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 07, 2019
To: "Jared T Roeckner" [redacted]
From: "The Green Journal" em@greenjournal.org
Subject: Your Submission ONG-19-1892

RE: Manuscript Number ONG-19-1892

Salpingectomy at the time of cesarean delivery: A systematic review and meta-analysis

Dear Dr. Roeckner:

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).

Your paper will be maintained in active status for 14 days from the date of this letter. If we have not heard from you by Nov 21, 2019, we will assume you wish to withdraw the manuscript from further consideration.

REVIEWER COMMENTS:

Reviewer #1: Precis - salpingectomy at time of c/s has no increase in surgical complications as compared to standard tubal ligation

Abstract - Objective: to compare differences in operative times and surgical outcomes between salpingectomy and tubal interruption at c/s
Data sources - articles with salpingectomy at time of c/s
Study Selection - operative time, complications, quality of studies
Tabulation, integration and results - 11 studies with 320,443 women - 3 randomized trials and 8 retrospective cohorts
operative 6 min longer in cohort studies in salpingectomy group but no increase in complications
Conclusions - salpingectomy at c/s longer operative time but no increase in adverse outcomes and should be considered

Introduction - sterilization by opportunistic salpingectomy is performed, a systematic review and metaanalysis were done to review salpingectomy at c/s
Sources - literature search
Study selection - prospective and retrospective studies - total operative time, surgical complications, EBL
primary outcome - total operative time, secondary outcome - complications, assessed quality of study and bias

Results - 11 studies 320,443 women, 8 retrospective, 3 RCTs, time of surger, 4 used bipolar devices, low bias and good quality
cohorts - operative time increased by 6.3 minutes with no difference in time in RCTs
no difference in complications
metaregression for bipolar devices and bipolar did not alter results

Discussion - salpingectomy at c/s - small increase in time but no increase in surgical complications - supports salpingectomy at c/s
consider training of surgical technique due to 27-29% MDs concerned about safety -
the addition of only a few minutes is not clinically significant and we should suggest offering

Comments:
Overall this is a good metaanalysis with good quality studies, though there are only a handful.

1) Did the metaanalysis offer anything different than the individual studies had shown alone?

2) The introduction is very choppy and needs smoother transitions.

3) was there any discussion as to technique if a bipolar wasn't used?

4) was there any mention as to how often this could not be completed or if intended procedure had to be aborted due to venous engorgement, adhesions, etc?

5) Is there any data that discusses affect on tubal interruption via Parkland or Pomeroy on risk of salpingectomy to indicate if changing procedure is warranted? studies show it can be done safely, but I'm wondering if it is warranted and if there is any benefit

Reviewer #2: This study addresses an important topic and is clinically important to generalist Ob/Gyns - the use of salpingectomy for permanent contraception at the time of cesarean delivery.

A few considerations for the authors:
1. Recommend using the term "permanent contraception" over "sterilization"

2. Did any studies report operative time for the tubal procedure only? This would be useful to include in your outcomes if reported.

3. Recommend discussing the following additional limitations:
a. "ability to complete the intended procedure" was not included as an outcome. In line 165, you say that "success of total salpingectomy was high." This outcome is likely not reported in all studies in this review (especially retrospective studies), but would be helpful to know when available, can you give a range of reported success rates?
b. While no permanent contraceptive method should be performed with the option of reversal, as we are performing more salpingectomies for permanent contraception, we do not have updated information about patient regret. It would be relevant to comment on this.
c. We also do not have good data on the contraceptive efficacy of complete salpingectomy, though it is assumed to be greater than partial tubal interruption methods.

Line by line comments:
- Line 32: add word "which" to " additional outcomes included" to "additional outcomes, which included"

- Line 142: "None of the studies reported method failure rates." I assume this refers to contraceptive failure, not inability to perform procedure? Does this mean that method failure was 1. not reported at all in any studies, 2. studies did not have follow up, 3. Did not have any failures in a certain follow up time? (see comment 3c above)

- Line 173: did the RCTs describe a specific training protocol?

- Line 202: add word "surgical" from "increased risk" to "increased surgical risk"

Reviewer #3: In this paper, the authors compare the differences in operative time and surgical outcomes between salpingectomy and standard tubal interruption during cesarean delivery.

This is a very well conducted study. The control groups are well chosen, the use of sensitivity analyses, analyzing RCTs separately are all good and reassuring steps.

