

Impedance-detected Symptom Association and Number of Reflux Episodes as Pre-treatment Parameters That Predict Outcomes of Gastroesophageal Reflux Disease Patients

TO THE EDITOR: We read with interest the study by Khan et al,¹ who investigated patients with non-erosive reflux disease (NERD) refractory to anti-secretory therapy by means of impedance-pH monitoring on-therapy and concluded that nearly 60% of these patients had primarily a non-acid reflux disease. Moreover, they found that approximately half of NERD patients with normal multichannel intraluminal impedance (MII)-pH monitoring could be sub-divided into functional heartburn and hypersensitive esophagus equally. Differently from previous study,²⁻⁴ they used the bolus exposure time (BET) together with symptoms association analysis (symptom index [SI] and symptom association probability) to define NERD as true NERD, hypersensitive esophagus, or functional heartburn.

We congratulate the authors with their study, however, we believe that the strength of their experimental findings would have improved if a more in depth analysis symptom-reflux association was also reported. Indeed, one of the major advantage of impedance-pH is to correlate symptoms to both kind of reflux episodes (acid and non-acid).^{5,6} Therefore, it is possible to observe a positive symptom correlation with non-acid reflux and, furthermore, to find a positive correlation by summing up the 2 measurements in order to obtain the so-called impedance-detected symptoms-reflux association (for example, 1 out of 3 [33%] episodes of heartburn related to acid and 1 [33%] related non-acid result in a negative SI to acid or non-acid, but a positive impedance-detected SI since 2 out of 3 [66%] episodes are related to symptoms).⁷⁻⁹ The strength of this analysis was recently highlighted by Patel et al,⁷ who underlined as the correlation between symptoms and reflux events detected by impedance consistently predicted symptomatic outcome in patients with reflux disease treated with either medical or surgical therapy. Thus, given the increased advantage provided by impedance to symptom associa-

tion analysis, we believe that this issue should be investigated and, then, considered in studies aimed to investigate patients with suspect gastroesophageal reflux disease (GERD).

Finally, we would like to emphasize the presence of data in medical literature supporting the importance of the number of distal reflux episodes, instead of BET, in refractory GERD outcome after surgical therapy. Indeed, recently Frazzoni et al¹⁰ reported as 29% of their refractory patients surgically-treated with persistent symptom remission at 3-year follow-up had an abnormal number of total refluxes as the only preoperative abnormal impedance-pH finding. However, further outcome studies assessing the role of BET or number of reflux events on GERD outcome are mandatory to define their relevance in the management of refractory GERD.

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