

Question 31 – Week of September 15

Which of the following was demonstrated by intraluminal multi-channel impedance in subjects who failed PPI twice daily (after treatment as compared to baseline)?

- A. Increased esophageal body dysmotility
- B. Increased volume of gastroesophageal reflux
- C. No change in the number of gastroesophageal reflux events
- D. Increased esophageal mucosal sensitivity to acid

Answer: C

When intra-luminal, multi-channel impedance is combined with a pH sensor, one can separate between acidic and non-acidic aboral flow of gastric content. Recent studies, using the combined technique, revealed that subjects who continued to be symptomatic on double dose PPI have a marked shift in the pattern of their gastroesophageal reflux. Although they have the same number of gastroesophageal reflux events before and after treatment, they develop a marked shift to non-acidic reflux during PPI therapy. This shift is known to be associated with a unique symptom presentation, which consists of more regurgitation and bitter/sour taste in the mouth.

References:

1. Castell DO, Vela M. Combined multichannel, intraluminal impedance and pH –metry: An evolving technique to measure type and proximal extent of gastroesophageal reflux. *Am J Med* 2001; 111 (Suppl 8A): 157S-159S.
2. Vela MF, Camacho-Lobato L, Srinivasan R, et al. Simultaneous intraesophageal impedance and pH measurement of acid and nonacid gastroesophageal reflux: Effect of omeprazole, *Gastroenterology* 2001; 120 (7): 1599-1606.