

## REVIEWER COMMENTS and AUTHOR ANSWERS

### REVIEWER#1

The authors present a well done review to esophageal testing. Aspects which should be included into the review are:

combination of esophageal impedance with HR manometry which demonstrates the functional result of manometric disturbances. For example: Am J Gastroenterol. 2004 Jun;99(6):1011-9. Combined multichannel intraluminal impedance and manometry clarifies esophageal function abnormalities: study in 350 patients. Tutuian R, Castell DO.

The value of the Restech probe results should be further discussed. For example: J Gastrointest Surg. 2012 Jun;16(6):1096-101. First agreement analysis and day-to-day comparison of pharyngeal pH monitoring with pH/impedance monitoring in patients with suspected laryngopharyngeal reflux. Becker V, Graf S, Schlag C, Schuster T, Feussner H, Schmid RM, Bajbouj M. Neurogastroenterol Motil. 2014 Nov;26(11):1557-64. Correlation between oropharyngeal pH-monitoring and esophageal pH-impedance monitoring in patients with suspected GERD-related extra-esophageal symptoms. Mazzoleni G, Vailati C, Lisma DG, Testoni PA, Passaretti S. Laryngoscope. 2013 Apr;123(4):980-4. Gastroesophageal reflux evaluation in patients affected by chronic cough: Restech versus multichannel intraluminal impedance/pH metry. Ummarino D, Vandermeulen L, Roosens B, Urbain D, Hauser B, Vandenplas Y.

### ANSWER TO REVIEWER#1

Dear Reviewer,

We read with interest your comments and we accepted your suggestions and we added the references you indicated. All modifications are underlined in red color.

Kindest Regards.

### REVIEWER#2

In this manuscript authors revised current literature in order to describe all technologies applied to the functional study of the esophagus that allowed the improvement of knowledge on pathophysiology of GERD. the manuscript is presented in a clear fashion and the text is well written, however I think that the paper could be further improved by adding more figures. Best regards

### ANSWER TO REVIEWER#2

Dear Reviewer,

We read your comments and I accepted your suggestions.

We added some figures regarding high resolution manometry and pepsin test.

Thank you very much.

Kindest Regards.

### REVIEWER#3

Correct review of the techniques for esophageal testing; this is an educative paper, without original scientific contribution but useful for trainees and students.

### ANSWER TO REVIEWER#3

Dear Reviewer,

We read your comments. This paper is, as requested from Editorial Office, a short review and clearly it does not have any original scientific contribution. It's just a review and not an original paper. Overall we have added many suggested modification to improve it.

Thank you very much for your comments.

Kindest Regards.

**REVIEWER#4**

Further comment on dual channel pH testing for assessment of proximal reflux would be helpful 2.  
More illustrations would help a non-expert understand the techniques better  
A separate box for all the abbreviations used in the text would be very helpful  
The last paragraph on DX-PH is nonsensical as it reads at present (although I realise what you were trying to say!)

**ANSWER TO REVIEWER#4**

Dear Reviewer,

We read your comments. We added some comments and references on dual MII-pH monitoring to detect proximal reflux especially in larynx-pharyngeal diseases. We added more illustrations as suggested. Moreover, we added some modification to the Dx-pH paragraph.

A box dedicated for all abbreviations was added.

Thank you very much for your comments.

Kindest Regards.