While the findings are not remarkable, that is the point.

Overall, I have not much to add.

STATISTICAL EDITOR COMMENTS:

The Statistical Editor makes the following points that need to be addressed:

The precis states that salpingectomy at the time of CD is not associated with increased surgical complications, but the primary outcome is added time of procedure (Fig 2).

Table 2: The counts and frequency of: transfusion, wound infection, readmission, reoperations, internal organ damage are

each too few to have sufficient power to discern a difference. Hence, the NS findings cannot be generalized. For example, for transfusion, 24/829 (2.9%) vs 6274/313296 (2.0%), there is only 0.46 power to have discerned a difference. Put another way, the rates would have to be 2.0% vs 3.5% to have sufficient power with these sample sizes, to have established a significant difference. The other comparisons fare even worse as far as power is concerned. Particularly those limited to the RCTs, which have more restricted sample sizes available.

Table 2 has another problem with method, in that some comparisons have only 2 cohorts, which is insufficient to test for heterogeneity, In fact, those with N=3 cohorts have little power to establish heterogeneity with any precision.

EDITOR COMMENTS:

1. Specific comments about the manuscript are as follows:

Line 39: PRESENTATION OF STATS INFORMATION (P Values vs Effect Size and Confidence Intervals)
While P values are a central part of inference testing in statistics, when cited alone, often the strength of the conclusion can be misunderstood. Whenever possible, the preferred citation should be in terms of an effect size, such as odds ratio or relative risk or the mean difference of a variable between two groups, expressed with appropriate confidence intervals. When such syntax is used, the P value has only secondary importance and often can be omitted or noted as footnotes in a Table format. Putting the results in the form of an effect size makes the result of the statistical test more clinically relevant and gives better context than citing P values alone.
This is true for the abstract as well as the manuscript.

Please provide absolute values for variables, in addition to assessment of statistical significance.

We ask that you provide crude OR's followed by adjusted OR's for all variables.

Line 53: We no longer require that authors adhere to the Green Journal format with the first submission of their papers. However, any revisions must do so. I strongly encourage you to read the instructions for authors (the general bits as well as those specific to the feature-type you are submitting). The instructions provide guidance regarding formatting, word and reference limits, authorship issues, and other things. Adherence to these requirements with your revision will avoid delays during the revision process, as well as avoid re-revisions on your part in order to comply with the formatting.

Line 57: "may arise"?

Line 71: Please delete "a thorough and extensive search" as the data bases you searched and your search terms will demonstrate the thoroughness and extensiveness of your search. Let them stand on their own.

Line 132: Please start w/ total number identified-something like "Of the initial 115 identified studied, 16 were fully screened…."

Line 134: not clear what you mean by 5 studies were excluded for various reasons. You excluded a total of 90 it seems. As it reads currently, you are describing 11 studies on line 133 and then on line 134 you say that 5 studies were excluded. It sounds like it was of these 11. Please edit for clarity.

Line 141: bipolar device during salpingectomy for what purpose? To do the tubal interruption or for hemostasis?

Lines 146-149: the sum of the patients reported for here is about 7,500. But on line 138, you report that the largest sample size was 313,007. Please explain.

Line 149-152: Is this lack of difference for these secondary outcomes for both cohort and RCT groups of articles?

Line 165: Define "success of total salpingectomy". You don't report data on pregnancy rates or ovarian cancer rates following these procedures, which would be 2 measures of "success". Do you mean success in accomplishing the salpingectomy? When reading the rest of the paragraph, it is obviously the latter but Please edit for clarity.

One of your reviewers recommended substitution of "sterilization" by "permanent contraception". I just looked at the ACOG Practice Bulletin #208 entitled "Benefits and Risks of Sterilization" published March 2019 which continues to use Sterilization, so no change is necessary.

2. The Editors of Obstetrics & Gynecology are seeking to increase 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.

3. As of December 17, 2018, Obstetrics & Gynecology has implemented an "electronic Copyright Transfer Agreement" (eCTA) and will no longer be collecting author agreement forms. When you are ready to revise your manuscript, you will be prompted in Editorial Manager (EM) to click on "Revise Submission." Doing so will launch the resubmission process, and you will be walked through the various questions that comprise the eCTA. Each of your coauthors will receive an email from the system requesting that they review and electronically sign the eCTA.

Please check with your coauthors to confirm that the disclosures listed in their eCTA forms are correctly disclosed on the manuscript's title page.

