Studying of Gastroesophageal Reflux Disease with High Resolution Esophageal Manometry in Different Positions.

Hala M. Imam, Esam Abdelmohsen

Abstract:

Purpose: High resolution esophageal manometry (HREM) is usually performed in supine position. While it is known that posture has effect on gastroesophageal reflux (GER), studies describing the effect of posture on HRM measurements in gastroesophageal reflux disease GERD are lacking. The aim of this study is to compare the impact of different body positions on HREM recording in patients with GERD. Methods: Prospective study included 42 patients presented with typical and atypical GER symptoms had undergone HREM. A solid-state HREM assembly with 32 circumferential sensors spaced 1 cm apart (Unisensor) was used in the study, plotting graphs with high resolution color topography and pressure waves (GI Solar MMS). HREM recording was done while the patients is fasting and in different positions; recumbent at LT side, RT side, supine and sitting position; 10 minutes each. Patients were given ten 5-ml water swallows in each position. Pressure profiles across the esophagogastric junction (EGJ), upper esophageal sphincter (UES), peristaltic integrity, transient lower esophageal sphincter relaxations (TLESRs) were analyzed and interpreted according to Pandolfino et al, Am J Gastroenterol 2008;103:27. Results: A total of 1680 water swallows in different positions were analyzed. RT recumbent position had the lowest EGJ pressure, and the highest number of TLESRs. On the other hand, change of body position did not significantly change EGJ length, UES pressure, % of peristaltic contractions, and upper and lower body contraction amplitude (table 1). Normal body peristalsis was found in 47.7% of patients, while weak peristalsis with small peristaltic defects, large peristaltic defects, aperistalsis and distal esophageal spasm were found in 26.3%, 14.3%, 2.3%, and 9.4% respectively. Hiatal hernia was observed manometrically in 14.3% of patients. Conclusion: RT recumbent position showed the lowest EGJ pressure and the highest number of TLESRs. Sitting, LT recumbent and supine positions did not significantly affect HREM measurements. Ineffective esophageal motility disorder is a common finding with GERD.

Keywords:

High resolution esophageal manometry, Gastroesophageal reflux disease, motility.

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