OBSTETRICS & GYNECOLOGY

NOTICE: This document contains correspondence generated during peer review and subsequent revisions but before transmittal to production for composition and copyediting:

- Comments from the reviewers and editors (email to author requesting revisions)
- Response from the author (cover letter submitted with revised manuscript)*

**The corresponding author has opted to make this information publicly available.*

Personal or nonessential information may be redacted at the editor's discretion.

Questions about these materials may be directed to the *Obstetrics & Gynecology* editorial office: obgyn@greenjournal.org.

Date: Nov 16, 2021
To: "Patrick J. Culligan" [redacted]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-21-1857

RE: Manuscript Number ONG-21-1857

Contemporary Use and Techniques of Laparoscopic Sacrocolpopexy with or without Robotic Assistance

Dear Dr. Culligan:

Your manuscript has been reviewed by the Editorial Board and by special expert referees. Although it is judged not acceptable for publication in Obstetrics & Gynecology in its present form, we would be willing to give further consideration to a revised version.

If you wish to consider revising your manuscript, you will first need to study carefully the enclosed reports submitted by the referees and editors. Each point raised requires a response, by either revising your manuscript or making a clear and convincing argument as to why no revision is needed. To facilitate our review, we prefer that the cover letter include the comments made by the reviewers and the editor followed by your response. The revised manuscript should indicate the position of all changes made. We suggest that you use the "track changes" feature in your word processing software to do so (rather than strikethrough or underline formatting).

Please be sure to address the Editor comments (see "EDITOR COMMENTS" below) in your point-by-point response.

Your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Dec 07, 2021, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1:

This is a straightforward description of a minimally invasive colpopexy. Many of the noted articles however are selectively interpreted to support the use of colpopexy over native tissue repair (particularly the meta analysis) which is irrelevant to describing the procedure. This should be an unbiased presentation with risk and benefit of the procedure, including noting the return to OR rate among native tissue and mesh groups are similar. Supracervical hysterectomy, though protective for mesh erosions, has a low rate of abnormal uterine pathology that should be mentioned when considering surgical approach. Similar reductions in mesh erosions are seen with delayed absorbable suture when compared to permanent suture yet this is not mentioned, and you describe technique with only permanent suture.
You also equate sacrocolpoperineopexy with sacrocolpopexy in your discussion of the procedure, which is also misleading, as the sacral colpoperineopexy is performed for perineal descent and carries a higher risk of denervation injury including urinary retention as compared to sacro colpopexy, which is performed for apical descent and does not carry the same risk.

Reviewer #2:

This is a clinical expert series manuscript written to describe the evidence and the author's experience with sacrocolpopexy for pelvic organ prolapse. This manuscript does provide a good description of the surgical technique along with various surgical tips based on the authors experience and preferences. However it comes off as very opinion-based and seems to represent preferences of one individual. There are many points throughout the paper where good data does exist but the author only provides their opinion. There are also some important clinical questions that the author does not fully elucidate, such as workup and outcomes of defecatory dysfunction with sacrocolpopeexy, as well as the debate of total versus supracervical hysterectomy. Many parts of the paper seem informal and conversational.

-Abstract/introduction: I am not sure that transvaginal mesh should be used as a surrogate for sacrocolpopexy. The impression is given that removal of transvaginal mesh by the FDA made sacrocolpopexy become the new primary option by default. This is not accurate as sacrocolpopexy has been the most commonly performed mesh augmented repair for decades.

-Line53-54: citations and evidence needed here for the success rates and adverse event rates associated with native tissue vs mesh augmented repairs
-Line 62: why would preoperative cystoscopy be considered in patients with prolapse?
-Line 67: this sentence sounds very informal and leaves the author's insinuation up to the imagination of the reader.
-Line 87: I have not come across this phenomenon of the cervix being replaced by nabothian cysts in advanced prolapse.
-Paragraph 83-95: this would be a good opportunity to discuss total versus supracervical hysterectomy in terms of risk for mesh erosion. A common clinical conundrum is the desire to perform a total hysterectomy for some clinical reason (bleeding, pain, cervical elongation) versus the potential risk for mesh erosion. This would be a helpful topic to discuss with some detail in your paper. Provide data and gaps in knowledge/need for future studies.
-Line 91: any discussion of rectal prolapse or incontinence should also include more advanced colorectal testing beyond a simple rectal exam. May include anal manometry/defecography and possible referral to a colorectal surgeon. Discuss prior data on sacrocolpoperineopexy vs sacrocolpopexy for defecatory dysfunction.
-Line 96 - provide data on use of perioperative vaginal estrogen
-Line 102-104 - provide data for preop enemas
-Line 108 - why 28 degrees?
-Line 117 - I'm not sure I would recommend connecting the laparoscopic tubing to the foley, even it if does successfully inflate the bladder.
-Line 131-132 - provide data that shows supracervical hysterectomy eliminates the risk of mesh exposure. This is misleading. The author should not lose sight that this paper will change practice patterns, and patient counselling, across the country and world.
-Line 143-144 - you previously stated you use the Humi for supracervical hysterectomy.
-Line 147-149 - provide data or citation.
-Line 253 - informal
-Line 371-372 - needs citation/data
-Line 404-408 - it is misleading to quote 90% success for sacrocolpopexy versus 30-40% for native tissue repairs in a comparative fashion. These were different studies with different outcomes.