4. As of January 1, 2020, authors of systematic reviews must prospectively register their study in PROSPERO (https://www.crd.york.ac.uk/PROSPERO/), an international database of prospectively registered systematic reviews. Please refer to the PROSPERO registration number in your submitted cover letter and include it at the end of the abstract.

5. 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 and gynecology data definitions at https://www.acog.org/About-ACOG/ACOG-Departments/Patient-Safety-and-Quality-Improvement/reVITALize. If use of the reVITALize definitions is problematic, please discuss this in your point-by-point response to this letter.

6. Because of space limitations, it is important that your revised manuscript adhere to the following length restrictions by manuscript type: Review articles should not exceed 25 typed, double-spaced pages (6,250 words). Stated page limits include all numbered pages in a manuscript (i.e., title page, précis, abstract, text, references, tables, boxes, figure legends, and print appendixes) but exclude references.

7. 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).

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 limits for different article types are as follows: Reviews, 300 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. In your Abstract, manuscript Results sections, and tables, the preferred citation should be in terms of an effect size, such as odds ratio or relative risk or the mean difference of a variable between two groups, expressed with appropriate confidence intervals. When such syntax is used, the P value has only secondary importance and often can be omitted or noted as footnotes in a Table format. Putting the results in the form of an effect size makes the result of the statistical test more clinically relevant and gives better context than citing P values alone.

If appropriate, please include number needed to treat for benefits (NNTb) or harm (NNTh). When comparing two procedures, please express the outcome of the comparison in U.S. dollar amounts.

Please standardize the presentation of your data throughout the manuscript submission. For P values, do not exceed three decimal places (for example, "P = .001"). For percentages, do not exceed one decimal place (for example, 11.1%").

12. Please review the journal's Table Checklist to make sure that your tables conform to journal style. The Table Checklist is available online here: http://edmgr.ovid.com/ong/accounts/table_checklist.pdf.

13. 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 reference you are citing is still current and available. If the reference you are citing has been updated (ie, 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 (exceptions could include manuscripts that address items of historical interest). All ACOG documents (eg, Committee Opinions and Practice Bulletins) may be found via the Clinical Guidance & Publications page at https://www.acog.org/Clinical-Guidance-and-Publications/Search-Clinical-Guidance.

14. Figures

Figure 1: Please upload as a figure file on Editorial Manager.

Figure 2: High res version of this figure is needed. Please upload as a figure file (eps, tiff, jpeg, etc.) on Editorial Manager. Please be sure to cite this figure within the manuscript.

15. 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 http://edmgr.ovid.com/acd/accounts/ifauth.htm.

Please note that 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.

16. If you choose to revise your manuscript, please submit your revision through Editorial Manager at http://ong.editorialmanager.com. Your manuscript should be uploaded in a word processing format such as Microsoft Word. 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.

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 14 days from the date of this letter. If we have not heard from you by Nov 21, 2019, we will assume you wish to withdraw the manuscript from further consideration.

Sincerely,

Nancy C. Chescheir, MD
Editor-in-Chief

2018 IMPACT FACTOR: 4.965
2018 IMPACT FACTOR RANKING: 7th out of 83 ob/gyn journals

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November 14, 2019

Nancy C. Chescheir, MD
Editor-In-Chief
Obstetrics & Gynecology
409 12th Street, SW
Washington, DC 20024-2188

Dear Dr. Chescheir and Reviewers,

Thank you for reviewing and commenting on our manuscript "Salpingectomy at the time of cesarean delivery: A systematic review and meta-analysis."

We are pleased to submit our revisions for your continued consideration. We have read the Instructions for Authors. Our systematic review has received PROSPERO Registration (#CRD42019145247). Below is our point-by-point response to each of the received comments.

Thank you for your continued consideration,

Jared Roeckner, MD
[redacted]

Reviewer #1 Comments:
Overall this is a good metaanalysis with good quality studies, though there are only a handful.

Comment:
1) Did the metaanalysis offer anything different than the individual studies had shown alone?

Response:
The main of strength of this meta-analysis and systematic review is that summarizes the current literature on total salpingectomy during cesarean delivery and confirms the results of smaller RCT's and cohort studies available in the current literature. This suggests that salpingectomy is a feasible and a safe option for women undergoing permanent contraception interested in ovarian cancer prevention. We hope that this may influence Obstetricians considering incorporating this procedure into their practices.

