

Dear Editor,

We are submitting our revised manuscript Ref.: 75466, "Laparoscopic bilateral inguinal hernia repair. Should it be the preferred technique?" The referees have made important and constructive comments and we have now addressed them separately to satisfy all their concerns. In the revised manuscript we have reviewed all sections according to the reviewers' suggestions. With all the revisions, additions and corrections made, we believe that we have responded to the reviewers' comments adequately and the manuscript is now complete in its targets and goals.

The manuscript has been revised by two native speakers of English. If the manuscript doesn't meet the language requirements of your journal we are willing to send the revised manuscript to a professional English language editing company.

**We thank the reviewers for the constructive comments which helped us improve the quality of our manuscript.**

Reviewer #1

-Most study had small numbers of patients and only 1 had 2800 which claimed "it wasn't inferior. Is this sufficient evidence to deem Laparoscopy superior to open method?"

Reply to the reviewer: We agree that the evidence is not sufficient, considering that the referred study is prospective and not a RCT. We have revised this paragraph.

-Since the initial studies were from late '90's and 2000's with minimal in last 15 years are you stating this is sufficient evidence for Laparoscopic method as "gold standard"?

Reply to the reviewer: We agree that there is not sufficient evidence and have changed this statement.

-You claim that uniformity in future studies is an issue that needs addressed to achieve significant results, has this concern been considered or addressed in current trials?

Reply to the reviewer: To the best of our knowledge and after thorough research on clinical trial databases, there aren't any active clinical trials that implement international guidelines on laparoscopic inguinal hernia repair. We have revised the "IS THERE SUFFICIENT EVIDENCE?" paragraph .

Reviewer #2

- Title The title is somewhat misleading in that one might expect an answer between Laparoscopic versus open repair in the conclusion. Consider rephrasing.

Reply to the reviewer: The title has been reviewed.

- Abstract They state "A diverse variety of techniques have been used to repair inguinal hernias", the focus of the paper is only open versus laparoscopic – the sentence does not lend itself to the story.

Reply to the reviewer: We agree and have deleted this sentence.

- You state as "laparoscopy became more advanced", but laparoscopy has been a procedure for the last 60+ years - what specific advancement has led to it becoming and advantageous alternative to open repair?

Reply to the reviewer: We have rephrased this statement into "laparoscopy has become more popular".

- Is the purpose of the study to evaluate the use of laparoscopic techniques for bilateral repairs or compare the effectiveness/outcomes of laparoscopic v.s. open repairs? The title of the paper suggests the latter.

Reply to the reviewer: We agree that the purpose of the study needs clarifying. Our aim is to compare the effectiveness of laparoscopic vs open repairs and thus have made the necessary changes according to the reviewer's comments.

- Introduction The hypothesis/aim of the study should be stated at some point in the introduction.

- The introduction concludes with a list of surgical options but does not get back to the overall point of the study.

Reply to the reviewer: We have stated the aim of the study at the end of the introduction.

- You state mesh repair open or laparoscopic is the first surgical option, which is more frequently used?

Reply to the reviewer: We have added that open mesh-repair is more frequently used.

- It is stated that laparoscopic techniques have an extended learning curve, what is being referred to here?

Reply to the reviewer: This refers to the number of operations needed for a surgeon to master the laparoscopic inguinal repair.

- The "EHS state that laparoscopic repair of bilateral hernias is associated with better shorter-term results". Change shorter to short. Also, this statement is somewhat confusing because it leads me to think that long term open repair has better results than laparoscopic. Please consider rephrasing or clarifying this point.

Reply to the reviewer: We agree and have made the necessary changes.

- Methodology Repeated from above - Is the purpose of the study to evaluate the use of laparoscopic techniques for bilateral repairs or compare the effectiveness/outcomes of laparoscopic v.s. open repairs? No other comments

-Reply to the reviewer: We have stated the purpose of the study in the introduction and thus, have deleted the sentence referring to the purpose from the methodology paragraph.

- Laparoscopic Hernia Repair In the first sentence, you state there has been a debate about the use of laparoscopic techniques, what debate?

Reply to the reviewer: This refers to a debate regarding the superiority of laparoscopic, over open inguinal hernia repair techniques. We have rephrased this sentence.

-About the cost effectiveness, the surgical technique/effectiveness, the difficulty? You state the main factors used to compare the two approaches: immediate post op pain, pain following recovery and quality of life. I recommend adding this to the methods sections these factors and search criterion etc.

Reply to the reviewer: We have added this to the methods section.

- “As a surgeon needs to perform 50 to 100 repairs to master the technique” consider moving to the introduction and removing from this section.

Reply to the reviewer: Changes have been made according to the reviewer’s comment.

- Laparoscopic Repair Techniques The sentence beginning with “So far”, please provide references.

Reply to the reviewer: We have added the references

- You state TEPP is associated with greater incidence of seroma formation, it would be good to compare this to open repair as well. E.g. does open repair have even higher rates of seroma compared to TEPP? I also recommend an additional sentence comparing the overall complications of TEPP/TAPP to open repair as well.