Reviewer #3:

This Clinical Expert Series is well-written and addresses the important topic of minimally invasive sacrocolpopexy for treatment of pelvic organ prolapse. With increasing high quality clinical trial data showing high failure rates of native tissue repairs by 5-years, enhancing readers knowledge and understanding of sacrocolpopexy is critical. The manuscript not only addresses techniques and use of minimally invasive sacrocolpopexy, but provides a thorough overview of recent clinical trial data on where sacrocolpopexy fits into the evidence for different routes of prolapse repair.

General comments:
* Images of instruments and trocar placement would add value as would leg positioning.

* Procedural videos (or at least images) would allow reader to better understand steps of procedures.

Specific comments:
Line 11: add "it" before provided better cure rates

Line 44-46: Recommend removing "most important" from discussing expectant management/serial POP-Q. Expectant management is an alternative, but no evidence indicates it is "most important" and newer data suggests having prolapse symptoms for a longer time may be associated with higher failure rates.

Line 59: preop should be preoperative

Line 62: change urodynamic studies to "urodynamic studies or cough stress test" - many data support cough stress test rather that urodynamics

Line 65: "some surgeons will screen all patients with pelvic ultrasound regardless of bleeding history". Unless there are data to support indications for universal uterine screening, omit this statement since some data suggests preoperative evaluation in asymptomatic patients in not valuable.

Line 74: It's should be it is

Line 84-85: this sentence does not read well

Line 102-104: if there are no data to recommend enemas (and I do not think there are), the last sentence should be removed. It is antiquated.

Lines 122-130: Please amend to state that a suction or bowel retraction device through the 3rd LSC port can also be used to retract the sigmoid similar to your description of robotic.

Lines 131-132: Provide reference. I also think "eliminate" is a strong word. Consider "almost eliminate". Culligan P et al FPMRS 2020 Mar;26(3):202-6.

Lines 131-137: Consider including lucite stent OR uterine manipulator.

Line 148-149: Add reference. Matthews CA, et al. Obstet Gynecol 2020 Aug;136(2):355-64.

Line 157: An image of trocar placement would be useful.

Line 164-66: 11 mm trocar is large. Consider amending to 8 or 11 mm trocar and suggesting placement in suprapubic area OR right periumbilical region.

Line 169-172: Consider amending to NOT include 11 mm port accessory port. In our practice, we also use StitchKit - place it through fascia of 8 mm umbilical port - so large accessory port is not necessary which reduces pain and hernia risk.

Lines 177+: Provide references for anatomy, suggest Corton M et al.

Line 190 - Concomitant hysterectomy: Include more explanation of data for mesh hysteropexy. This should be expanded as newer data looks favorable.

Line 200-205: Please provide more references in this section. I recommend discussing lower mesh exposure rates with supracervical (Culligan, Cundiff, etc) with a disclosure that those comparative studies were done with older, heavier weight meshes.

Line 206-210: This is redundant and was discussed early in manuscript.

Line 285+: Consider describing Y mesh attachment AND 2 separate strips. I think this can be consolidated. Why would you recommend attaching the mesh distally robotically and proximally laparoscopically? This does not really make sense to me … I suspect is it irrelevant and provider dependent. I believe this can be ONE paragraph with only small, nuanced differences between LSC and robotic approaches that are specific to route. For example, placement of knots between mesh and vagina should be same regardless of route.

Line 292-94: This seems like an extra step, ie: remove needle through suprapubic port then bring sutures through lateral port to tie. If the port is placed laterally rather than suprapubically, you can save a step.

Line 330: Provide image of mesh after tensioning.

Lines 330+: Similar comment to above. Difference in LSC and robotic with respect to scope (changing to 30 degree) should not change based on route.

Line 354: Perineal closure. It is fine to state that you recommend this technique, however the reference provided does not substantiate your claim so please remove. In the CARE trial (Whitehead et al reference), sacrocolpopexies were done open and all 4 reoperations were for incisional complications. They did not report a difference in SBO or ileus based peritoneal closure. Please provide a more appropriate reference for your statement and modify statement to include Whitehead and other minimally invasive studies that demonstrate low and similar rates of bowel complications with and without peritoneal closure (Mueller M et al. FPMRS 2016, Elneil et al BJOG 2005 - both specifically look at minimally invasive sacrocolpopexy). In other words, be more specific that it is your preference, but not necessarily substantiated by peer reviewed literature acknowledging it is a rare outcome and subject to type II error.