Comment:
2) The introduction is very choppy and needs smoother transitions.

Response:
Thank you for this advice. The transitions have been smoothened and the first paragraph has reworked. The introductory paragraph now reads:

Page 5, lines 56-64
"An estimated one-third of women in the United States use tubal sterilization for contraception and sterilization at the time of cesarean delivery is a commonly requested. While bilateral tubal interruption is a common method for sterilization during cesarean, there is increasing interest in removing the entire tube via salpingectomy as opportunistic salpingectomy has been recommended to reduce the risk of ovarian cancer. This recent interest originates from evidence that a large proportion of ovarian cancer may arise from the fimbriated fallopian tube and ovarian cancer continues to have the highest mortality of all gynecologic malignancies, total salpingectomy at the time of cesarean delivery could provide the patient with an effective means of contraception and reduce her risk of future ovarian cancer."

Comment:
3) was there any discussion as to technique if a bipolar wasn't used?

Response:
Yes, the technique for salpingectomy was outlined in six studies. We have added the details of the described technique to Table 1. The following sentence was added to the results on page 9, line 154-155
"A description of the techniques for salpingectomy can be found in Table 1."

Comment:
4) was there any mention as to how often this could not be completed or if intended procedure had to be aborted due to venous engorgement, adhesions, etc?

Response:
Six of 11 trials reported failure rates. These rates varied widely from 0% to 32%. The main reason cited was adhesive disease preventing exposure followed by engorged vasculature and provider preference. Failure rates: Duncan 2/41 (5%), Lehn 17/90 (19%), Shinar 0/50 (0%), Ganer Herman 0/22 (0%), Garcia 1/20 (5%), Subramaniam 13/40 (32%). When summed, the failure rate is 33/263, approximately 12.5%.

The Results have been updated and now reads (page 9 line 156-157)
"Six of the 11 studies reported salpingectomy failure rates which averaged 12.5% and ranged from 0% to 32%. The most common reason for failure salpingectomy was adhesive disease."

Comment:
5) Is there any data that discusses affect on tubal interruption via Parkland or Pomeroy on risk of salpingectomy to indicate if changing procedure is warranted? studies show it can be done safely, but I'm wondering if it is warranted and if there is any benefit

Response:
We acknowledge that the benefit as permanent contraception or ovarian cancer prophylaxis (or prevention) of total bilateral salpingectomy over partial salpingectomy by traditional methods during cesarean delivery has not been confirmed, however the theoretical benefit, feasibility and safety of the bilateral salpingectomy makes it a viable option for women undergoing permanent contraception interested in ovarian cancer prevention.

Reviewer #2: This study addresses an important topic and is clinically important to generalist Ob/Gyns - the use of salpingectomy for permanent contraception at the time of cesarean delivery.

Comments from Reviewer #2
1. Recommend using the term "permanent contraception" over "sterilization"

Response:
Thank you for this recommendation. Please see Editor comments below.

Comment:
2. Did any studies report operative time for the tubal procedure only? This would be useful to include in your outcomes if reported.

Response:
None of the cohort studies reported operative time for the tubal procedure only. Of the three RCTs, two reported the the operative time for the salpingectomy procedure. For Garcia et al. the time was 5.6 minutes (salpingectomy with bipolar device) vs 6.1 minutes for standard tubal interruption. For Subramaniam et al the operative time for salpingectomy (Kelly clamps and suture) was 18.5min vs 6.9 min for BTL.

The following sentence was added to the Results section (page 6, line 164-166)
"Two RCTs reported the operative times for the sterilization procedure. These times were 5.6 minutes (salpingectomy with bipolar device) vs 6.1 minutes (tubal interruption)[16] and 18.5 minutes (salpingectomy with suture ligation) vs 6.9 minutes (tubal interruption).[17]"

Comment:
3. Recommend discussing the following additional limitations:
a. "ability to complete the intended procedure" was not included as an outcome. In line 165, you say that "success of total salpingectomy was high." This outcome is likely not reported in all studies in this review (especially retrospective studies), but would be helpful to know when available, can you give a range of reported success rates?

Response:
Thank you for the recommendation. We needed to clarify this point as it was raised by several reviewers. Please refer to response to Reviewer #1, Question 4. (page 9 line 156-157)

Comment:
b. While no permanent contraceptive method should be performed with the option of reversal, as we are performing more salpingectomies for permanent contraception, we do not have updated information about patient regret. It would be relevant to comment on this.

