INPLASY

Meta analysis of the effect of bed cycling in early postoperative exercise for colorectal cancer patients

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Chen, SJ.

Corresponding author:
Chen shaojuan

2003csj2003@163.com

Author Affiliation:
Zhaoqing First People's Hospital.

ADMINISTRATIVE INFORMATION

Support - Self-funding.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 22 January 2025 and was last updated on 22 January 2025.

INTRODUCTION

Review question / Objective ①P：(Patient/Population or Problem)：Patients who are bedridden after colorectal cancer surgery ② I：(Intervention/exposure)：Rehabilitation exercise with bed foot pedal was used in early postoperative period for colorectal cancer patients ③ C：(Comparator/control)：Perform routine passive joint movement and ankle pump exercise ④ O：(Outcome)：Measurable indicators such as changes in coagulation index, Caprini risk assessment model score, pain score ⑤ S：(Study design)：RCT.

Condition being studied Early use of bed-mounted pedal for rehabilitation exercise was used in patients with colorectal cancer who were bedridden after surgery in general surgical wards.

METHODS

Participant or population Colorectal cancer patients who are bedridden after surgery.

Intervention Rehabilitation exercise with bed foot pedal was used in early postoperative period for colorectal cancer patients.

Comparator Perform routine passive joint movement and ankle pump exercise.

Study designs to be included RCT.

Eligibility criteria Patients diagnosed with colorectal cancer by pathological biopsy were over 18 years old, without severe heart and brain diseases or mental illness.

Information sources PubMed、EM base、the C och ra ne Lib ra ry、W eb of S cie nce、CINAHL、CNKI、Wanfang Data、CBM、VIP.

Main outcome(s) Coagulation index, Caprini risk assessment model score, pain score (VAS), VTE incidence, length of hospital stay, total length of hospital stay.

Quality assessment / Risk of bias analysis Cochrane Tools.

Strategy of data synthesis Meta-analysis was conducted using RevMan software. When quantitative data were collected using the same scale, mean variance (MD) was used to combine effect sizes. When quantitative data were collected using different scales.
Standardized Mean Difference (SMD) was used to combine effect sizes; if the quantitative data in the included studies only provided the first, third, and fourth quartiles, they were converted into mean and standard deviation forms, and then the data were combined for analysis. Heterogeneity testing was conducted on the included studies, and the appropriate data combination method was chosen based on the test results. If $P \geq 0.05$ and $I^2 \leq 50\%$, a fixed effects model was used for analysis; if P50%, significant heterogeneity was identified, and a random effects model was used to combine effect sizes. If heterogeneity could not be eliminated, sensitivity analysis and subgroup analysis were performed. Binary variables used odds ratio (OR) and 95%CI as effect size indicators, while continuous variables selected SMD and 95%CI. Data that could not be quantitatively combined were only analyzed qualitatively.

Subgroup analysis The subgroup study was conducted according to the duration of disease <6 months and ≥6 months.

Sensitivity analysis The sensitivity analysis was carried out using RevMan software, and the change of effect size after deleting one of the articles was used to reflect the sensitivity of the article.

Country(ies) involved China.

Keywords Colorectal cancer patients; cycling exercise; ankle pump exercise; length of hospital stay; Meta analysis; evidence-based nursing.

Contributions of each author
Author 1 - Chen shaojuan.
Email: 2003csj2003@163.com