RESULTS
Please elaborate on this section. It will be important for readers to have a more thorough understanding of specific subjective and objective outcomes and QOL.

Please also consider adding a paragraph comparing minimally invasive sacrocolpopexy data to other types of prolapse surgical repairs. You hit on it in the abstract, but a better summary is warranted.

Finally, I think a more effective conclusion/summary including the advantages of minimally invasive sacrocolopexy with respect to anatomic outcomes, recovery and symptomatic outcomes is important.

STATISTICS EDITOR COMMENTS:

Review of Manuscript ONG-21-1857 "Contemporary uses and techniques of laparoscopic sacrocolpopexy with or without robotic assistance"

A manuscript for the clinical expert series that evaluates and comments on the roll of laparoscopic sacrocolpopexy (with or without robotic assistance) has been submitted for review. Although a minor stylistic issue, there are frequent contractions which in my opinion should tend to be avoided in medical manuscripts. As noted by the authors, this current manuscript is designed to focus on the nuances of patient evaluation (line 59). Moreover, as this submission for the Clinical Expert Series deals with surgery, the authors should have included at least some type of figures especially when they are noting their recommendations, as compared to other options. I have the following questions and comments.

Title - Consider adding for pelvic organ prolapse.

Précis - While this may be true, you really presented no data. Can you revise to encapsulate your take on this issue?

Abstract - Line 8 - "Last few years" is somewhat vague and almost too informal. Consider revising.
Line 9 - Consider "demonstrated" rather than "showed."
Line 11 - Consider "…only to subsequently…."

Introduction - Line 28 - Consider revising "…shown to offer…" how about "…recently demonstrated lower composite…"?

Informed Consent - Line 45- how often/frequent such patients undergo the proposed serial POP-Q assessments?
Line 47 - How about "serious" instead of "dangerous"?
Line 59 - Consider preoperative rather than preop since this was used as the subjective heading above.
Line 69 - How about fasting glucose for those with no known history of diabetes and a HGB A1C for those with diabetes?
Line 87 - Is this expert opinion or is there a reference for this observation?

Patient Positioning
Line 119 - How does one control the volume of Co2 instilled in the bladder? I would assume you would need to turn down to a liter/minute and stop after 20-30 seconds?
Line 122-130 - Do you have figures to demonstrate these approaches?
Line 131 - For a supracervical hysterectomy what is you preferred rout of specimen removal?

Trocar Placement
Do you have figures for suggested placement for both traditional laparoscopy and/or with robotic assistance?

Procedural Steps
Was consideration given to include figure to illustrate key steps in the procedure?
Line 214-5 - As described being "just below the fundus" would seem to leave all of the cervix? Can you clarify?
Line 230 - Do you mean inferior and medial to the left common iliac vein? If seems like we would not want to be lateral to this vasculature.
Line 259 - How much CO2 should be used as this was recommended as another option?
Line 287 - Again figures or intra-operative photomicrographs would be helpful for the reader.
Line 332 - Should you consider referencing other techniques here?
Line 363 - I think this should be re-peritonealization.
Line 382 - Improved appears to be duplicated in this sentence.
Line 401 - Consider spelling out "<" as less than

Tables - None

Figures - None

EDITORIAL OFFICE COMMENTS:

1. The Editors of Obstetrics & Gynecology have increased transparency around its peer-review process, in line with efforts to do so in international biomedical peer review publishing. If your article is accepted, we will be posting this revision letter as supplemental digital content to the published article online. Additionally, unless you choose to opt out, we will also be including your point-by-point response to the revision letter. If you opt out of including your response, only the revision letter will be posted. Please reply to this letter with one of two responses:

A. OPT-IN: Yes, please publish my point-by-point response letter.
B. OPT-OUT: No, please do not publish my point-by-point response letter.

2. When you submit your revised manuscript, please make the following edits to ensure your submission contains the required information that was previously omitted for the initial double-blind peer review:
* Include your title page information in the main manuscript file. The title page should appear as the first page of the document. Add any previously omitted Acknowledgements (ie, meeting presentations, preprint DOIs, assistance from non-byline authors).
* Funding information (ie, grant numbers or industry support statements) should be disclosed on the title page and in the body text. For industry-sponsored studies, the Role of the Funding Source section should be included in the body text of the manuscript.
* Include clinical trial registration numbers, PROSPERO registration numbers, or URLs at the end of the abstract (if applicable).
* Name the IRB or Ethics Committee institution in the Methods section (if applicable).
* Add any information about the specific location of the study (ie, city, state, or country), if necessary for context.

3. Obstetrics & Gynecology uses an "electronic Copyright Transfer Agreement" (eCTA), which must be completed by all authors. When you uploaded your manuscript, each co-author received an email with the subject, "Please verify your authorship for a submission to Obstetrics & Gynecology." Please check with your coauthors to confirm that they received and completed this form, and that the disclosures listed in their eCTA are included on the manuscript's title page.

