Systematic review

A list of fields that can be edited in an update can be found here

1. * Review title.

Give the title of the review in English

Risk factors for postoperative ileus in hysterectomy: A Systematic Review and Meta-analysis

2. Original language title.

For reviews in languages other than English, give the title in the original language. This will be displayed with the English language title.

Risk factors for postoperative ileus in hysterectomy: A Systematic Review and Meta-analysis

3. * Anticipated or actual start date.

Give the date the systematic review started or is expected to start.

13/12/2022

4. * Anticipated completion date.

[1 change]

Give the date by which the review is expected to be completed.

31/05/2023

5. * Stage of review at time of this submission.

This field uses answers to initial screening questions. It cannot be edited until after registration.

Tick the boxes to show which review tasks have been started and which have been completed.

Update this field each time any amendments are made to a published record.

The review has not yet started: Yes

Review stage	Started	Completed
Preliminary searches	No	No
Piloting of the study selection process	No	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Provide any other relevant information about the stage of the review here.

6. [1*changed] Named contact.

The named contact is the guarantor for the accuracy of the information in the register record. This may be any member of the review team.

Zhuoer Hou

Email salutation (e.g. "Dr Smith" or "Joanne") for correspondence:

Miss Hou

7. [1*changed] Named contact email.

Give the electronic email address of the named contact.

202211114111005@zcmu.edu.cn

8. Named contact address

Give the full institutional/organisational postal address for the named contact.

Zhejiang Chinese Medical University

9. Named contact phone number.

Give the telephone number for the named contact, including international dialling code.

18367374721

10. * Organisational affiliation of the review.

Full title of the organisational affiliations for this review and website address if available. This field may be completed as 'None' if the review is not affiliated to any organisation.

Zhejiang Chinese Medical University

Organisation web address:

Zhejiang Chinese Medical University

11. * Review team members and their organisational affiliations.

Give the personal details and the organisational affiliations of each member of the review team. Affiliation refers to groups or organisations to which review team members belong. **NOTE: email and country now MUST be entered for each person, unless you are amending a published record.**

Zhuoer Hou. Zhejiang Chinese Medical University
Miss Ting Liu. Zhejiang Chinese Medical University
Mrs Xiaoyan Li. Zhejiang Chinese Medical University
Dr Qiuhua Sun. Zhejiang Chinese Medical University

12. * Funding sources/sponsors.

Details of the individuals, organizations, groups, companies or other legal entities who have funded or sponsored the review.

The National Natural Science Foundation of China (No. 8197152282).

Grant number(s)

State the funder, grant or award number and the date of award

13. * Conflicts of interest.

List actual or perceived conflicts of interest (financial or academic).

None

14. Collaborators.

Give the name and affiliation of any individuals or organisations who are working on the review but who are not listed as review team members. **NOTE: email and country must be completed for each person, unless you are amending a published record.**

15. * Review question.

State the review question(s) clearly and precisely. It may be appropriate to break very broad questions down into a series of related more specific questions. Questions may be framed or refined using PI(E)COS or similar where relevant.

P: Post gastrectomy patients
I: PO laparoscopic feeding intolerance, nausea, vomiting, abdominal pain and distension, delayed defecation

and flatus). The authors did not establish a specific time in days for determining the presence of this condition, as there is not a clear consensus about the duration of symptoms for diagnosis; however, the definition in each article could not be fewer than 1 days or longer than 7 days

C: POI diagnosis (feeding intolerance, nausea, vomiting, abdominal pain and distension, delayed defecation and flatus). The authors did not establish a specific time in days for determining the presence of this condition, as there is not a clear consensus about the duration of symptoms for diagnosis; however, the definition in each article could not be fewer than 1 days or longer than 7 days

O: postoperative ileus

S: Meta analysis/cohort study/case-control study

16. * Searches.

State the sources that will be searched (e.g. Medline). Give the search dates, and any restrictions (e.g. language or publication date). Do NOT enter the full search strategy (it may be provided as a link or attachment below.)

PubMed, EMBASE, Web of Science, MEDLINE and the Cochrane Library databases were searched. The search period is from inception until December 2018. Key words used were: hysterectomy, postoperative ileus, postoperative intestinal obstruction, risk factors, factors.

17. URL to search strategy.

Upload a file with your search strategy, or an example of a search strategy for a specific database, (including the keywords) in pdf or word format. In doing so you are consenting to the file being made publicly accessible. Or provide a URL or link to the strategy. Do NOT provide links to your search **results**.

Alternatively, upload your search strategy to CRD in pdf format. Please note that by doing so you are consenting to the file being made publicly accessible.

Do not make this file publicly available until the review is complete

18. * Condition or domain being studied.

Give a short description of the disease, condition or healthcare domain being studied in your systematic review.

Postoperative ileus (POI) refers to the temporary interruption of postoperative gastrointestinal dynamics. Its pathogenesis includes over-activation of sympathetic nervous system, intestinal inflammatory response and surgical trauma, etc. The main symptoms are oral feeding intolerance, nausea, vomiting, abdominal pain and distension, delayed defecation and flatus, etc, which usually disappeared on the fourth day after surgery.