Response:
We appreciate the comment. The following sentences have been added to the discussion (page 11, lines 208-212)
"Additionally, while permanent sterilization methods should not be performed if there are plans for future reversal, salpingectomy removes the option of tubal reanastomoses. One study attempted to address regret with a patient questionnaire; however, response was too low to reach a conclusion.[7] We do not have updated information about patient regret and the permanence of the procedure should be stressed."

Comment:
c. We also do not have good data on the contraceptive efficacy of complete salpingectomy, though it is assumed to be greater than partial tubal interruption methods.

Response:
Agreed. We acknowledge that the benefit as permanent contraception or ovarian cancer prophylaxis or (or prevention) of total bilateral salpingectomy over partial salpingectomy by traditional methods during cesarean delivery has not been confirmed, however the theoretical benefit, feasibility and safety of the bilateral salpingectomy makes it a viable option for women undergoing permanent contraception interested in ovarian cancer prevention.

Comment:
- Line 32: add word "which" to " additional outcomes included" to "additional outcomes, which included"

Response:
Corrected, "which" was added to line 32

Comment:
- Line 142: "None of the studies reported method failure rates." I assume this refers to contraceptive failure, not inability to perform procedure? Does this mean that method failure was 1. not reported at all in any studies, 2. studies did not have follow up, 3. Did not have any failures in a certain follow up time? (see comment 3c above)

Response:
Thank you for this comment. Please see response to Reviewer #1 Question 4 for parts 1&2. To answer part 3: The studies did not follow these women for a long enough duration to establish method failure rates.

Comment:
- Line 173: did the RCTs describe a specific training protocol?

Response:
One of the three RCTs described a specific training protocol. For the Garcia trial, which had a 5% failure rate, "all health care providers underwent a training session on the use of this device [Ligasure] and the method for performing salpingectomy before study initiation." If the Reviewers find it important for clarification, we would add on page 11, line 192: "For example, the RCT by Garcia et al which had a low salpingectomy failure rate was preceded by a training method for salpingectomy."

Comment:
- Line 202: add word "surgical" from "increased risk" to "increased surgical risk"

Response:
Thank you. The manuscript now reads page 12, line 229: "increased surgical risk"

Reviewer #3: In this paper, the authors compare the differences in operative time and surgical outcomes between salpingectomy and standard tubal interruption during cesarean delivery.

This is a very well conducted study. The control groups are well chosen, the use of sensitivity analyses, analyzing RCTs separately are all good and reassuring steps.

While the findings are not remarkable, that is the point.

Overall, I have not much to add.

STATISTICAL EDITOR COMMENTS:
The Statistical Editor makes the following points that need to be addressed:

Comment:
The precis states that salpingectomy at the time of CD is not associated with increased surgical complications, but the primary outcome is added time of procedure (Fig 2).

Response: we will that while operative time is important it is the lack of other surgical complications that we would like to convey to the reader. The Precis now reads (page 2, lines 21-22):
"Salpingectomy may be associated with a small increased operative time, but it was not associated with an increased risk for surgical complications."

Comment:
Table 2: The counts and frequency of: transfusion, wound infection, readmission, reoperations, internal organ damage are each too few to have sufficient power to discern a difference. Hence, the NS findings cannot be generalized. For example, for transfusion, 24/829 (2.9%) vs 6274/313296 (2.0%), there is only 0.46 power to have discerned a difference. Put another way, the rates would have to be 2.0% vs 3.5% to have sufficient power with these sample sizes, to have established a significant difference. The other comparisons fare even worse as far as power is concerned. Particularly those limited to the RCTs, which have more restricted sample sizes available.

Response:
Thank for this comment. While we are limited by the number of studies in literature and cannot adjust these sample sizes, we have added the following sentence in the discussion section when discussing study limitations (page line 219-223):
"Additionally, the small numbers of studies and participants limited the ability to establish heterogeneity with precision and to have sufficient power to establish a significant difference between the groups for the outcomes of transfusion, wound infection, readmission, reoperation, internal organ damage; however, there does not appear to be a trend toward increased complications among the salpingectomy cohort."

Comment:
Table 2 has another problem with method, in that some comparisons have only 2 cohorts, which is insufficient to test for heterogeneity, In fact, those with N=3 cohorts have little power to establish heterogeneity with any precision.

Response:
In the limitations section of the discussion we have made note of this limitation. Please refer to response above.