4. Standard obstetric and gynecology data definitions have been developed through the reVITALize initiative, which was convened by the American College of Obstetricians and Gynecologists and the members of the Women's Health Registry Alliance. Obstetrics & Gynecology has adopted the use of the reVITALize definitions. Please access the obstetric data definitions at https://www.acog.org/practice-management/health-it-and-clinical-informatics/revitalize-obstetrics-data-definitions and the gynecology data definitions at https://www.acog.org/practice-management/health-it-and-clinical-informatics/revitalize-gynecology-data-definitions. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

5. Because of space limitations, it is important that your revised manuscript adhere to the following length restrictions by manuscript type: Clinical Expert Series should be no longer than 6,250 words. Stated word limits include the title page, précis, abstract, text, tables, boxes, and figure legends, but exclude references.

6. Specific rules govern the use of acknowledgments in the journal. Please note the following guidelines:

* All financial support of the study must be acknowledged.
* Any and all manuscript preparation assistance, including but not limited to topic development, data collection, analysis, writing, or editorial assistance, must be disclosed in the acknowledgments. Such acknowledgments must identify the entities that provided and paid for this assistance, whether directly or indirectly.
* All persons who contributed to the work reported in the manuscript, but not sufficiently to be authors, must be acknowledged. Written permission must be obtained from all individuals named in the acknowledgments, as readers may infer their endorsement of the data and conclusions. Please note that your response in the journal's electronic author form verifies that permission has been obtained from all named persons.
* If all or part of the paper was presented at the Annual Clinical and Scientific Meeting of the American College of Obstetricians and Gynecologists or at any other organizational meeting, that presentation should be noted (include the exact dates and location of the meeting).
* If your manuscript was uploaded to a preprint server prior to submitting your manuscript to Obstetrics & Gynecology, add the following statement to your title page: "Before submission to Obstetrics & Gynecology, this article was posted to a preprint server at: [URL]."

7. Provide a short title of no more than 45 characters (40 characters for case reports), including spaces, for use as a running foot.

8. The most common deficiency in revised manuscripts involves the abstract. Be sure there are no inconsistencies between the Abstract and the manuscript, and that the Abstract has a clear conclusion statement based on the results found in the paper. Make sure that the abstract does not contain information that does not appear in the body text. If you submit a revision, please check the abstract carefully.

In addition, the abstract length should follow journal guidelines. The word limit for Original Research articles is 300 words; Reviews is 300 words; Case Reports is 125 words; Current Commentary articles is 250 words; Executive Summaries, Consensus Statements, and Guidelines are 250 words; Clinical Practice and Quality is 300 words; Procedures and Instruments is 200 words. Please provide a word count.

9. Only standard abbreviations and acronyms are allowed. A selected list is available online at http://edmgr.ovid.com /ong/accounts/abbreviations.pdf. Abbreviations and acronyms cannot be used in the title or précis. Abbreviations and acronyms must be spelled out the first time they are used in the abstract and again in the body of the manuscript.

10. The journal does not use the virgule symbol (/) in sentences with words. Please rephrase your text to avoid using "and/or," or similar constructions throughout the text. You may retain this symbol if you are using it to express data or a measurement.

11. Please review examples of our current reference style at http://ong.editorialmanager.com (click on the Home button in the Menu bar and then "Reference Formatting Instructions" document under "Files and Resources). Include the digital object identifier (DOI) with any journal article references and an accessed date with website references. Unpublished data, in-press items, personal communications, letters to the editor, theses, package inserts, submissions, meeting presentations, and abstracts may be included in the text but not in the reference list.

In addition, the American College of Obstetricians and Gynecologists' (ACOG) documents are frequently updated. These documents may be withdrawn and replaced with newer, revised versions. If you cite ACOG documents in your manuscript, be sure the references you are citing are still current and available. Check the Clinical Guidance page at https://www.acog.org/clinical (click on "Clinical Guidance" at the top). If the reference is still available on the site and isn't listed as "Withdrawn," it's still a current document.

If the reference you are citing has been updated and replaced by a newer version, please ensure that the new version supports whatever statement you are making in your manuscript and then update your reference list accordingly (exceptions could include manuscripts that address items of historical interest). If the reference you are citing has been withdrawn with no clear replacement, please contact the editorial office for assistance (obgyn@greenjournal.org). In most cases, if an ACOG document has been withdrawn, it should not be referenced in your manuscript.

12. Authors whose manuscripts have been accepted for publication have the option to pay an article processing charge and publish open access. With this choice, articles are made freely available online immediately upon publication. An information sheet is available at http://links.lww.com/LWW-ES/A48. The cost for publishing an article as open access can be found at https://wkauthorservices.editage.com/open-access/hybrid.html.

If your article is accepted, you will receive an email from the editorial office asking you to choose a publication route (traditional or open access). Please keep an eye out for that future email and be sure to respond to it promptly.

