

Peer Review File

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Reviewer A

We are honored to offer a review of this excellent manuscript. The Author clearly explains his modification of the TIPP technique and how the placement of a large preperitoneal mesh can be accomplished. It is clear that this approach is superior to the Lichtenstein technique and that it can be taught to surgeons and trainees. This is a very important work and worthy of the highest rating possible for its substance.

In terms of the writing, it is effective, and interesting to those of us who perform OPP regularly. If this publication is going to be widely read by native English speakers I suggest that the author work with someone to make it read more easily as some of the concepts are obvious to me, but not likely someone who is not well versed in OPP. As a not native English speaker myself, I have other routinely work on my manuscripts to ensure readability.

Reply. the manuscript has been corrected by an English language professional.

Here are a few examples of edits that I would suggest on the first page(s):

Line 17 - Change to "One type or version of these approaches"

Reply. we have modified our text as advised see Page 1, line 17

Line 19 - Maybe need a reference to Ugahary?

Reply. As with the TIPP references, I have put the references regarding the Ugahary technique above in the INTRODUCTION: REF 8-9 for Ugahary; 10-11 for TIPP

Line 21 - "Precise elements" Consider changing to "Precisely describe"

Reply. we have modified our text as advised see Page 1, line 22

Line 28 - In the US we say "Perioperative" or "pre-operative"

Reply. we have modified our text as advised see Page 2, line 30

Line 36 - needs revision or commas, I can't tell what the % recurrence is and what the timeline is

Reply. we have modified our text About Results Page 1-2

Line 72 - Trans Rectal? It does not seem right - see comment below.

Reply. we have modified our text as advised see Page 5 line 105

Page 3 Trans rectus - not Trans Rectal.

Reply. we have modified our text as advised see Page 5 line 124

Page 5 - 164 - not sure what the sentence means and why it's important.

Reply. we have modified our text as advised: Deletion of the sentence: "The preparation and preoperative precautions shows no specificity." And modification of the text Page 5

Another suggestion:

Paragraph on line 62. I would add something about: As healthcare costs increase, the total cost of care of an OPP is lower than endoscopic repair. Given it's equal or better outcomes, this repair should be considered a cost effective alternative to endoscopic repairs and thus should be taught to all surgeons.

Reply. we have modified our text, by adding a sentence, as advised see Page 4 line 91-93

Description of surgery - excellent and quite detailed - almost like a textbook

Reply: Thanks for the comment. I have tried to present a repeatable and easy learning procedure. I also standardized my technique after questions and comments from the many colleagues who came to learn in the operating room with me.

Results - Best to present it in table format, maybe just highlight the most important items of data, not all of them. I think it will be easier to interpret.

Reply. The chapter has been completely rewritten and simplified in accordance with the recommendation, with only the most important data in the text. All other data is precisely present in the four tables See Results chapter page 18-20 For more details, see Table 1: For demographics, baseline pain status and perioperative data (1401 cases out of 1146 patients) Table 2: For hospital stay, postoperative course and first results (up to D30) Table 3: For follow-up and late results Table 4: For Patient Related Outcomes Measurement (PROM)

Discussion - when do you use Ugahary - please explain

Reply. we have modified our text as advised see Page 24-25 line: 566-574

Limitations - You should highlight more the fact that recurrences are so rare that entering the anterior and posterior planes is not a big deal given that you get the job done right the FIRST time. I think this is going to be a big criticism of this approach as it does technically violate anterior and posterior planes, but may be easier for surgeons to learn.

Reply. I am totally agreeing with all the important points of this comment. we have modified our text, by adding a paragraph, as advised see Page 24 line 554-566

The teaching and Conclusions are excellent.

This recent reference may be helpful for describing the improvements when compared to Lichtenstien and with describing the steps of the retroperitoneal

dissection.

Agarwal, D., Bharani, T., Fullington, N. et al. Improved patient-reported outcomes after open preperitoneal inguinal hernia repair compared to anterior Lichtenstein repair: 10-year ACHQC analysis. *Hernia* (2023). <https://doi.org/10.1007/s10029-023-02852-6>

Reply. we have completed our text as indicated in the discussion chapter (see page 22, line 514-519).

Reviewer B

Thank you for providing me with the opportunity to review the article The minimal open preperitoneal (MOPP) approach to treat the groin hernias, technique, indication results.

This article was interesting to read and may provide original and updated data on MOPP. The authors provided context to the novelty and purpose of the paper and a brief background on the evolution of the method. However, the authors should revise the language to improve readability and flow, for example there are punctuation and capitalization, as well as spelling and grammatical errors present.

Reply. the manuscript has been corrected by an English language professional.

There is a lack of information from the discussion and repetitive findings in the results section.

Reply. The Results chapter has been completely rewritten and simplified in accordance with the recommendation, with only the most important data in the text. All other data are precisely present in the four tables see page 18-20 line 403-460 For more details, see Table 1: For demographics, baseline pain status and perioperative data (1401 cases out of 1146 patients) Table 2: For hospital stay, postoperative course and first results (up to D30) Table 3: For follow-up and late results Table 4: For Patient Related Outcomes Measurement (PROM)

The title and subsection titles could also be made clearer for the reader.

The abstract is concise and provided an informative and balanced summary, but the results could be displayed in a clearer and easier to read manner.

