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.

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.

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

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.