If you choose open access, you will receive an Open Access Publication Charge letter from the Journal's Publisher, Wolters Kluwer, and instructions on how to submit any open access charges. The email will be from publicationservices@copyright.com with the subject line, "Please Submit Your Open Access Article Publication Charge(s)." Please complete payment of the Open Access charges within 48 hours of receipt.

***

If you choose to revise your manuscript, please submit your revision through Editorial Manager at http://ong.editorialmanager.com. Your manuscript should be uploaded as a Microsoft Word document. Your revision's cover letter should include the following:

* A confirmation that you have read the Instructions for Authors (http://edmgr.ovid.com/ong/accounts/authors.pdf), and
* A point-by-point response to each of the received comments in this letter. Do not omit your responses to the Editorial Office or Editors' comments.

If you submit a revision, we will assume that it has been developed in consultation with your co-authors and that each author has given approval to the final form of the revision.

Again, your paper will be maintained in active status for 21 days from the date of this letter. If we have not heard from you by Dec 07, 2021, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,
John O. Schorge, MD
Associate Editor, Gynecology

2020 IMPACT FACTOR: 7.661
2020 IMPACT FACTOR RANKING: 3rd out of 83 ob/gyn journals

_____

12/13/2021

With respect, we are submitting our revised manuscript entitled *"**Contemporary Use and Techniques of Laparoscopic Sacrocolpopexy with or without Robotic Assistance**"* for consideration to be included in your Clinical Expert Series. We greatly appreciate the reviewers' and editor's thoughtful comments and suggestions.

It is our intent to submit solely to Obstetrics & Gynecology, and it is not under consideration elsewhere. It will not be submitted elsewhere unless a final negative decision is made by the Editors of Obstetrics & Gynecology.

I, Patrick Culligan, have reviewed and edited the submission, and have included some new elements which would unblind the manuscript. I hereby submit this no-longer self-blinded manuscript for consideration in Obstetrics & Gynecology. The following paragraph was added which would unblind the manuscript.

In addition to the descriptions of our surgical techniques below, we have posted three unedited, fully narrated videos demonstrating our techniques of 1) Laparoscopic post-hysterectomy sacrocolpopexy https://www.youtube.com/watch?v=pt5MmxM6-D4 ; 2) Robotic supracervical hysterectomy and sacrocolpopexy https://www.youtube.com/watch?v=F1dGujj8LYQ&t=1477s ; and 3) Robotic post-hysterectomy https://www.youtube.com/watch?v=ecscXcVLV04&t=1072s sacrocolpopexy.

I, Patrick Culligan, affirm that this manuscript is an honest, accurate, and transparent account of the subject being reported; that no important aspects of the studies we cited have been omitted

The responses to the reviewers' comments are in *red italics* below:

Signed by: Patrick Culligan, MD – The manuscript's guarantor.

REVIEWER COMMENTS:

Reviewer #1:

This is a straightforward description of a minimally invasive colpopexy. Many of the noted articles however are selectively interpreted to support the use of colpopexy over native tissue repair (particularly the meta

analysis) which is irrelevant to describing the procedure. This should be an unbiased presentation with risk and benefit of the procedure, including noting the return to OR rate among native tissue and mesh groups are similar.

On this point we disagree with the reviewer. The rates of return to the OR between these studies is not nearly as important as the failure rates. Prolapse recurrence after surgery is highly disappointing and upsetting to patients and should not be minimized by implying that only those who presented for reoperation had "meaningful" recurrences. A statement to this effect was added to the manuscript.

Supracervical hysterectomy, though protective for mesh erosions, has a low rate of abnormal uterine pathology that should be mentioned when considering surgical approach. Similar reductions in mesh erosions are seen with delayed absorbable suture when compared to permanent suture yet this is not mentioned, and you describe technique with only permanent suture.

We added a statement about low rate of abnormal uterine pathology. The reduction in mesh exposure that the reviewer referred to was found in a retrospective trial, but a subsequent RCT on this subject showed the opposite. We chose to feature the results of the RCT, since it was level 1 evidence.

You also equate sacrocolpoperineopexy with sacrocolpopexy in your discussion of the procedure, which is also misleading, as the sacral colpoperineopexy is performed for perineal descent and carries a higher risk of denervation injury including urinary retention as compared to sacro colpopexy, which is performed for apical descent and does not carry the same risk.

We have never seen and couldn't find reference to higher risk of denervation associated with going down to the perineum, so we disagree with this comment and made no changes.

Reviewer #2:

This is a clinical expert series manuscript written to describe the evidence and the author's experience with sacrocolpopexy for pelvic organ prolapse. This manuscript does provide a good description of the surgical technique along with various surgical tips based on the authors experience and preferences. However it comes off as very opinion-based and seems to represent preferences of one individual. There are many points throughout the paper where good data does exist but the author only provides their opinion. There are also some important clinical questions that the author does not fully elucidate, such as workup and outcomes of defecatory dysfunction with 2acrocolpopexy, as well as the debate of total versus supracervical hysterectomy. Many parts of the paper seem informal and conversational.

