INPLASY PROTOCOL

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None declared.

Laparoscopic nerve sparing radical hysterectomy for the treatment of cervical cancer

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Review question / Objective: **This meta-analysis aims to evaluate the role of LNSRH versus LRH in the treatment of cervical cancer.**
Condition being studied: **LNSRH and LRH in treatment of early stage of cervical cancer based on FIGO staging.**
Information sources: **Pubmed, Embase, Web of Science, cochrane liberary, Weipu database, Tsinghua Tongfang database, and China national knowledge infrastructure (CNKI).**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 16 September 2021 and was last updated on 16 September 2021 (registration number INPLASY202190047).

INTRODUCTION

Review question / Objective: **This meta-analysis aims to evaluate the role of LNSRH versus LRH in the treatment of cervical cancer.**

Rationale: **The effects and safety of laparoscopic nerve sparing radical hysterectomy (LNSRH) and laparoscopic radical hysterectomy (LRH) in cervical cancer treatment remains unclear.**

Condition being studied: **LNSRH and LRH in treatment of early stage of cervical cancer based on FIGO staging.**

METHODS

Search strategy: **We searched Pubmed, Embase, Web of Science, cochrane liberary, Weipu database, Tsinghua Tongfang database, and China national knowledge infrastructure (CNKI) for**

randomized controlled trials (RCTs) involving independent LNSRH and LRH as the treatment of early stage of cervical cancer based on FIGO staging, the search time limit was from the inception of databases to June 15, 2021. The search strategies used in this present meta-analysis were: (laparoscopic nerve-sparing radical hysterectomy) OR (LNSRH) OR(nerve sparing)) AND (laparoscopic radical hysterectomy) OR (LRH)) AND (cervical cancer). Besides, we checked and searched the reference lists of the RCTs and reviews that met the inclusion criteria of our study.(laparoscopic nerve-sparing radical hysterectomy) OR (LNSRH) OR(nerve sparing)) AND (laparoscopic radical hysterectomy) OR (LRH)) AND (cervicalcancer).

Participant or population: Patients with cervical cancer; comparison of independently LNSRH and LRH in treatment of early stage of cervical cancer based on FIGO staging.

Intervention: LNSRH versus LRH in treatment of early stage of cervical cancer based on FIGO staging.

Comparator: LRH.

Study designs to be included: RCT.

Eligibility criteria: Patients with cervical cancer; comparison of independently LNSRH and LRH in treatment of early stage of cervical cancer based on FIGO staging; RCT study design; related outcomes and complete data were reported.

Information sources: Pubmed, Embase, Web of Science, cochrane liberary, Weipu database, Tsinghua Tongfang database, and China national knowledge infrastructure (CNKI).

Main outcome(s): duration of surgery, estimated blood loss, length of parauterine tissue resection, length of vaginal excision, time to intestinal function recovery, time to postoperative urinary catheter removal and the incidence of intraoperative adverse events.

Quality assessment / Risk of bias analysis: We used the Cochrane Collaborations risk of bias tool to assess the methodological quality and risk of bias of analyzed RCTs. Seven specific domains were evaluated in this tool: i.e sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective outcome reporting and other issues. Each domain was rated as low, high, or unclear risk of bias according to the judgment criteria. The literature quality evaluation was independently completed by two literature review researchers. When the two of them disagreed, the third evaluator intervened and reached a consensus through discussion.

Strategy of data synthesis: All statistical analyses were performed using RevMan 5.3 software. Data were used as input and double-checked by two authors. All the data syntheses and interpretations were also conducted by two authors to ensure the accuracy of the results. Binary outcomes were presented as Mantel–Haenszel-style risk ratio(RR) with 95% confidence intervals(CI). Continuous outcomes were presented as standardized mean differences (SMD). A fixed-effect model was applied in cases of homogeneity (P value of $\chi 2$ test >.10 and I2 .10 and I2 ≥ 50%). Publication bias were assessed by funnel plots, and we conducted Egger regression test to evaluate the asymmetry. In this study, the difference was statistically significant with $P<0.05$.

Subgroup analysis: Subgroup analysis and a random-effect model was applied in cases of obvious heterogeneity (P value of $\chi 2$ test>.10 and I2 ≥ 50%).

Sensitivity analysis: Sensitivity analyses was conducted to investigate the influence of single one study on the overall risk estimate by removing RCT one by one.

Country(ies) involved: China.

Keywords: nerve sparing; radical hysterectomy; cervical cancer; surgery; treatment; meta-analysis.

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