EDITOR COMMENTS:
Comment:
1. Specific comments about the manuscript are as follows:
Line 39: PRESENTATION OF STATS INFORMATION (P Values vs Effect Size and Confidence Intervals)
While P values are a central part of inference testing in statistics, when cited alone, often the strength of the conclusion can be misunderstood. Whenever possible, the preferred citation should be in terms of an effect size, such as odds ratio or relative risk or the mean difference of a variable between two groups, expressed with appropriate confidence intervals. When such syntax is used, the P value has only secondary importance and often can be omitted or noted as footnotes in a Table format. Putting the results in the form of an effect size makes the result of the statistical test more clinically relevant and gives better context than citing P values alone.
This is true for the abstract as well as the manuscript.
Please provide absolute values for variables, in addition to assessment of statistical significance. We ask that you provide crude OR's followed by adjusted OR's for all variables.

Response:
We have provided the results in the form of RR or WMD along with 95% CIs. We have refrained from the presentation of p-values.

Page 3 line 37-39 reads
"In performing meta-analyses, a random-effects model was employed to calculate pooled relative risk (RR) or weighted mean difference (WMD) for each outcome with their 95% confidence intervals (CI)."

Comment:
Line 53: We no longer require that authors adhere to the Green Journal format with the first submission of their papers. However, any revisions must do so. I strongly encourage you to read the instructions for authors (the general bits as well as those specific to the feature-type you are submitting). The instructions provide guidance regarding formatting, word and reference limits, authorship issues, and other things. Adherence to these requirements with your revision will avoid delays during the revision process, as well as avoid re-revisions on your part in order to comply with the formatting.

Response:
Thank you. We have read the instructions for authors and adjusted our manuscript accordingly.

Comment:
Line 57: "may arise"?

Response:
Line 57 on page 4 changed to "may arise"

Comment:
Line 71: Please delete "a thorough and extensive search" as the data bases you searched and your search terms will demonstrate the thoroughness and extensiveness of your search. Let them stand on their own.

Response:
"thorough and extensive" has been removed from the manuscript as recommended. The sentence now reads, "A search of published literature from January 1966 to August 2019 was conducted…" (page 6, line 81)

Comment:
Line 132: Please start w/ total number identified-something like "Of the initial 115 identified studied, 16 were fully screened…."

Response:
We believe the following adjustments should clarify the point. The sentence was changed to "Of the initial 101 identified studied, 16 were fully screened and 11 studies including 320,443 women were selected for inclusion in the systematic review (Figure 1 Flow Diagram). Page 8 lines142-143

Comment:
Line 134: not clear what you mean by 5 studies were excluded for various reasons. You excluded a total of 90 it seems. As it reads currently, you are describing 11 studies on line 133 and then on line 134 you say that 5 studies were excluded. It sounds like it was of these 11. Please edit for clarity.

Response:
This point was clarified and now reads (page 8 lines144-145: "Of the 16 fully screened studies, five studies were excluded for various reasons (see Figure 1). Of the eleven included studies, eight were retrospective cohort studies and three were randomized clinical trials."

Comment:
Line 141: bipolar device during salpingectomy for what purpose? To do the tubal interruption or for hemostasis?

Response:
This has been clarified (page 9, line153-154): "Four of the 11 studies used a bipolar device during as part of the surgical technique for salpingectomy."

Comment:
Lines 146-149: the sum of the patients reported for here is about 7,500. But on line 138, you report that the largest sample size was 313,007. Please explain.

Response:
Yes, we agree that this is confusing. In total, there are 11 studies with 320,443 women. One large cohort study (Rosenfield et al 2017) provides information on blood transfusion and length of stay with a sample size of 313,007 women. This total is divided into cohort 8 and 3 RCTs. Seven of the 8 cohort studies report the outcome of operative time. As such, these women were not included in the meta-analysis for operative time. We tried to be transparent about this by reporting all the outcomes as OR, CI, # studies, # women).

We have added line 151, "The largest study of 313,007 patients did not include the primary outcome of operative time."

Comment:
Line 149-152: Is this lack of difference for these secondary outcomes for both cohort and RCT groups of articles?

Response:
Yes, the lack of difference was for both the cohorts and RCTs. The manuscript has been updated to reads (pages 9-10, lines 166-170)

"For both the cohorts and RCTs, the rates of transfusion, wound infection, readmission, reoperation, internal organ damage and the amount of estimated blood loss, change in hemoglobin and length of stay were not different among women receiving total salpingectomy and those undergoing comparison sterilization methods."