We are actually pleased that the tone was seen as conversational, because that's what we were going for.

This being an article for the clinical expert series, we think that describing our personal techniques is the desired idea.

Specifically regarding defecation dysfunction, we added some statements and references per this reviewer's request. (page 19)

-Abstract/introduction: I am not sure that transvaginal mesh should be used as a surrogate for sacrocolpopexy. The impression is given that removal of transvaginal mesh by the FDA made sacrocolpopexy become the new primary option by default. This is not accurate as sacrocolpopexy has been the most commonly performed mesh augmented repair for decades.

The FDA's removal of vaginal mesh did in fact make sacrocolpopexy the default way to augment prolapse surgery with mesh. We respectfully would like to the leave the statement as-is.

-Line53-54: citations and evidence needed here for the success rates and adverse event rates associated with native tissue vs mesh augmented repairs

We do not feel that it is necessary to restate the reference, since it was covered above.

-Line 62: why would preoperative cystoscopy be considered in patients with prolapse?

This statement about cystoscopy was clarified.

-Line 67: this sentence sounds very informal and leaves the author's insinuation up to the imagination of the reader.

We like this sentence and the tone it sets

-Line 87: I have not come across this phenomenon of the cervix being replaced by nabothian cysts in advanced prolapse.

I have an unusually large population of stage 4 uterovaginal prolapse cases - perhaps that's why I have seen this issue and would like to warn my peers

-Paragraph 83-95: this would be a good opportunity to discuss total versus supracervical hysterectomy in terms of risk for mesh erosion. A common clinical conundrum is the desire to perform a total hysterectomy for some clinical reason (bleeding, pain, cervical elongation) versus the potential risk for mesh erosion. This would be a helpful topic to discuss with some detail in your paper. Provide data and gaps in knowledge/need for future studies.

We discuss these issues in a later section.

-Line 91: any discussion of rectal prolapse or incontinence should also include more advanced colorectal testing beyond a simple rectal exam. May include anal manometry/defecography and possible referral to a colorectal surgeon. Discuss prior data on sacrocolpoperineopexy vs sacrocolpopexy for defecatory dysfunction.

We added discussion of sacrocolpopexy / perineopexy regarding defecation symptoms.

-Line 96 - provide data on use of perioperative vaginal estrogen

We don't know of any data proving that estrogen improves surgical results, but we feel that preoperative estrogen use is a valuable and common recommendation

-Line 102-104 - provide data for preop enemas –

that statement was removed

-Line 108 - why 28 degrees?

That's the most common degree of T-burg I use, so I thought stating the number would be useful to other surgeons.

-Line 117 - I'm not sure I would recommend connecting the laparoscopic tubing to the foley, even it if does successfully inflate the bladder.

That statement was removed

-Line 131-132 - provide data that shows supracervical hysterectomy eliminates the risk of mesh exposure. This is misleading. The author should not lose sight that this paper will change practice patterns, and patient counselling, across the country and world.

More language was added about the choice between total and supracervical hysterectomy.

-Line 143-144 - you previously stated you use the Humi for supracervical hysterectomy.

That was for traditional laparoscopic cases. The technique of using no vaginal manipulation is something we do during robotic cases. We think this distinction is clear in the manuscript, so no changes were made.

-Line 147-149 - provide data or citation. *Reference added*

-Line 253 – informal

We like the statement that "fat belongs to the rectum", and we use it in teaching situations regularly

Formatted: Font: Italic, Font color: Red

-Line 371-372 - needs citation/data

We don't have data to cite on this point.

-Line 404-408 - it is misleading to quote 90% success for sacrocolpopexy versus 30-40% for native tissue repairs in a comparative fashion. These were different studies with different outcomes.

We never suggested that these were head-to-head comparisons of native tissue versus sacrocolpopexy. It is obvious that we refer to different studies here, therefore, no changes were made to the manuscript.

Reviewer #3:

This Clinical Expert Series is well-written and addresses the important topic of minimally invasive sacrocolpopexy for treatment of pelvic organ prolapse. With increasing high quality clinical trial data showing high failure rates of native tissue repairs by 5-years, enhancing readers knowledge and understanding of sacrocolpopexy is critical. The manuscript not only addresses techniques and use of minimally invasive sacrocolpopexy, but provides a thorough overview of recent clinical trial data on where sacrocolpopexy fits into the evidence for different routes of prolapse repair.

General comments:
* Images of instruments and trocar placement would add value as would leg positioning.

* Procedural videos (or at least images) would allow reader to better understand steps of procedures.

Our full-length unedited videos of straight stick and robotic-assisted sacrocolpopexy cases were added, and we also added pictures of our trocar placement.

Specific comments:
Line 11: add "it" before provided better cure rates - *done*

Line 44-46: Recommend removing "most important" from discussing expectant management/serial POP-Q.