Reply to the reviewer: We have revised this sentence, taking into consideration the reviewer's comments and have stated that TEP, TAPP and the open repair are comparable regarding seroma formation.

- Under the "Is there sufficient evidence section" you describe a list of advancements in techniques over recent years. Consider moving that section here and then you can refer back to it in the future section.

Reply to the reviewer: As suggested, we have made the changes to this section.

- Do Short-term results indicate laparo-endoscopic repair of bilateral inguinal hernias as a better option?

"Despite a higher cost" sentence please indicate less post-operative pain immediately following the procedure.

Reply to the reviewer: We have made the necessary changes, as indicated.

- The "time to recovery" sentence - consider moving to the introduction or Laparoscopic repair sections as it provides good background information.

Reply to the reviewer: The sentence has been moved to the introduction.

- You state Ielpo et al. results supported prior RCTs but never actually state which specific results are supported. Is it cost, pain days of hospitalization?

Reply to the reviewer: As correctly pointed out, we have added the results that are supported by this RCT. These are recovery, postoperative pain and complications.

- Missing a P in TEPP in last sentence.

Reply to the reviewer: Abbreviation of Total Extra-Peritoneal is TEP

- References 11-14 also support the point in the final sentence.

Reply to the reviewer: We have made the necessary changes.

- Is there sufficient evidence of long term superiority of the method? You state there are two studies, you describe the results of Ielpo et al but never mention this second study.

Reply to the reviewer: We have made the necessary changes.

- A sentence stating “chronic groin pain, quality of life and recurrence rates are the common factors used to evaluate long term superiority” would be useful at the start of this section.

Reply to the reviewer: We have added this sentence.

- The last paragraph is confusing and contradicts itself. “Available data shows cases of recurrence following laparoscopic repair” followed by “recurrence rates are similar” followed by “In 5 studies, there were more cases of recurrence in laparoscopic group”. Please rephrase this. “A few cases of recurrence following laparoscopic repair were recorded” - important to distinguish why recurrence? Was it a failed repair? A new unrelated hernia? The Hynes et al study is the only one with a significant difference in recurrence rates, however, it also from 2006. You’ve stated that there have been significant advancements specifically in the last 10 years, it could be worth mentioning that the techniques used in 2006 could have a role in this.

Reply to the reviewer: We agree that this paragraph is confusing. As suggested by the reviewer, we have rephrased it. Higher recurrence rates in the Hynes et al study, were mostly associated to less experienced surgeons performing the laparoscopic repairs. We have also pointed out that the consumables and techniques used in the study of Hynes, are from the 00’s, and that fact may have a role in the difference in recurrence rates.

- Is laparoscopy worth the cost? Are any consumables absolutely required for surgery or does this come down to surgeon preference?

Reply to the reviewer: Regarding consumables, laparoscopic instruments may be reusable. The factor that increases the cost is the mesh-fixation technique. Tack fixation increases the cost significantly.

-Is there sufficient evidence? See above about considering moving the advancements in technique sections.

Reply to the reviewer: We have made the necessary changes.

-Which technique should a surgeon use? The second sentence, clarify that they outperform in terms of post-operative pain in the short term. Consider adding a sentence that future studies controlling for technique, instruments and consumables used will be needed to truly set a “gold standard”.

Reply to the reviewer: We have added that laparoscopic repair outcomes outperform those of the open repair in terms of pain in the immediate postoperative period. We have also added a sentence regarding the need for future studies.

-Overall: Laparoscopic and laparo-endoscopic are used interchangeably, consider choosing just one.

Reply to the answer: We have made the necessary changes, using laparoscopic throughout the article.

-Recommend overall grammar recheck

Reply to the reviewer: We have revised the text, according to the reviewer's comments.

- Change the use of numbers where applicable, for example “one of the 2 published RCTs” can be changed to “one of the two published RCTs”.

Reply to the reviewer: The numbers have been changed throughout the text.

- Tables No comments on content Consider re-formatting without underlining the column titles.

Reply to the reviewer: We have made the necessary changes.

Science editor

- This opinion review focused on the laparoscopic and open bilateral inguinal hernia repair, which is an interesting topic for clinical work. However, the manuscript still needs a lot of revision. The writing structure needs to be further organized and the writing language needs to be further refined. The author needs to clarify the purpose of the research and the gist of the conclusion. Furthermore, the number of total references is few and a bit outdated, maybe a little more related references could also be cited. The form of the table in the article should adopt the form of a three-line table.

Reply to the editor: We agree and have revised the manuscript. The purpose of the research has been rephrased. More references have been cited. We have also made the necessary changes to the form of the tables.

Company editor-in-chief

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Methodology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

Reply to the editor: We have made the necessary changes to the form of the tables.

Sincerely,

George Koukoulis MD, MSc, PhD