How Useful the Combined Impedance-pH Monitoring Is for Evaluation of Refractory Reflux Symptoms?

TO THE EDITOR: I read with great interest the paper entitled "Yield of combined impedance-pH monitoring for refractory reflux symptoms in clinical practice" by Karamanolis et al,¹ which was published in April 2011 issue of Journal of Neurogastroenterology and Motility.

Esophageal impedance pH monitoring allows detection of reflux of any composition (liquid or gas) and pH (acid, weakly acid or non-acid). Many prevalence studies have suggested the relationship between weakly acid or non-acid reflux and residual symptoms in patients suspected to have gastroesophageal reflux disease (GERD).^{2,3}

Prof. Karamanolis evaluated the yield of impedance pH monitoring in patients with persistent GERD symptoms on proton pump inhibitor (PPI) therapy. With symptom index analysis, 20.5% of patients showed symptoms receiving a diagnosis that could not have been achieved with pH testing alone. Fifty-two percent of patients reporting symptoms during the impedance-pH monitoring had no reflux-symptom association (non-GERD). Heartburn was the most prevalent symptom associated with acid reflux, whereas regurgitation and ear, nose and throat (ENT) symptoms were associated with non-acid reflux. These results were similar to a Multicenter MII-pH studies in patients with PPI refractory symptoms in which suggested that approximately one third of patients to have weakly acid or non-acid reflux.^{2,3} The problem of MII-pH on PPI therapy may be the limited number of reflux event associated with symptoms. Fifty-two percent (37/71) patients did not report any symptoms during the impedance pH study.

In my opinion, the limitation of the study, as the authors had mentioned in the text, was that the patients' groups were inhomogeneous regarding medication use and predominant symptoms. It could have an influence on the diagnostic sensitivity and clinical impact of esophageal impedance pH monitoring.

In those who fail on PPI once a day, there are 2 major potential therapeutic strategies that are utilized in clinical practice - switching to another PPI or doubling the dose of the same PPI. Doubling the PPI dose is by far the most common therapeutic strategy used by practicing physicians. In this study, 59% of patients were refractory to single dose of PPI. In those patients the MII-pH may be the next step after doubling the PPI dose in the diagnostic algorithm. In addition, to obtain the therapeutic response, patients reporting extraesophageal manifestation usually require more than the standard dose of PPI.⁴

The second question is about the role of impedance in patients with atypical symptoms while on PPI. As many experts have indicated, those in whom GERD is more likely (typical symptoms) should be considered for impedance pH testing while on therapy because testing in those patients is more likely to reveal ongoing reflux (either acid or nonacid) despite the medication. In contrast, patients in whom GERD is less likely (atypical presentation) may be best served by pH monitoring while off medication.⁵ A negative test in those patients while off therapy directs the diagnostic work up toward other causes, and it enables cessation of unnecessary PPI therapy. Choosing patients based on their clinical presentation may be helpful. ENT symptoms are widely accepted as it is unlikely to be related with acid. Therefore, in those patients, impedance pH monitoring while off medication could give more clinical information.

Further studies with large cases are needed to solve the limitations of the present study and to evaluate to whom clinical impact of impedance pH would be more.

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- Conflicts of interest: None.**
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