Author’s response to reviews

Title: Hysterosalpingosonography for diagnosing tubal occlusion in subfertile women: a systematic review protocol

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Version: 2 Date: 20 June 2013

Author’s response to reviews: see over
Dear Dr. Moher,

Please find enclosed a manuscript entitled: “Hysterosalpingosonography for diagnosing tubal occlusion in subfertile women: a systematic review protocol”, which we are re-submitting for exclusive consideration of publication as an article in Systematic Reviews.

First, we want to thank the reviewers for their helpful comments. Please find below our point-by-point modifications in response to their comments. All changes to the manuscript are highlighted. I attest to the fact that all co-authors agreed to the submission of the revised manuscript to the Systematic Reviews.

Sincerely,

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Reviewer's report 1
Title: Hysterosalpingosonography for diagnosing tubal occlusion in subfertile women: a systematic review protocol
Version: 1 Date: 5 May 2013
Reviewer: Laura Gaudet
Reviewer's report:
Review of

“Hysterosalpingosonography for diagnosing tubal occlusion in subfertile women: A systematic review protocol”

In this manuscript, the authors propose a systematic review of the literature to establish the diagnostic accuracy of hysterosalpingosonography (sono-HSG) in detecting tubal occlusion among sub-fertile women. They plan to compare sono-HSG to the established gold standard, laparoscopy with chromotubation. As a secondary analysis, they plan to compare sono-HSG to another technique that is currently widely used, standard hysterosalpingography (HSG). The information obtained will be important and useful for patients and clinicians, since sono-HSG is clearly a less-invasive technique than laparoscopy and has advantages over routine HSG, including the avoidance of ionizing radiation. If sono-HSG is comparable to standard HSG, it may become the screening test of choice.

Further, if sono-HSG is comparable to laparoscopy, it will add evidence that non-invasive techniques are a viable diagnostic alternative.

Previous attempts to answer this question suggested that sono-HSG and routine HSG are comparable. Since the most recent systematic review was published in 1997, this review will incorporate newer studies, thereby increasing the number of included patients and the confidence in the results. Importantly sono-HSG techniques have evolved substantially since 1997.

The lead author is a resident in Obstetrics and Gynaecology, as well as a PhD student, and has chosen to undertake a systematic review of a clinically-relevant topic. She has a strong team supporting her work, including clinicians, systematic review methodologists, biostatisticians and epidemiologists.

1. Will the study design adequately test the hypothesis? 
As written, the study design will allow the hypothesis to be tested.

The authors are planning an appropriate and comprehensive literature search, the design of which included librarian support. They have provided a preliminary PubMed search strategy that retrieved a sufficient number of manuscripts for screening (962). This number will certainly increase once all sources are searched.

The study design has been completed according to standard methodological recommendations. Objectives and eligibility criteria are clearly stated. Plans are in place for two authors to screen articles for inclusion, data extraction and quality assessment (using QUADAS-2). A standardized data abstraction form was developed and has been pilot-tested with appropriate revisions. The proposed statistical analyses are appropriate and within the capabilities of the group.

a. Major Compulsory Revisions
None

b. Minor Essential Revisions
None

c. Discretionary Revisions
The authors state that manuscripts published in all languages will be considered for inclusion. As a point of practicality, they may wish to consider limiting inclusion of non-English/French articles to those with English or French abstracts. If they wish to include all non-English/French articles, they should have a plan in place for having such articles translated – a process that can be costly.

Since there is a risk of bias with the inclusion of only English or French publications, we decided to fix no language restriction. We specified in the manuscript that non-English or French studies will be translated.

2. Are sufficient details provided to allow replication of the work or comparison with related analyses: if not, what is missing?
Yes – sufficient detail is provided to allow replication or comparison.

a. Major Compulsory Revisions
None

b. Minor Essential Revisions
None

c. Discretionary Revisions
The authors are reminded that quality assessment is a crucial component of systematic review. A clear, quality, checklist developed using QUADAS-2 will allow for consistent, fair determination of study quality. The authors should consider including their planned checklist in the current manuscript.

We added the checklist in the manuscript and suggest that it be published as a web appendix.

3. Is the planned statistical analysis appropriate?
Yes, the planned statistical analysis is appropriate to answer the proposed question.

a. Major Compulsory Revisions
None

b. Minor Essential Revisions
None

c. Discretionary Revisions
None

4. Is the writing acceptable?
This protocol is well-written with a logical flow and is comprehensive in its nature.

a. Major Compulsory Revisions
None

b. Minor Essential Revisions
None

c. Discretionary Revisions
None

Level of interest: An article of outstanding merit and interest in its field
Quality of written English: Acceptable
Reviewer's report 2
Title: Hysterosalpingosonography for diagnosing tubal occlusion in subfertile women: a systematic review protocol
Version: 1 Date: 16 May 2013
Reviewer: Ahmed Abou-Setta
Reviewer's report:
Maheux-Lacroix et al have prepared a protocol for a diagnostic accuracy review to evaluate the comparative diagnostic accuracy of hysterosalpingosonography to laparoscopy with chromotubation (gold standard) in detecting fallopian tubal occlusion in infertile women.

1. Major Compulsory Revisions
In general, please make sure all your tenses are future, rather than past.
Abstract:
* In the background, the authors compare hysterosalpingosonography and hysterosalpingography while in fact they should be comparing hysterosalpingosonography with laparoscopy with chromotubation (gold standard).

