

Peer Review File

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Reviewer A

The review is very comprehensive and I have a few suggestions to improve readability:

- 1) The main problem with the reports dealing with endoscopic therapy is the lack of objective evaluation for GERD (by pH monitoring). Authors usually rely (or hide behind) symptoms that are unreliable, subjective and biased. This was not discussed. –

Response: We appreciate reviewer A for their recommendations. Unfortunately, published data, as was pointed out by Reviewer A, has mainly reported subjective outcomes and lacks objective data. We added discussion to the conclusion section, and gave some rationale behind it.

- 2) I missed a conclusion. There is an excellent exposure of the techniques but no final conclusion.

Response: We thank you for pointing out the lack of conclusion. The conclusion has been added with summary on reviewed technologies.

Minor comments:

- 1) The authors stated in the introduction that the LES is a "thickened circular muscular layer of the distal esophagus". This is not true. There is no anatomical landmark for the LES, otherwise our life would be too easy fixing achalasia...

Response: We would like to thank Reviewer A for this input regarding LES. We acknowledge controversial school of thought regarding this issue. However, majority of literature states that the LES has an intrinsic component of a thickened circular or semicircular layer of muscles, and this is also in our experience of working in this area with GERD of achalasia patients. Based on this, we stand by this statement. We included two more references in our paper to support this view.

- 2) I would use generic names (not commercial) in the sections titles.

Response: We would like to thank reviewer A for this comment, and agree that it would be ideal to use generic instead of the commercial names. However, there are currently no generic names for these devices, and we are subject to use the commercial names to appropriately describe the devices.

- 3) The section on POEM is related to achalasia, NOT GERD. It should be deleted.

Response: Although this is an excellent recommendation, post-POEM GERD has a very similar physiology to typical GERD in the sense that the LES is compromised due to mechanical disruption, leading to reflux. In addition, explosive growth of POEM procedure has led to significant increase in numbers of patient presenting with this pathology. Thus, the utility of POEM + F procedure, allowing a fundoplication component to this high GERD risk group. We stand by this section on POEM + F and would like to include this in the manuscript.

Reviewer B

Please provide more details about how articles were selected, and whether there were any standardized criteria for not including a paper on one of these topics.

Response: We would like to thank Reviewer B for their input regarding the standardized criteria for the methodology. We included more on details on the article selection in the methods section based on the above comments.

Reviewer C

This narrative review provides a thorough summary of the available endoscopic techniques for the treatment of GERD. The literature review is comprehensive and the topic timely, although the tone of the review could be a bit more neutral.

Response: We appreciate reviewer C's comments. We attempted to correct this issue.

For the methods section, I recommend providing additional detail. Which literature database/search engine did you use (e.g. MEDLINE, Scopus)? What key terms or MESH terms did you use for searching the database? Did you use any inclusion or exclusion criteria to arrive at 52 articles?

Response: We would like to thank Reviewer C for the comments regarding the methodology section. We added more on the literature search criteria in the methods section based on the above comments.

Otherwise, well written and informative.

Response: We appreciate reviewer C's input.

Reviewer D

1. In background of abstract, the authors mentioned that in this review, they will discuss the medium-term outcomes. Could the authors describe the definition of "medium"?

Response: we appreciate Reviewer D's input regarding defining this term. Unfortunately, "medium-term outcomes" term is used in several of the reference papers, and has not been well defined. The definition varies from different papers and authors, as such for this paper we included "over a several year follow-up period" following medium-term in the abstract to better define this.

2. In discussion, there are some methods not been approved or no longer to be used currently. I thought there was no need to be discussed too much here because the aim of this review is focus on the role for minimally invasive procedure for correction of GERD. Maybe more detailed for the new technology and effectiveness in our daily practice are better.

Response: We agree, and thank Reviewer D's for the comment. However we included a few of these procedures in our paper for historical purposes for surgeons to understand development and starting point of this rapidly evolving field.

3. Some methods mentioned in the discussion are old, attaching pictures will make young readers understand more easily.

Response: We appreciate the recommendations by reviewer D and agree on the importance of adequate visual representation. In the attached video the conduct of TIF procedure is demonstrated. We included pictures of TIF, Overstitch device, and the POEM + F procedure, where we were able to secure manufactures permissions. We regret we were not able to get permissions from other manufacturers.

Reviewer E

This manuscript is well written and seems to be valuable information for readers. However, there remain some issues to revise the following points.

In terms of each therapeutic devices for GERD, it would be better to create tables to describe the reported data and the pros and cons of each modality in order to make it easier for the reader to understand.

Response: We appreciate reviewer E's recommendations regarding the tables. We have created and attached a table to summarize the devices for the readers.

It would also be easier to understand if there were pictures of each device and a brief description of how to manipulate it.

Response: We appreciate reviewer E's recommendations regarding the pictures and description of the device use. In the attached video the conduct of TIF procedure is demonstrated. We included pictures of TIF, Overstitch device, and the POEM + F procedure, where we were able to secure manufactures permissions. We regret we were not able to get permissions from other manufacturers.

In some cases, there is no comment about the downside.

Response: We thank reviewer E for their recommendations regarding the downsides. For each of the devices, we spoke about the downsides/shortcomings, however we added a table quickly summarizing these shortcomings for each procedure for reader ease.

The author should elaborate what indicators should be considered when recommending these devices or methods. While some of them have a lack of confirmative data yet, specify what indicators should be considered so that the reader can easily make a choice.

Response: We appreciate reviewer E's recommendations regarding the indicators to help the surgeon make a choice. We described this more thoroughly in the conclusion.