Author's response to reviews

Title: Comparability of localization data in transnasal and transoral esophagogastroduodenoscopy

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Author's response to reviews: see over
Referee 1: Reviewer: Atsuhiko Murata

Reviewer’s report:
The theme of this paper is unique and interesting. I think that the finding can contribute to the accurate measurement of distance in transnasal esophagogastroduodenoscopy. However, some revisions are required. Please consider the following points.

(Major compulsory revisions)
1. Authors used the words “esophagogastroduodenoscopy” and “gastroscopy” in this paper. Authors should use the word either “esophagogastroduodenoscopy” or “gastroscopy”. Furthermore, “EGD” should be used as abbreviation if you use “esophagogastroduodenoscopy” rather than “gastroscopy”.
    We changed the term „gastroscopy“ into „esophagogastroduodenoscopy“.

2. Did the patients undergo both the transoral gastroscopy (TOG) and transnasal gastroscopy (TNG) in same day?
   Yes, we started with the transnasal examination and after that we conducted the transoral examination - in one session.

3. What is the meaning of the measuring the patient’s height?
   It was on request of the ethics committee. For instance, if you collect more data of the patient e.g. the height, you may assume how long the esophagus could be. It raises the safety of the patient during the examination.

4. Authors showed the significant difference between TOG and TNG with regard to the distance to the cardia (Figure 1). I recommend that authors show the p value and statistical methods such as Mann-Whitney U-test or Student’s t test. By showing this, authors’ hypothesis (fourth paragraph in the Introduction (page 4, lines 10)) can be reasonably validated.
    We figured out the comparability of the localization data performing a transnasal or a transoral examination. From our point of view it is sufficient to publish the standard deviation and the Pearson correlation analysis of the collected data.

5. To highlight the significance of the findings in this paper, authors should describe about the application to clinical endoscopy (e.g. the accurate measurement of distance in esophageal diseases).
   In general, we described it in the introduction (the last two paragraphs). We thought it was adequate to reflect on the clinical importance in such a way. But of course you are right, especially in tumor growth it is clinical quite important. We implemented it into the manuscript´s introduction.

(Minor essential revisions)
1. Authors should add the regression equation to Figure legends (Figure 2). We added the regression equation to the legends in figure 2: **Figure 2:** Graphic depiction of the correlation between measurement points obtained with transoral gastroscopy (TOG) and transnasal gastroscopy (TNG): the regression line. The regression line is described by the equation \( \text{TOG (cm)} = 0.914 \times \text{TNG (cm)} - 1.115 \) or after correction as follows \( \text{TOG (cm)} = 0.89 \times \text{TNG (cm)} \).

(Discretionary revisions)
1. Introduction of this paper seems to be too long. I think that authors had better delete the first paragraph in Introduction and start from the second paragraph because the content of first paragraph is irrelevant to the theme of this paper. In our point of view it was interesting to us, so we would like to keep it in the introduction.
Referee 2:  
Reviewer: Akihiro Mori  
Reviewer's report:  
There are 2 main issues that concern me.

Major concerns
1. When a gastroscopy is converted from transnasal to transoral, it would be more suitable to use a conventional endoscope (larger diameter) because it has higher resolution than an ultrathin endoscope. The authors performed a transoral gastroscopy with an ultrathin endoscope. They should comment that their formula is available for converting localization details even if a conventional endoscope is used. It could be dangerous and harmful to perform an examination via the naris with a conventional endoscope (larger diameter). But, of course, the localization data can be converted by our formula even if you use a conventional endoscope.

2. Although their formula can be used in the location from the cardia to the naris or upper incisors, it is unusable in the post-cardiac location because the endoscope shaft is bent in the stomach. Moreover, there must be differences between a conventional (larger diameter) endoscope and an ultrathin endoscope. The authors should comment to this remark. It would be interesting to evaluate how much an endoscope is bent in the stomach. We did not work on that topic. Maybe one can collect data by performing an x-ray during the examination, but then you have a medium degree of radiation exposure.
Referee 3:
Reviewer: Klaus Moenkemueler
Reviewer’s report:

Comments:
Introduction:
"Manipulation of the uvula causes gagging". I would say the entire hypopharynx, Please clarify.
We changed it into “hypopharynx”. Thanks for the clue.

Patients and methods:
Why do you use both TNG and traditional TOG in all patients? Please clarify. Or was it only during a specific period of time that you were performing both procedures in all patients?
It was only a specific period of time when we performed both examinations. The interesting question was to compare both access routes with each other by measure the length of naris resp. incisors to cardia.

Please define the exclusion criteria. There must be some! Coagulopathy, thrombocytopenia, etc.
In accordance to the guidelines of the German Society of Digestive Diseases we performed the examination. We added this paragraph in the manuscript. So, we think, it becomes more obvious to the reader.

Why did you sue sedation for TNG?
Sedation for a TNG is not necessary. It is safe and efficient to perform a local anesthesia (examination via the naris).
We performed the sedation only during the period of time while we were doing the study.

Why did you measure the esophagogastric landmarks on the way out and not on the way in? I have the impressions that once the stomach gets filled with air it "pulls" the esophagus down a little bit. Please explain.
Of course we take a look on the shaft of the endoscope when we were on the way in, but we did not collect these data. And from today´s point of view it would be interesting if there is a difference in the data (comparing the data from way in versus way out).
Objectively, we could not comment on this impression by “strong” data.

"All the examination were conducted with Fujinon EG470-N". (all TOG and TNG?)
Yes.

Results:
The range of distance of the upper incisors to cardia is somewhat broad; ranging from 26 to 50 cm. This is quite unusual as most Z-Lines (and cardia) in adults begin between 36 to 42. How many patients with Barrett’s esophagus did you have? Can you report on median?
You are right. We agree with the length between 36 to 42 cm in adults. But during our study we collected these data.

Discussion:
Reference 17 is a book. You should provide a study (literature report).
Done.