   Indeed, hysterosalpingography, is not a gold standard in terms of validity, but is a standard of care preceding laparoscopy. In this context, we wanted to highlight the differences between both techniques and the clinical interest in assessing the validity of hysterosalpingosonography, which could be a replacement of hysterosalpingography. Moreover, we will compare hysterosalpingosonography with laparoscopy, and we will also compile data about the comparison between hysterosalpingography and laparoscopy from studies that compared both hysterosalpingosonography and hysterosalpingography to laparoscopy. We clarified this point in the abstract.

* In the methods, please describe the software packages that will be used, and spell out QUADAS and ROC.

   See corrections in the abstract.

* From the methods, it is not clear what the outcomes of interest are. For example, tubal occlusion diagnosed per woman or per tube (taking in mind the unit of analysis error due to the normal female anatomy… 2 tubes per woman and so the tubes are not independent of each other but rather a cluster)?

   We agree that “2 tubes per women” represents a cluster. However, results per participants are usually not reported in studies preventing the specification of clusters in the analysis. We planned on discussing this limitation of the literature in the manuscript (underestimation of confidence intervals).

* The Discussion is not completely accurate based on the proposed methodology. The authors
reported that “this systematic review will help to determine if sono-HSG is an adequate alternative screening test for diagnosing tubal occlusion”. In actuality, your target population (infertile women) limits you from making such a general claim. Therefore, you need to attach a few more words to the end of that statement to read, “this systematic review will help to determine if sono-HSG is an adequate alternative screening test for diagnosing tubal occlusion in infertile women” or loosen up the inclusion criteria to include all women.

We clarified the discussion according to this comment.

Introduction:
* Please move the primary and secondary outcomes to the methods section.

We added a paragraph in the methods section about our outcomes of interest.

Methods:
* Search strategy – It is not clear why would search the mentioned databases “up to a maximum of 3 months before publication”. Do you mean publication of your review or publication of the specific database? Please clarify.

We meant that the search of the databases will be updated a maximum of 3 months before submission of the manuscript. However, we removed this sentence because we no longer think that it is essential.

* Eligibility criteria – the rationale for limiting to only infertile women in not clear. Why should trials in fertile women be excluded? I do not see the rationale explained, but I might have missed it. This may limit the number of included studies and create a potential selection bias.

The main indication of testing tubal patency is subfertility. Sono-HSG is also described as an exam to check for tubal occlusion post hysteroscopic tubal ligation. It is likely that sono-HSG do not perform the same in this situation (different mechanism of occlusion, different characteristics of participants). Sono-HSG may also not perform the same in a very low risk fertile population for which the exam is not indicated (different characteristics of participants, different settings). We therefore limited our review to subfertile women in order to calculate the best estimate possible for the target population. Most likely, only a small proportion of studies will be excluded because of this criterion.

* I am confused by how the authors anticipate to exclude but still include studies “based on other modalities, such as HSG, hysteroscopic selective tubal cannulation under fluoroscopic guidance or vaginal laparoscopy”. At first, the authors state these studies will be excluded, then they state that studies “using HSG as a comparator test, data on the diagnostic accuracy of HSG will be retained in order to make a direct comparison between sono-HSG and HSG”. Therefore, are the objectives two part: 1) hysterosalpingosonography vs. gold standard; 2) hysterosalpingosonography vs. hysterosalpingography? Please clarify.

We agree that we need to clarify this section. We will include studies that looked at the validity of hysterosalpingosonography. Some of these studies also report data about the
validity of hysterosalpingography meaning that all patients underwent a hysterosalpingosonography, a hysterosalpingography and a laparoscopy. In both cases the gold standard remains laparoscopy. We clarified this point in the methods section.

Minor Essential Revisions

Abstract:
* In the abstract and across the manuscript, please do not use the abbreviations for hysterosalpingosonography and hysterosalpingography but rather write out the words as both the abbreviation and original word are the same number of words (i.e., one).

We removed abbreviations from the abstract.

However, HSG is a common abbreviation for hysterosalpingosonography and we believe that the abbreviations “Sono-HSG” and “HSG” make the manuscript easier to read as hysterosalpingography and hysterosalpingosonography are difficult to rapidly distinguish.

* The statement “as well as references lists of included studies, citations and previous related review articles” should read “as well as references lists of included studies and previous related review articles” since citations don’t have reference lists per say.

We corrected this sentence.

Introduction:
* Again too much emphasis on comparing hysterosalpingosonography and hysterosalpingography while in fact they should be comparing hysterosalpingosonography with laparoscopy with chromotubation (gold standard).

We clarified this point.

* When describing the results of the Holz et al review, it is more beneficial to know if there were any significant differences rather than the point estimates (especially since you did not present any CIs around them).

Unfortunately, Holz et al. did not report any statistical test. However, as it is the only previous systematic review on the subject, we think that it is still relevant to present their results.

Discretionary Revisions
* Regarding the search strategy, I would recommend being a bit broader in your concepts including searching for ‘infertility’, ‘fallopian tubes’, etc. and their associated indexing terms to capture non-indexed citations.

We tested those strategies and adding ‘infertility’ or ‘fallopian tubes’ alone introduced too much noise if included as an alternate term (linked with an “OR” operator), and too high specificity if included with and “AND” operator.

Else than these minor clarifications in the intended conduct of the review and proper reporting of the methods and expected conclusions, the protocol is well prepared. I hope that these
comments will help in improving the methodology, transparency and reporting of the final protocol and subsequent review.

Level of interest: An article of importance in its field
Quality of written English: Needs some language corrections before being published
Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests:
I declare that I have no competing interests.