

Systematic Review and Meta-Analysis Protocol

Title: Opportunistic salpingectomy by general surgeons to prevent gynecological malignancy

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Research Team members and contact information

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Do you require a Librarian to co-author on the systematic review?

Yes (Librarian will work with the team to develop the search strategy, search databases, export results, write search part of the methods section, document search appendix for article, and review the final draft of the article)

No (Librarian will instruct you in how to search databases and export results)

Introduction *(Describe the background to your study)*

A growing body of evidence suggests that an overwhelming proportion of ovarian cancers originate from the fallopian tube¹⁻³. Similarly, few screening modalities exist to enable early diagnosis of ovarian malignancy and most patients present with large, late stage malignancy that is difficult to treat and leads to substantial mortality⁴. As a preventative measure opportunistic salpingectomy, where fallopian tubes are removed during unrelated surgeries, has been advocated for within obstetrics and gynecology. This has occurred primarily during hysterectomy, and as an alternative to tubal ligation with substantial evidence for reduced malignancy risk and cost effectiveness^{5,6}. Although limited studies have evaluated the feasibility of opportunistic salpingectomy during general surgery procedures, and gynecological literature has advocated for general surgeons to conduct these procedures to further improve cost effectiveness^{7,8}, no summary of the evidence for general surgeons exists.

Objectives

The objective of this review is to conduct a systematic review evaluating literature discussing opportunistic salpingectomy in general surgery

Methods

Criteria for considering studies for this review

Types of studies

To be included, studies will discuss opportunistic salpingectomy during general surgery.

Types of participants (*Population*)

Studies all adult general surgery patients will be included.

Types of interventions

Opportunistic salpingectomy during any type of general surgery procedure will be included.

Types of outcome measures

Feasibility, safety, and efficacy data will be included. Additionally, surgery types and patient demographics where opportunistic salpingectomy will be evaluated.

Outcomes

Not applicable, this will be a systematic review with qualitative description of the available literature. This is because very few studies evaluating the topic exist for general surgeons to evaluate.

Search methods for identification of studies

Electronic searches

We will identify studies via systematic searches of bibliographic databases including

- Medline
- EMBASE
- Scopus
- Web of Science
- Cochrane Database

We will search electronic data bases using the following terms:

We will not limit by date

We will not limit by language

We will not include unpublished materials

Appendix 5- Search Strategy – Grey Literature

Grey literature search will be conducted as follows:

We will include

Yes No - Clinical trial registries (Cochrane Central Register of controlled trials, controlled trials.com and ClinicalTrials.gov) to identify recent and ongoing studies.

Yes No - Web of Science/Scopus searches of the sentinel paper⁵ from each of the reviews will be completed at the end of the searches to identify any additional potentially relevant studies.

Yes No - Google Scholar web search.

Yes No - Dissertations and Theses

Yes No - Hand searches of the most recent subject _____

Yes No - conference abstracts associated with Canadian and research meetings to identify recently completed but not yet published studies. Please list relevant meetings:

Yes No - bibliographies from included studies, known reviews and text for additional citations.

Does not have to be completed for Search Session

Data collection and analysis

Selection of studies

How will you define inclusion/exclusion criteria?

Inclusion:

1. Any general surgery procedure
2. Evaluates opportunistic salpingectomy
3. Age ≥ 18
4. $n \geq 5$

Excluding:

1. Non-English
2. Animal studies
3. Studies with patients <18 years old

Who/how many people will select from the complete title list?

Two reviewers will screen titles and abstracts, and two independent reviewers will assess full-text versions of all screened studies and extracted data. Disagreements will be resolved by re-extraction, or third-party adjudication.

Data extraction and management

As above

How will you do your data extraction and management?

Data will be extracted by two independent reviewers with comparison and re-extraction or third party adjudication of any discrepancies.

Quality Assessment (Risk of Bias):

How will you assess risk of bias?

Included studies will be assessed for quality using the Methodological Index for Non-Randomized Studies (MINORS) and revised Cochrane risk of bias tool.

Interpretation of the Results:

When data is presented as a median, means will be estimated by applying the formula presented by Hozo et. al (7). Patient characteristics and follow-up data will be summarized and described as a weighted mean or percentage. If meta-analysis if possible this will be completed. The estimated effects will be calculated using RevMan 5.4 software provided by the Cochrane website. The random-effects method will be applied in our analysis assuming that true effect estimates vary among studies. The included studies will then be tested for heterogeneity. Additional subgroup analyses will be completed for patients undergoing RYGB and SG.

References (List relevant papers that you have already found)

1. Salvador S, Gilks B, Köbel M, et al. The fallopian tube: primary site of most pelvic high-grade serous carcinomas. *Int J Gynecol Cancer*. 2009;19(1):58-64.
2. Przybycin CG, Kurman RJ, Ronnett BM, et al. Are all pelvic (nonuterine) serous carcinomas of tubal origin? *Am J Surg Pathol*. 2010;34(10):1407-16.
3. Piek JM, van Diest PJ, Zweemer RP, et al. Dysplastic changes in prophylactically removed Fallopian tubes of women predisposed to developing ovarian cancer. *J Pathol*. 2001;195(4):451-6.
4. Lowe KA, Chia VM, Taylor A, et al. An international assessment of ovarian cancer incidence and mortality. *Gynecologic Oncology*. 2013;130(1):107-14.

5. Hanley GE, McAlpine JN, Kwon JS, Mitchell G. Opportunistic salpingectomy for ovarian cancer prevention. *Gynecologic Oncology Research and Practice*. 2015;2(1):5.
6. Dilley SE, Straughn JM, Jr., Leath CA, III. The Evolution of and Evidence for Opportunistic Salpingectomy. *Obstetrics & Gynecology*. 2017;130(4).
7. Kwon JS, McAlpine JN, Hanley GE, et al. Costs and Benefits of Opportunistic Salpingectomy as an Ovarian Cancer Prevention Strategy. *Obstetrics & Gynecology*. 2015;125(2).
8. Tomasch G, Lemmerer M, Oswald S, et al. Prophylactic salpingectomy for prevention of ovarian cancer at the time of elective laparoscopic cholecystectomy. *The British journal of surgery*. 2020;107(5):519-24.