Peer Review File

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Reviewer A

I suggest to split the article in two: inguinal hernia and ventral hernia. As they are different in nature and evolution. Will more interesting for the reader.

Reply: The ventral hernia section has been excluded from the paper with plans for an additional review article dedicated to ventral hernias in the future.

Reviewer B

I have reviewed the manuscript titled "The Evolution of Endoscopic Hernia Repairs " by Dr Xie J et al for considering a potential publication in Annals of Laparoscopic and Endoscopic Surgery.

A descriptive analysis of the historical evolution of minimally invasive hernia repair techniques is carried out. However, it seems to me that the article is a bit disorganized and scattered and could be considerably improved with some changes that I propose below.

After reading it, I understand that the final objective of the article is to develop the historical evolution of surgical techniques in inguinal hernia. Therefore, I believe that the ventral hernia and the lateral hernias treated at the end of the manuscript as "special considerations" should not be included, since they are totally different pathologies and with such different particularities from the inguinal hernia so I believe it is more convenient to separate them in a second or even third manuscript.

***Reply*:** The ventral hernia and lateral flank sections has been excluded from the paper.

A review of the literature is carried out, but not a systematic review. The terms to carry out the bibliographic search are not explained, the method should be explained.
Reply: The methods including search terms are now included in descriptions of table 1 and table 2.
Changes in text: See page 23 line 550-552 and page 25 line 557-558.

The title does not seem the most appropriate to me: first, I believe, as I explained in my previous comment, that only inguinal hernia repairs should be included; I do not believe the term endoscopic is correct since it equally treats endoscopic approaches such as TEP and laparoscopic approaches such as TAPP, even robotic approaches (perhaps replace with "The evolution of minimally invasive inguinal hernia repairs").

Reply: The title has been changed to “minimally invasive” rather than “endoscopic”

I think it is important to discuss about the increase in the economic cost of the minimally invasive approach in hernia repair, which becomes even more important when we include robotic surgery.

Reply: We added a section discussing the financial implications of minimally invasive inguinal hernia repairs compared to open repairs.
Changes in text: See page 12-13 line 282-305.

It catches my attention that the EHS classification is described in lateral hernias, however no mention is made of the same classification of inguinal hernia.

Reply: The EHS classification of groin hernias are now included.
Changes in text: Please see page 7 line 146-148 and figure 2.

I do not understand the meaning of the sentence “Laparoscopic visualization of groin anatomy allows clear identification of hernia etiology”. In my opinion, visualization of the inguinal anatomy does not identify the etiology of the process.

Reply: The sentence has been changed to “clear identification of type of hernia defect”.
Changes in text: See page 7 line 1659-160.

Minor fix:
- Abbreviation OL (line 138) is not explained.
Reply: abbreviation explained in page 9 line 210
- TEP cannot be performed robotically (line 160) due to the arrangement of the robotic arms on the patient; in any case, it should say eTEP (extended TEP), which is a different surgical technique.
Reply: changed to eTEP. See page 11 line 250.
- The acronym TARUP (line 197) refers to a robotic technique. However, other techniques such as TARM (Transabdominal Retromuscular) are missing.
Reply: The lateral hernia section has been removed from the manuscript
- TAPE (line 264) is a technique described for hypogastric or suprapubic hernias, not for lateral hernias as such.
Reply: The lateral hernia section has been removed from the manuscript
- I do not place patients in lateral decubitus to repair a lateral hernia (line 265-66).
Reply: The lateral hernia section has been removed from the manuscript
- I disagree that one of the advantages of the robotic approach in lateral hernia is greater extraperitoneal dissection that allows larger meshes to be placed. This same dissection can be perfectly done by open or laparoscopic approach (Line 274-76). One of the principles of minimally invasive surgery is to reproduce the same surgical technique with less invasion.
Reply: The lateral hernia section has been removed from the manuscript

- How have the articles in tables 1 and 2 been ordered? I don't know the criteria but I think the most appropriate thing is alphabetical order according to main author or chronologically.
Reply: the articles are now reordered in alphabetical order according to first chronology and then by alphabetical order of main author.

Reviewer C

The information compiled in this manuscript is extensive and clearly explains the evolution of hernia surgery. However, I think it would be interesting if the authors could comment on the following points:

1. It would be interesting if you could describe the current recommendations in international guidelines for using laparoscopic for inguinal hernia repair.

Reply: Different international guideline recommendations were added including slight variances between each guideline. No recommendations are made between laparoscopic TAPP vs. TEP repairs.
Changes in text: Please see page 10-11 line 222-229.

2. The cited studies and international guidelines describe the advantages of using laparoscopic repair. However, its use is very variable in the world. It would be interesting if you could comment on the utilization rate of laparoscopic inguinal hernia repair and the reasons for these differences.

Reply: We added a section on the different rates of laparoscopic surgery around the world and some reasons for the variance in utilization.
Changes in text: Please see page 10-11 line 229-241.

3. The manuscript describes with several references the advantages of using laparoscopy compared to open surgery for inguinal hernia. However, when comparing TAPP with TEP, it only describes a randomized study in bilateral inguinal hernias that analyzes short-term results. It would be interesting if you could reference the meta-analyses comparing TAPP and TEP in unilateral inguinal hernias in which long-term results such as chronic pain and recurrence are also analyzed.

Reply: Additional studies comparing TAPP and TEP repairs were added.
Changes in text: Please see page 9-10 line 197-217.

4. What are the current recommendations of the international clinical guidelines for the use of laparoscopy in ventral hernia? What is the most used laparoscopic technique in ventral hernia? Is laparoscopic IPOM a technique that should still be used?

Reply: Per recommendations from other reviewers, the sections on ventral and lateral wall

hernias has been removed from the manuscript for a more concise paper.