Peer Review File

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Reviewer A:

The introduction focusses on the evolution and merging of the concept of extending a transanal approach for local excisions with radical TME resection into transanal TME. The authors mention some of the steps with the more rigid platforms as TEM by Buess and TEO, flexible platform as the gelpoint path (TAMIS) but do not incorporate the TATA concept by prof Gerald Marks. This altogether resulted in the TaTME as proposed by Sylla and Lacy in their landmark paper.

The concept of Natural orifice specimen extraction is only a minor part of the TaTME procedure. For lets say lap right hemicolectomy with a transvaginal speciment extraction by making a colpotomy in the fornix this is a true NOSE step. In TaTME the natural orrifice is actually a rather large part of the operation itsellf.

Moreover, many european centres have moved away from a transanal extraction of the specimen and propose a pfannenstiel incission for a controlled specimen extraction site and application of the anvil in the desceding colon. This has several reasons: 1. this lowers the risk of tearing/damaging the marginal artery (drummond) which can occur if the specimen is externalized transanally. 2 it does not increase the risk of sfincter damage beyond the diameter of the transanal port (especially in bulky specimens, 3 it does not enhold the risk of tumor /specimen perofration of damage by squeezing this through the anus/sfincter comples especially in bulky tumours.

The section concerning the oncological outcomes heavily emphasizes the results of the study by Roodbeen et al on the voluntary registry of TaTME and compares these not

audited data with the results form wel conducted robust RCT's. Huge selection and publication bias is suspected. The worrisome data of local recurrences found in Norway and the Netherlands are not discussed in this paragraph.

The section describing the series of tatme perfomed in Ankara city hospital does not mention the rate of NOSE for delivery of the specimen. This leaves me very confused with the aim/title of this manuscript.

In response to Reviewer A.

Although we mentioned the symptom TATA concept in the introduction part in the first paragraph, it was not written in a way that was overlooked in the abbreviation part. This field has been corrected in line with the suggestions.

The transvaginal extraction mentioned in the second paragraph will be prepared by another author, as another subject, since it is a special issue of the journal.

We agree with the concerns in the third paragraph. In general, the rates of transanal extraction are 40-60% when we look at the literature. If the mesorectum is swollen and there is a risk of developing the complications mentioned during transanal extraction, a pfannenstiel incision is recommended. We have shared some details about the indications before (page 14)

We know all the writings about the problem in the fourth paragraph. The Norwegian study was suspended in TaTME Norway due to the high local recurrence rate in the early period(1). However, upon detailed examination, it was seen that there were many problems with this article. The fact that local recurrences occur in 11 months, multifocal recurrences, the low number of patients receiving neoadjuvant, and the fact that many centers start this work without the necessary training are seen as the factors that cause these problems. In addition, it is a problem that there is not enough information about the quality of the specimens extracted in the article. In the Dutch study(2), local recurrence, which seemed to be high during the implementation period, decreased to 4-5% in long-term follow-ups. Since our aim in this article is to explain the technique in the foreground, we did not want to discuss these articles

in order to avoid speculation. As for the RCT study, there is no finalized article yet, but we mentioned at the end of the article that there are ongoing articles.(page 17)

Thank you for the warning of the authority regarding the question in the last paragraph, we think it will be right to share the rates.

Reviewer B:

I would suggest that the authors attach a short (about 5-8 minutes) video showing the major operative steps of the procedure.

In response to Reviewer B

If the journal rules allow this, I will gladly prepare this proposal, I think it will increase the technical level of the proposal. I prepared and sent this video.

Reviewer C:

I think the review is generally well written, including experiences and cases from your institution. However, sometimes there are no references, even though the text requires academic background. (e.g., TAMIS descriptions, etc.)

And there are not enough references as a review. This type of review should have more than 60 references, about double the current number.

Particularly in the section of " Benefits of TaTME", at least one reference for each of the 10 listed is required. Also, for "Oncological Outcomes", olease add more References to this section, including an even small number of case reports, as you only cited Roodbeen's paper.

In response to Reviewer C

Thank you for the author's commendable words and suggestions.

We used the TAMIS reference based on your suggestion in the first paragraph.

We used the 14th reference in the 'Benefits of TaTME' section in the last paragraph, I think it was overlooked. In addition to Roodbeen's article on oncological results, we also evaluated 1283 cases from China.

Reviewer D:

this is a descriptive manuscript which attempts to provide an overview of the current literature about TaTME while shedding a light on the authors' own opinion on each point discussed.

Positive:

- good, yet a little bit biased, overview of the current literature

Negative:

- the manuscript english language is poorly written and must be reviewed by a professional native speaker.

- I really cannot decide on how to classify this manuscript. It does not satisfy in its current form a systematic review or a meta-analysis. There are no tables listing previous papers and their data. There is no methodology described. No statistical analysis. The manuscript also is not compatible with a case series or a cohort study. There are no hints on how the data was collected and how it was analyzed (prospective, retrospective etc.).

The paragraph describing the data is extremely short. The manuscript is on the other hand too lengthy to be defined as an expert opinion or a letter to the editor.

- I can realize that the authors are hardline enthusiasts for TaTME which I can respect since all surgeons have their personal preferences. But the scientific method involves also mentioning data which did not support TaTME even if the authors do not agree with it, like that coming from Norway with respect to the very high local recurrency rates, from Denmark with regard to higher rates of anorectal dysfunction and from Germany with regard to complications rarely seen before in rectal surgery like urethral and prostatic injury as well as bilateral ureter lesions.

If I may suggest, your manuscript might be more suitable as a book chapter but not as a scientific paper.

In response to Reviewer D

The article was prepared according to the invitation as I mentioned at the beginning.

The English part was re-evaluated by a certified professional native speaker. I'm forwarding the certificate.

I described the concerns about the Norwegian study in the section above. I came across 2 articles from Denmark about functional study (3, 4), one of which compared laparoscopic TME with TaTME. It states that there is no difference in manometric measurement. The other article is a review article, in this article, it wanted to give functional results related to TaTME, Laparoscopic TME and Robotic TME. However, he states that he can only access information about TaTME. It says it can't find a resource for other methods. We have previously used the functional study on TaTME that the reviewer mentioned in reference 26.

I could not find any information about complications in the German data(5). However, there are some complications that we consider specific to this surgery. such as injury to the urethra (6).

References

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