

## Peristaltic Recovery After Peroral Endoscopic Myotomy for Achalasia: Dream or Reality?: Author's Reply

TO THE EDITOR: We would like to thank the authors of the Letter to the Editor<sup>1</sup> for constructive comments and important issues raised regarding our analysis of post-peroral endoscopic myotomy (POEM) esophageal motility.<sup>2</sup> We were aware that the term "partial peristaltic recovery" used in the article to describe the re-appeared contractile activity in the esophagus after POEM in patients with achalasia is not precisely accurate in terms of fulfilling the functional criteria of peristalsis. That was the reason for the use of the term "partial." However, it must be said, that the "partial peristaltic recovery" should have been used more consistently instead of replacing it with just "peristaltic recovery"; maybe the term "contractile activity" would have been more appropriate. Anyhow, we decided to use this term because it seemed to better express to the reader the character of the significant change observed in the esophageal motility after the intervention, but we also conceded this as a limitation of the study in the discussion.

Although the Chicago classification (CC) has a specific definition for normal peristalsis requiring the distal latency of at least 4.5 seconds, we were often unable to accurately measure this parameter, as the post-POEM contraction is in most of the cases situated in the mid esophagus and does not reach all the way to the 3 cm above the lower esophageal sphincter (where the contractile deceleration point is placed) after the myotomy, also in some cases the contraction were partially peristaltic and partially simultaneous. Regarding the distal contractile integral, we used the cutoff 100 mmHg·sec·cm for absent or present contraction.<sup>3</sup> For the esophagogastric junction outflow obstruction (EGJOO), we did review the patients with EGJOO after POEM again and we would like to correct that 6/18 did indeed have the distal contractile integral less than 450

mmHg·sec·cm (so not fulfilling the newest criteria of EGJOO in CC version 4.0),<sup>4</sup> the rest was over this threshold. Nevertheless, some motility patterns after POEM were difficult to classify within the CC for obvious reasons, which was also stated in out manuscript as limitation.

Regarding other functional testing after POEM, we do perform timed barium esophagogram routinely after POEM. Although helpful, neither the timed barium esophagogram is a perfect method for assessment of the role of peristalsis on esophageal emptying, because even patients with complete symptomatic relief after treatment may present with some level of stagnation of the contrast solution, most probably due to the impaired peristalsis and the solution clinging to the esophageal wall of the deviated lumen.

To clear our intent, the term "partial peristaltic recovery" should have expressed more comprehensively of what we see on the post-POEM high-resolution manometry tracings—and that is a partial contraction that was not seen or visible before the treatment within the pressurizations due to the esophagogastric junction obstruction, even though the rigorous criteria of peristalsis might not have been fulfilled completely in all cases. From our personal experience, we are not convinced that normal or intact peristalsis per se can return or re-appear in the esophagus in patients with developed achalasia irrespective of treatment used. What we see is most probably just remnants of the previous peristaltic contraction, that are not fully functionally sufficient to propel the bolus. And thus, we fully agree with the authors of the letter, that the true peristaltic recovery is rather a dream than a reality and the term peristalsis should have been used more cautiously.

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