POI is most common in abdominal surgery, especially those involving direct operation of the intestine, which has been extensively researched. Among abdominal operations, benign disease hysterectomy is the most common gynecological operation in the world. Moreover, the incidence of ileus after hysterectomy is about 0.12-1.1%, which is second only to colorectal surgery. When this happen, surgical intervention is required, it will increase the hospital stay of patients by 3.7 days on average, which undoubtedly increases the burden of medical treatment and family. Therefore, early identification of POI-related risk factors can not only help to set down targeted intervention measurements, but also reduce the incidence of POI and the burden of medical care and family.

19. * Participants/population.

Specify the participants or populations being studied in the review. The preferred format includes details of both inclusion and exclusion criteria.

(1) The subjects were patients over 18 years of age who underwent elective hysterectomy;

(2) The surgical methods of hysterectomy were transabdominal, laparoscopic or transvaginal;

(3) Demonstrate clear criteria for POI diagnosis (feeding intolerance, nausea, vomiting, abdominal pain and distension, delayed defecation and flatus). The authors did not establish a specific time in days for determining the presence of this condition, as there is not a clear consensus about the duration of symptoms for diagnosis; however, the definition in each article could not be fewer than 1 days or longer than 7 days.

Exclusion criteria were as follows:

(1) Patients undergoing hysterectomy due to postpartum hemorrhage;

(2) Emergency operation patients;

(3) Transferred patients;

(4) The patient's medical records are incomplete.

20. * Intervention(s), exposure(s).

Give full and clear descriptions or definitions of the interventions or the exposures to be reviewed. The preferred format includes details of both inclusion and exclusion criteria.

(1) The studies included in the research are the influencing factors and risk factors of POI in hysterectomy;

(2) Demonstrate clear criteria for POI diagnosis (feeding intolerance, nausea, vomiting, abdominal pain and distension, delayed defecation and flatus). The authors did not establish a specific time in days for determining the presence of this condition, as there is not a clear consensus about the duration of symptoms

for diagnosis; however, the definition in each article could not be fewer than 1 days or longer than 7 days;

(3) The results reported the incidence of POI and risk factors, and the results were converted to OR values, 95%CI and standard error (SE);

(4) The POI could not have been the result of an intra-abdominal complication.

Exclusion criteria were as follows:

(1)The data extraction cannot be carried out or the data extraction does not meet the research requirements;

21. * Comparator(s)/control.

Where relevant, give details of the alternatives against which the intervention/exposure will be compared (e.g. another intervention or a non-exposed control group). The preferred format includes details of both inclusion and exclusion criteria.

No postoperative ileus occurred.

22. * Types of study to be included.

Give details of the study designs (e.g. RCT) that are eligible for inclusion in the review. The preferred format includes both inclusion and exclusion criteria. If there are no restrictions on the types of study, this should be stated.

Included studies need to be cohort study or case control study;

(1) The study type was cohort study or case control study;

(2) The contents of literature research are the influencing factors and risk factors of POI in hysterectomy;

(3) The results reported the incidence of POI and risk factors, and the results were converted to OR values, 95%CI and standard error (SE);

(4) The POI could not have been the result of an intra-abdominal complication;

(5) Full text available.

Exclusion criteria were as follows:

(1) Repeated publication or incomplete literature;

(2) The data extraction cannot be carried out or the data extraction does not meet the research requirements;

(3) Literature review, systematic review, animal experiments, case reports;

(4) Studies in which there was insufficient information for analysis.

23. Context.

Give summary details of the setting or other relevant characteristics, which help define the inclusion or exclusion criteria.

24. * Main outcome(s).

Give the pre-specified main (most important) outcomes of the review, including details of how the outcome is defined and measured and when these measurement are made, if these are part of the review inclusion criteria.

(1) The contents of literature research are the influencing factors and risk factors of POI in hysterectomy;

(2) Demonstrate clear criteria for POI diagnosis (feeding intolerance, nausea, vomiting, abdominal pain and distension, delayed defecation and flatus). The authors did not establish a specific time in days for determining the presence of this condition, as there is not a clear consensus about the duration of symptoms for diagnosis; however, the definition in each article could not be fewer than 1 days or longer than 7 days;

(3) The results reported the incidence of POI and risk factors, and the results were converted to OR values, 95%CI and standard error (SE);

(4) The POI could not have been the result of an intra-abdominal complication.

Measures of effect

Please specify the effect measure(s) for you main outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

odds ratios, 95%CI and standard error (SE)

25. * Additional outcome(s).

List the pre-specified additional outcomes of the review, with a similar level of detail to that required for main outcomes. Where there are no additional outcomes please state ‘None’ or ‘Not applicable’ as appropriate to the review

None.

Measures of effect

Please specify the effect measure(s) for you additional outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

None.

26. * Data extraction (selection and coding).

Describe how studies will be selected for inclusion. State what data will be extracted or obtained. State how

this will be done and recorded.

Pre-designed data extraction table was used to extract data independently and cross-check. The data included the following variables: First author, year of publication, years of the study, country, study design, surgical type, time to POI, sample, POI patients, risk factor, study quality (according to the Newcastle–Ottawa scale). Discrepancies were resolved by consensus.