Reply. we have modified our text as advised see Page 2, line 36-51

Additionally, the abstract says 1401 hernias had been operated on but in the manuscript, it said a total of 1616 groin hernias were operated on with 1401 operated on with MOPP, this should be edited in the abstract to better represent what the total operations and total MOPP operations were.

Reply. we have modified our text as advised see Page 1, line 36-38

Interesting historical introduction. The results including data from the literature and additional references should be included when discussing the open

preperitoneal being superior to Lichtenstein and comparable to the endoscopic techniques.

Reply. we have modified our text as advised, the sentence is deleted from this chapter and this is integrated into the discussion chapter See Page 22-23 line 493-540

Objectives should be formatted in a more classical way, either listing out each objective in sentence structure or point form. It is difficult to understand if the only objective is to demonstrate the results of MOPP or secondly to also to redefine some essential steps and thirdly to discuss the reproducibility and teachability of the MOPP.

Reply. The objectives are two, firstly to redefine the technique for a better reproducibility and teachability and secondly to show the results with a large number of patients. We have modified our text as advised see Page 6-7 line 133-153

The authors should clarify the methods section to present findings more clearly and provide a better understanding of the variables collected and analyzed.

Reply. we have modified our text as advised see Page 7-9 line 157-206

Missing data, loss to follow-up should be moved under the results section.

Reply. we have modified our text as advised see Page 18 line 403-412

Under the objectives section it clearly states the objective is to demonstrate the results and briefly indicates the paper redefines some essential steps, which should be added as a main objective if it is one, and if so, this information should be shortened in the methods section to clearly outline what parts have been redefined and the other steps simply referenced from a previous publication.

Reply. The objectives section has been modified to precise the two important objectives we have modified our text as advised see Page 6 line 133-157 2 the methods section has been shortened, with a new layout. but as previous publications were in the form of book chapters and never in a peer-reviewed journal, the author wishes to present a precise and complete description with all the steps of the technique to make this article the reference article for our colleagues.

The authors should clarify the results section to present findings more clearly, reduce repeating information, and provide a better understanding of what was analyzed. The results section appears to be in point form and should be edited into sentences. I recommend removing duplicate information that will be displayed within a table and provide written information to clearly outline what the findings were.

Reply. The chapter results has been completely rewritten and simplified in accordance with the recommendation, with only the most important data in the

text. All other data is precisely present in the four tables see page 18-20 line 410-460

Under the section “At 3 mois: (the chronic pain)” the value 20 is used to calculate chronic pain rate but the term “gene” has not been described or referenced early and it is unclear to the reader what is being discussed and measured here.

Reply. we have modified our text as advised see Page 19, line 436-442

Additionally, English translation may need to be reviewed.

Reply. the manuscript has been corrected by an English language professional.

The tables only indicate that there was 1 recurrence recorded yet in the abstract it says there were 2 recurrences, this should be edited.

Reply. I distinguished on the one hand the recurrence found during our personal follow-up, from the recurrence observed in another center. The total number of recurrences is thus 2. As I indicated in the table 3 thus modified Table 3: Follow-up and late outcomes Minimum follow up: 12 months MOPP N (%) or mean 1401 Lost to Follow-up 72 (5.14) Follow-up > 1 year 1329 (94.86) Medium follow up 1241 days [365-3002] Phone questionnaire completed 847 (68) Clinical visit 398 (32) Identified recurrence 1 (0.08) Late complications Testicular atrophy 0 Late superficial infection operated 1 Late sepsis or chronic sinus operated twice (no recurrence) 1 In another center: Abscessed sigmoid diverticulosis, prosthesis removal 1 In another center: Meshoma, prosthesis removal, recurrence reoperated 1 Bowel obstruction or erosion 0 Chronic pain (please see PROM) Total of recurrences 2

The paper fails to provide a discussion section with a formal discussion and review of the results, implications, comparisons to other techniques, and published results. The authors should rewrite their discussion to explain their findings, compare the results to other publications in the literature, and relay the importance or novelty of the findings, as this was stated as the objective. The methods are repeated in the discussion and should be removed (paragraph about other operative techniques used).

Reply. the comments chapter has been completely rewritten based on the recommendations. the repeated elements have been deleted. Data from the literature were integrated and discussed. see Page 20-23, line 462-540

The data does not fully support the conclusion that it is easier to teach the MOPP technique and should therefore be removed as a conclusion.

Reply. we have modified our text as advised see Page 27, line 614- 617

There was no data collection or presentation regarding learning curve or analysis of teachability presented in the manuscript, as well as no discussion comparing this technique's ability to learn versus other techniques (open with mesh,

laparoscopic, tissue).

Reply. we added a paragraph to specify the problem of the learning curve as recommended, see Page 21-23, line 468-540

There are a lot of figures which are insightful for the technique, however the schematic illustrations were not referenced in the manuscript and could be removed or referenced within text, if necessary.

Reply. The figures try as much as possible to show the different steps of the intervention as in reality. They are always oriented in the same way for better understanding. The schematic illustrations were provided separately to the editor but they are precisely linked to the corresponding figures, which are themselves precisely referenced in the text. The technical points being one of the main objectives of this work, I would have liked to clarify each step of the procedure. For example it is important to gently locate and dissect the spermatic cord, to locate a nerve (genital branch of the genito-femoral nerve), or to respect the cremaster muscle, to find the deep inguinal ring, to initiate parietalization of the cord , etc. I therefore wish to make this article the reference article on MOPP for our colleagues