A, Basavaraju K, Canavan R, Wong T.
Aliment Pharmacol Ther 2009;29:669-676.

Key Points

1. A prospective study was conducted to evaluate the technical success, patient satisfaction, and results of Bravo® wireless pH monitoring compared to catheter-based pH testing.

2. The majority of patients (96%) demonstrated a significantly higher preference for wireless testing than for catheter-based testing, and reported less restriction of daily activities, less nasal and throat discomfort, and less swallowing difficulties with Bravo.

3. Findings showed a higher prevalence of pathological esophageal acid exposure on at least one day during the Bravo test compared with the catheter-based test (6.9% vs. 4.1%, p = 0.001).

4. Improved comfort and the lack of a catheter during a Bravo study facilitates more normal dietary and physical activity. In addition, prolonged monitoring may increase the diagnostic yield of GERD.

5. Without Bravo pH testing, many patients with pathological pH exposure who are unable to tolerate catheter-based testing would not receive a definitive diagnosis of GERD, which may have an adverse impact on patient management decisions.

Abstract:

Background: Standard pH monitoring is performed over 24 h with a naso-oesophageal catheter (C-pH). Limitations include naso-pharyngeal discomfort, nausea and social embarrassment resulting in reduced reflux-provoking activities. Recently a catheter-free pH-monitoring technique has become available. The tolerability and diagnostic yield of this system in patients who failed standard monitoring remain unknown. AIM: To examine the tolerability and diagnostic outcome of catheter-free pH-monitoring technique in patients who failed standard monitoring.

Methods: Patients referred for C-pH and catheter-free pH monitoring completed a tolerability questionnaire. Acid exposure in the distal oesophagus and symptom index (SI) were reviewed.

Results: Over 4 years, 883/1751 (50%) of patients with typical reflux symptoms referred for C-pH were diagnosed with gastro-oesophageal reflux disease (GERD) based on a pathological percentage time acid exposure (%time pH <4);134 (8%) patients failed C-pH and, of these, 129 successfully completed 2-day catheter-free pH monitoring. Ninety-eight (76%) of these patients had a pathological percentage pH <4 on either day compared with 49/102 (49%) of contemporaneous C-pH patients (P < 0.01). There was no difference in SI for heartburn (35% vs. 42%; P = 0.49). The questionnaire demonstrated a preference for catheter-free pH monitoring (96%) with less restriction in activities of daily living, naso-pharyngeal discomfort, dysphagia and chest pain.

Conclusions: Tolerance and satisfaction with catheter-free pH monitoring are high in patients who had previously failed C-pH; catheter-free pH monitoring assists the definitive diagnosis of GERD in this group.

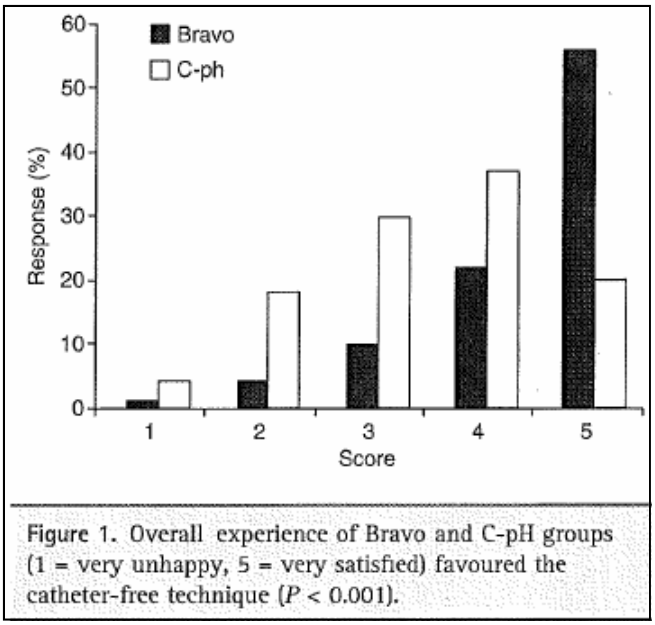

Figure 1. Overall experience of Bravo and C-pH groups (1 = very unhappy, 5 = very satisfied) favoured the catheter-free technique ($P < 0.001$).

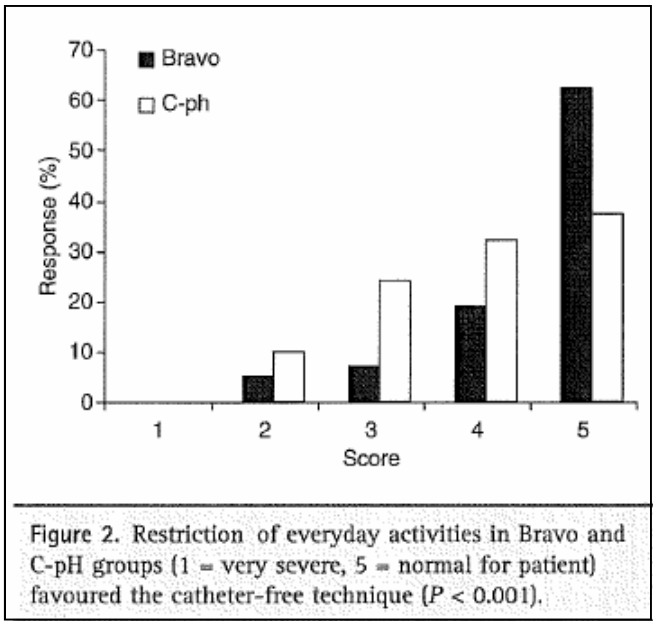

Figure 2. Restriction of everyday activities in Bravo and C-pH groups (1 = very severe, 5 = normal for patient) favoured the catheter-free technique ($P < 0.001$).