27. * Risk of bias (quality) assessment.

State which characteristics of the studies will be assessed and/or any formal risk of bias/quality assessment tools that will be used.

NOS was independently used by two researchers with evidence-based training to evaluate the quality of the included literature and the third researcher was jointly assessed when there was any disagreement. Newcastle–Ottawa scale (NOS) was used to evaluate the quality of the included literature, which included two scales, case-control study and cohort study. The two scales each contained 3 dimensions and a total of 8 items. The full score of the two scales were 9, and a score of 7 or above is considered as high-quality literature and included.

28. * Strategy for data synthesis.

Describe the methods you plan to use to synthesise data. This **must not be generic text** but should be **specific to your review** and describe how the proposed approach will be applied to your data. If meta-analysis is planned, describe the models to be used, methods to explore statistical heterogeneity, and software package to be used.

The data were analyzed by Stata17 software, and the OR values of the original data in the literature and 95% confidence interval (CI) were used as the combined effect size, I^2 value was used to analyze the heterogeneity. If P0.1 and I^2?50%, there was no statistical heterogeneity among the studies, the fixed-effects model was used to analyze the heterogeneity. If P ? 0.1 and I^2 50%, the heterogeneity among studies was high, the random-effects model was used for analysis. The pooled estimates were presented with Forest plots.

29. * Analysis of subgroups or subsets.

State any planned investigation of ‘subgroups’. Be clear and specific about which type of study or participant will be included in each group or covariate investigated. State the planned analytic approach.

None.

30. * Type and method of review.

Select the type of review, review method and health area from the lists below.

Type of review

Cost effectiveness

No

Diagnostic
No

Epidemiologic
No

Individual patient data (IPD) meta-analysis
No

Intervention
No

Living systematic review
No

Meta-analysis
Yes

Methodology
No

Narrative synthesis
No

Network meta-analysis
No

Pre-clinical
No

Prevention
No

Prognostic
No

Prospective meta-analysis (PMA)
No

Review of reviews
No

Service delivery
No

Synthesis of qualitative studies
No

Systematic review
Yes

Other
No

Health area of the review

Alcohol/substance misuse/abuse

No

Blood and immune system

No

Cancer

No

Cardiovascular

No

Care of the elderly

No

Child health

No

Complementary therapies

No

COVID-19

No

Crime and justice

No

Dental

No

Digestive system

No

Ear, nose and throat

No

Education

No

Endocrine and metabolic disorders

No

Eye disorders

No

General interest

No

Genetics

No

Health inequalities/health equity

No

Infections and infestations

No

International development

No

Mental health and behavioural conditions

No

Musculoskeletal

No

Neurological

No

Nursing

Yes

Obstetrics and gynaecology

No

Oral health

No

Palliative care

No

Perioperative care

Yes

Physiotherapy

No

Pregnancy and childbirth

No

Public health (including social determinants of health)

No

Rehabilitation

No

Respiratory disorders

No

Service delivery

No

Skin disorders

No

Social care

No

Surgery

Yes

Tropical Medicine

No

Urological

No

Wounds, injuries and accidents

No

Violence and abuse

No

31. Language.

Select each language individually to add it to the list below, use the bin icon to remove any added in error.

English

There is an English language summary.

32. * Country.

Select the country in which the review is being carried out. For multi-national collaborations select all the countries involved.

China

33. Other registration details.

Name any other organisation where the systematic review title or protocol is registered (e.g. Campbell, or The Joanna Briggs Institute) together with any unique identification number assigned by them. If extracted data will be stored and made available through a repository such as the Systematic Review Data Repository (SRDR), details and a link should be included here. If none, leave blank.

34. Reference and/or URL for published protocol.

If the protocol for this review is published provide details (authors, title and journal details, preferably in Vancouver format)

Add web link to the published protocol.

Or, upload your published protocol here in pdf format. Note that the upload will be publicly accessible.

No I do not make this file publicly available until the review is complete

Please note that the information required in the PROSPERO registration form must be completed in full even if access to a protocol is given.

35. Dissemination plans.

Do you intend to publish the review on completion?

No

Give brief details of plans for communicating review findings.?

36. Keywords.

Give words or phrases that best describe the review. Separate keywords with a semicolon or new line. Keywords help PROSPERO users find your review (keywords do not appear in the public record but are included in searches). Be as specific and precise as possible. Avoid acronyms and abbreviations unless these are in wide use.

37. Details of any existing review of the same topic by the same authors.

If you are registering an update of an existing review give details of the earlier versions and include a full bibliographic reference, if available.

38. * Current review status.

Update review status when the review is completed and when it is published.New registrations must be ongoing so this field is not editable for initial submission.

Please provide anticipated publication date

Review_Ongoing

39. Any additional information.

Provide any other information relevant to the registration of this review.

40. Details of final report/publication(s) or preprints if available.

Leave empty until publication details are available OR you have a link to a preprint (NOTE: this field is not editable for initial submission). List authors, title and journal details preferably in Vancouver format.

Give the link to the published review or preprint.