Expectant management is an alternative, but no evidence indicates it is "most important" and newer data suggests having prolapse symptoms for a longer time may be associated with higher failure rates.

Agree – change made

Line 59: preop should be preoperative - *done*

Line 62: change urodynamic studies to "urodynamic studies or cough stress test" - many data support cough stress test rather that urodynamics - *done*

Line 65: "some surgeons will screen all patients with pelvic ultrasound regardless of bleeding history". Unless there are data to support indications for universal uterine screening, omit this statement since some data suggests preoperative evaluation in asymptomatic patients in not valuable.

Done - omitted

Line 74: It's should be it is *- change made*

Line 84-85: this sentence does not read well

This section of manuscript rewritten to make more sense.

Line 102-104: if there are no data to recommend enemas (and I do not think there are), the last sentence should be removed. It is antiquated.

Removed

Lines 122-130: Please amend to state that a suction or bowel retraction device through the 3rd LSC port can also be used to retract the sigmoid similar to your description of robotic.

done

Lines 131-132: Provide reference. I also think "eliminate" is a strong word. Consider "almost eliminate". Culligan P et al FPMRS 2020 Mar;26(3):202-6.

done

Lines 131-137: Consider including lucite stent OR uterine manipulator.

done

Line 148-149: Add reference. Matthews CA, et al. Obstet Gynecol 2020 Aug;136(2):355-64.

done

Line 157: An image of trocar placement would be useful.

Added – Figure 1

Line 164-66: 11 mm trocar is large. Consider amending to 8 or 11 mm trocar and suggesting placement in suprapubic area OR right periumbilical region.

done

Line 169-172: Consider amending to NOT include 11 mm port accessory port. In our practice, we also use StitchKit - place it through fascia of 8 mm umbilical port - so large accessory port is not necessary which reduces pain and hernia risk.

Done – language added as suggested

Lines 177+: Provide references for anatomy, suggest Corton M et al.

done

Line 190 - Concomitant hysterectomy: Include more explanation of data for mesh hysteropexy. This should be expanded as newer data looks favorable.

We would like to keep this section as-is, because we feel as though it already reflects the idea that the choice regarding whether to perform concomitant hysterectomy and which type to perform are mainly based on surgeon & patient preference.

Line 200-205: Please provide more references in this section. I recommend discussing lower mesh exposure rates with supracervical (Culligan, Cundiff, etc) with a disclosure that those comparative studies were done with older, heavier weight meshes.

We respectfully disagree that including references to studies done with older heavier weight mesh material would enhance this section. The references we chose (14, 15 & 16) are the most relevant, because they include "modern" very lightweight mesh products. Therefore, we would like to leave this section as-is.

Line 206-210: This is redundant and was discussed early in manuscript.

Deleted this paragraph

Line 285+: Consider describing Y mesh attachment AND 2 separate strips. I think this can be consolidated. Why would you recommend attaching the mesh distally robotically and proximally laparoscopically? This does not really make sense to me … I suspect is it irrelevant and provider dependent. I believe this can be ONE paragraph with only small, nuanced differences between LSC and robotic approaches that are specific to route. For example, placement of knots between mesh and vagina should be same regardless of route.

We respectfully disagree, because the nuances described for traditional and robotic laparoscopic cases are different and individual readers will be attracted to either but probably not both. We did add a sentence stating that we are describing Y-mesh use but that using 2 separate strips would be ok as well.

Line 292-94: This seems like an extra step, ie: remove needle through suprapubic port then bring sutures through lateral port to tie. If the port is placed laterally rather than suprapubically, you can save a step.

We did not make a change, because we find our technique to be the most efficient. Obviously, surgeons know that they may incorporate any knot tying technique they prefer. In addition, we have found anecdotally that larger ports placed laterally lead to more discomfort post-operatively, so we choose to have the one larger port (11 mm) in our traditional laparoscopic cases placed in the midline (suprapubic) and keep our lateral ports 5 mm. Therefore, the needles need to be removed from the larger suprapubic port, but it is easier technically to tie extracorporally from the lateral ports.

Formatted: Font: Italic

Line 330: Provide image of mesh after tensioning.

Provided as part of the videos

Lines 330+: Similar comment to above. Difference in LSC and robotic with respect to scope (changing to 30 degree) should not change based on route.

We respectfully disagree for the same reason as above. We want to present both techniques separately.

Line 354: Perineal closure. It is fine to state that you recommend this technique, however the reference provided does not substantiate your claim so please remove. In the CARE trial (Whitehead et al reference), sacrocolpopexies were done open and all 4 reoperations were for incisional complications. They did not report a difference in SBO or ileus based peritoneal closure. Please provide a more appropriate reference for your statement and modify statement to include Whitehead and other minimally invasive studies that demonstrate low and similar rates of bowel complications with and without peritoneal closure (Mueller M et al. FPMRS 2016, Elneil et al BJOG 2005 - both specifically look at minimally invasive sacrocolpopexy). In

other words, be more specific that it is your preference, but not necessarily substantiated by peer reviewed literature acknowledging it is a rare outcome and subject to type II error.

