INPLASY PROTOCOL

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None declared.

Meta-analysis of randomised controlled trials comparing intracorporeal versus extracorporeal anastomosis in minimally invasive right hemicolectomy: upgrading the level of evidence

Zhang, T[1]; Sun, YG[2]; Mao, WZ[3].

Review question / Objective: **This study examines the advantages and disadvantages of intraluminal and extraluminal anastomoses in laparoscopic or robotic right hemicolectomy through a comprehensive collection of randomized controlled studies.**
Condition being studied: **Minimally invasive right hemicolectomy has gradually become the standard procedure for right hemicolectomy. Minimally invasive surgery mainly includes laparoscopic and robot-assisted platforms. Intraluminal anastomosis and extraluminal anastomosis are the two anastomotic techniques in minimally invasive right hemicolectomy. Among them, extraluminal anastomosis is the mainstream anastomosis technique for right hemicolectomy, which has the advantages of simple operation and short surgical operation time. However, compared with intraluminal anastomosis, extraluminal anastomosis may lead to a longer recovery time of intestinal function and an increased risk of ileocecal torsion during anastomosis establishment due to the wider freeing of mesenteric tissue.**
The current choice of intraluminal or extraluminal anastomosis in minimally invasive right hemicolectomy is mostly based on surgeons' expertise and personal preference, and there is a lack of high-quality evidence-based medical evidence and guidelines.Existing Meat analyses are mostly retrospective studies, and we hope to improve the level of evidence by including high-quality randomized controlled studies.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 04 March 2023 and was last updated on 04 March 2023 (registration number INPLASY202330011).

INTRODUCTION

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METHODS

Participant or population: Patients undergoing laparoscopic or robotic right hemicolectomy for colonic tumors.

Intervention: Intraluminal anastomosis.

Comparator: Extraluminal anastomosis.

Study designs to be included: Randomized controlled trials.

Eligibility criteria: Inclusion criteria: (1) The type of study design was randomized controlled clinical study. (2) The study population was patients who underwent laparoscopic or robotic right hemicolectomy for benign or malignant tumors of the right hemicolectomy based on colonoscopy and pathology, and were divided into intraluminal and extraluminal anastomosis groups according to the anastomosis technique. (3) The literature reports at least one or more of our desired outcome indicators. Exclusion criteria: (1) Non-randomized controlled clinical studies, observational studies including cohort studies, case-control studies, etc. (2) Data on perioperative complications are not available or are incomplete. (3) Not relevant to the topic. (4) Repeated publication of the same clinical study.

Information sources: PubMed, Embase, the Cochrance library, Web of Science, ClinicalTrials.

Main outcome(s): Bleeding, paralytic ileus, anastomotic leak, surgical site infection (SSI), overall perioperative(within 30 days of operation) morbidity, procedure time, length of incision, number of harvested lymph node and length of hospital stay.

Quality assessment / Risk of bias analysis: Cochrane Handbook.

Strategy of data synthesis: We used Revman 5.4 software for the analysis, using RR values for dichotomous variables and means and standard deviations for continuous variables, to make forest plots.

Subgroup analysis: Subgroup analysis based on laparoscopic and robotic surgery.

Sensitivity analysis: Sensitivity analysis of factors with high heterogeneity to explore sources of heterogeneity.

Language restriction: English.

Country(ies) involved: China.

Keywords: Robotic right colectomy . Laparoscopic right colectomy . Intra-corporeal anastomosis . Extra-corporeal anastomosis. Meta-analysis.

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