Comment:
Line 165: Define "success of total salpingectomy". You don't report data on pregnancy rates or ovarian cancer rates following these procedures, which would be 2 measures of "success". Do you mean success in accomplishing the salpingectomy? When reading the rest of the paragraph, it is obviously the latter but Please edit for clarity.

Response:
To clarify we have changed the manuscript to read (page 10 line 183):
"From the studies we reviewed it appears that the overall success of completing the total salpingectomy was high."

Comment:
One of your reviewers recommended substitution of "sterilization" by "permanent contraception". I just looked at the ACOG Practice Bulletin #208 entitled "Benefits and Risks of Sterilization" published March 2019 which continues to use Sterilization, so no change is necessary.

Response: Thank you.

Comment:
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.

Response: A. OPT-IN

Comment:
3. Please check with your coauthors to confirm that the disclosures listed in their eCTA forms are correctly disclosed on the manuscript's title page.

Response: will do

Comment:
4. Prospectively register their study in PROSPERO

Response: Registration is complete. Review took 3 months and no changes to our original protocol submission were needed. Registration number is CRD42019145247

Comment:
5. Standard obstetric and gynecology data definitions have been developed through the reVITALize initiative.

Response:
We have followed the standard data definitions

Comment:
6. Space limitations, it is important that your revised manuscript adhere to the following length restrictions by manuscript type: Review articles should not exceed 25 typed, double-spaced pages (6,250 words). Stated page limits include all numbered pages in a manuscript (i.e., title page, précis, abstract, text, references, tables, boxes, figure legends, and print appendixes) but exclude references.

Response:
We are within limits. Abstract 295 words. Manuscript 2233 words

Comment:
7. *Specific rules govern the use of acknowledgments in the journal. Please note the following guidelines:*

Response:
Rules and Guidelines acknowledged. Presentation at SMFM's annual meeting was outline on the title page and cover letter.

Comment:

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.

Response: Rechecked. The abstract shorted to be within word count. Word Count of Abstract 295 words

Comment
9. Only standard abbreviations and acronyms are allowed. A selected list is available online at https://nam04.safelinks.protection.outlook.com/?url=http%3A%2F%2Fedmgr.ovid.com%2Fong%2Faccounts%2Fabbreviations.pdf&data=02%7C01%7Cjroeckne%40usf.edu%7C2daf4b731786439faf0608d763bac875%7C741bf7dee2e546df8d6782607df9deaa%7C0%7C1%7C637087526186671476&sdata=i8clyyjRW2B3zDT60t7l3%2BHwNxlETkgFtW6c9dxygYI%3D&reserved=0. 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.

Response: reviewed

Comment:
10. The journal does not use the virgule symbol (/) in sentences with words.

Response:
"/" was removed from line 119 and 3 times in Table 1

Comment:
11. In your Abstract, manuscript Results sections, and tables, the preferred citation should be in terms of an effect size, such as odds ratio or relative risk or the mean difference of a variable between two groups, expressed with appropriate confidence intervals. When such syntax is used, the P value has only secondary importance and often can be omitted or noted as footnotes in a Table format. Putting the results in the form of an effect size makes the result of the statistical test more clinically relevant and gives better context than citing P values alone.

Response: We have given results as WMD or RR with 95% CIs

Comment:
12. Please review the journal's Table Checklist to make sure that your tables conform to journal style.

Response: Reviewed.

Comment:
13. The American College of Obstetricians and Gynecologists' (ACOG) documents are frequently updated. These documents may be withdrawn and replaced with newer, revised versions.
Response: n/a

Comment:
14. Figures
Figure 1: Please upload as a figure file on Editorial Manager.

Response: We have uploaded the figures.
Comment:
Figure 2: High res version of this figure is needed. Please upload as a figure file (eps, tiff, jpeg, etc.) on Editorial Manager. Please be sure to cite this figure within the manuscript.

Response: We will "see figure 2 was added to line 214.

Comment:
15. Authors whose manuscripts have been accepted for publication have the option to pay an article processing charge and publish open access.

Response: If published, we will choose the traditional route.

Comment:
16. If you choose to revise your manuscript, please submit your revision through Editorial Manager at http://ong.editorialmanager.com. Your manuscript should be uploaded in a word processing format such as Microsoft Word.

Response: Acknowledged.