INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Laparoendoscopic single-site surgery versus conventional laparoscopic surgery for benign gynecological disease: a meta-analysis of randomized controlled trial

Chen, P[1]; Zhang, CY[2].

Review question / Objective: **We aimed to evaluate the perioperative outcome of laparoendoscopic single-site surgery (LESS) compared with conventional laparoscopic surgery (CLS) for benign gynecological diseases (BGDs).**
Information sources: **Relevant publications were searched from four online databases : PubMed, Embase, The Cochrane library, and Web of Science.**
Participant or population: **Patients with benign gynecological diseases who underwent surgical treatment.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 December 2021 and was last updated on 19 December 2021 (registration number INPLASY2021120084).

INTRODUCTION

Review question / Objective: **We aimed to evaluate the perioperative outcome of laparoendoscopic single-site surgery (LESS) compared with conventional laparoscopic surgery (CLS) for benign gynecological diseases (BGDs).**

Condition being studied: **We aimed to evaluate the perioperative outcome of laparoendoscopic single-site surgery (LESS) compared with conventional**

laparoscopic surgery (CLS) for benign gynecological diseases (BGDs).

METHODS

Participant or population: Patients with benign gynecological diseases who underwent surgical treatment.

Intervention: Surgical treatment.

Comparator: The difference in outcome of laparoendoscopic single site surgery (LESS) and conventional laparoscopic surgery (CLS) was compared.

Study designs to be included: Randomized controlled trial.

Eligibility criteria: Patients with benign gynecological diseases who underwent surgicaltreatment.

Information sources: Relevant publications were searched from four online databases : PubMed, Embase, The Cochrane library, and Web of Science.

Main outcome(s): Study reported at least one of the following outcomes: operative time, blood loss, hospital stay, hemoglobin decrease, postoperative pain score, and postoperative complication.

Quality assessment / Risk of bias analysis: The quality of included studies was evaluated by The Cochrane Collaboration's tool for assessing risk.

Strategy of data synthesis: For continuous variables such as operative time, weighted mean difference (WMD) with its 95% confidence intervals (CI) was used as effect size indicator; meanwhile, for binary variables such as complications, risk ratio (RR) with its 95% CI was used. Cochran's Q test and I2 test were applied to assess the heterogeneity among studies. $P < 0.05$ and $I2 > 50\%$ indicated significant heterogeneity between studies, and random-effect model was used for meta-analysis; however, $P \geq 0.05$ and $I2 \leq 50\%$ revealed no significant heterogeneity, and fixed-effect model was adopt. Further, to explore the source of heterogeneity, subgroup analyses classified by area, surgery type, and single port system were performed. Moreover, funnel chart and Egger test were used to assess the publication bias. All statistical analyses were conducted by using RevMan 5.3 and Stata 12.0 software.

Subgroup analysis: No.

Sensitivity analysis: No.

Country(ies) involved: China.

Keywords: Benign gynecological diseases; laparoendoscopic single-site surgery; conventional laparoscopic surgery; perioperative outcome.

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