We removed reference 20 and added the Mueller reference plus a statement indicating that some authors have found no differences in reoperation for bowel complications for those patients who did or did not undergo re-peritonealization. We did not include the Elneil reference, because it referred to open abdominal surgeries rather than laparoscopic cases.

RESULTS
Please elaborate on this section. It will be important for readers to have a more thorough understanding of specific subjective and objective outcomes and QOL.

More language was added to this section regarding surgical outcomes.

Please also consider adding a paragraph comparing minimally invasive sacrocolpopexy data to other types of prolapse surgical repairs. You hit on it in the abstract, but a better summary is warranted.

We did discuss vaginal native tissue and vaginal mesh hysteropexy in addition to laparoscopic sacrocolpopexy in the results section. Those are by far the most established minimally invasive reconstructive surgeries for the treatment of pelvic organ prolapse.

Finally, I think a more effective conclusion/summary including the advantages of minimally invasive sacrocolopexy with respect to anatomic outcomes, recovery and symptomatic outcomes is important.

The conclusion was enhanced as per the reviewer.

STATISTICS EDITOR COMMENTS:

Review of Manuscript ONG-21-1857 "Contemporary uses and techniques of laparoscopic sacrocolpopexy with or without robotic assistance"

A manuscript for the clinical expert series that evaluates and comments on the roll of laparoscopic sacrocolpopexy (with or without robotic assistance) has been submitted for review. Although a minor stylistic issue, there are frequent contractions which in my opinion should tend to be avoided in medical manuscripts. As noted by the authors, this current manuscript is designed to focus on the nuances of patient evaluation (line 59). Moreover, as this submission for the Clinical Expert Series deals with surgery, the authors should have included at least some type of figures especially when they are noting their recommendations, as compared to other options. I have the following questions and comments.

Title - Consider adding for pelvic organ prolapse.

Respectfully, we prefer the title we chose, because sacrocolpopexy is only used to treat pelvic organ prolapse, so that part is implied. However, we would of course defer to you if you wish to change the title.

Précis - While this may be true, you really presented no data. Can you revise to encapsulate your take on this issue?

We feel that the statement is now supported by the additional support added to the "results" section of our manuscript.

Abstract - Line 8 - "Last few years" is somewhat vague and almost too informal. Consider revising.

Revised to read "the last four"

Line 9 - Consider "demonstrated" rather than "showed." – *changed*

Line 11 - Consider "…only to subsequently…." *changed*

Introduction - Line 28 - Consider revising "…shown to offer…" how about "…recently demonstrated lower composite…"? *changed*

Informed Consent - Line 45- how often/frequent such patients undergo the proposed serial POP-Q assessments? *"semiannual to annual" added*

Line 47 - How about "serious" instead of "dangerous"?

We respectfully disagree. Saying it's not "serious" may minimize the debilitating symptoms experienced by women with prolapse

Line 59 - Consider preoperative rather than preop since this was used as the subjective heading above.

Changed

Line 69 - How about fasting glucose for those with no known history of diabetes and a HGB A1C for those with diabetes?

Actually, I have diagnosed between 5-10 women with diabetes via preoperative HGB A1C values in the last 20 years. I would prefer to leave the line as-is

Line 87 - Is this expert opinion or is there a reference for this observation? *Personal experience*

Patient Positioning
Line 119 - How does one control the volume of Co2 instilled in the bladder? I would assume you would need to turn down to a liter/minute and stop after 20-30 seconds? -

we removed this statement

Line 122-130 - Do you have figures to demonstrate these approaches?

Demonstrated in the video

Line 131 - For a supracervical hysterectomy what is you preferred rout of specimen removal?

Description added

Trocar Placement
Do you have figures for suggested placement for both traditional laparoscopy and/or with robotic assistance?

Figure added

Procedural Steps
Was consideration given to include figure to illustrate key steps in the procedure?

The videos will illustrate them best

Line 214-5 - As described being "just below the fundus" would seem to leave all of the cervix? Can you clarify?

Clarification added

Line 230 - Do you mean inferior and medial to the left common iliac vein? If seems like we would not want to be lateral to this vasculature.

Actually, the spot we are going for along the anterior longitudinal ligament is lateral to the left common iliac vein. I see how the wording could be misleading though, so we changed it to read "to the right…"

Line 259 - How much CO2 should be used as this was recommended as another option?

That part was removed

Line 287 - Again figures or intra-operative photomicrographs would be helpful for the reader.

Added

Line 332 - Should you consider referencing other techniques here?

Discussed more fully in the videos

Line 363 - I think this should be re-peritonealization.

Changed

Line 382 - Improved appears to be duplicated in this sentence.

Fixed

Line 401 - Consider spelling out "<" as less than

Changed