

Efficacy of modified Ligation of Intersphincteric Fistula Tract for anal fistula: a systematic review and Meta-analysis

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Zhang, HX¹; Hu, YB²; Zhang, K³.**Corresponding author:**

Kun Zhang

zhkun1982@126.com

Author Affiliation:

Linyi Hospital of Traditional Chinese Medicine.

ADMINISTRATIVE INFORMATION**Support - No.****Review Stage at time of this submission -** Formal screening of search results against eligibility criteria.**Conflicts of interest -** None declared.**INPLASY registration number:** INPLASY202420113**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 28 February 2024 and was last updated on 28 February 2024.**INTRODUCTION**

Review question / Objective Would modified ligation of intersphincteric fistula tract(LIFT) be more effective than classic LIFT in the treatment of anal fistula?

Condition being studied Anal fistula is a common disease secondary to perianal abscess, currently mainly treated through surgery. In recent years, due to the increasing demand of patients for preserving anal function and minimally invasive surgical methods, the surgical method of preserving the sphincter, represented by LIFT, has gradually been favored. LIFT was proposed by Rojasasakul in 2007, which can effectively preserve the sphincter but has problems such as high postoperative recurrence rate, pain, defecation, and urinary incontinence. Therefore, in recent years, some surgeons have gradually improved it. The improvement methods include treating the internal opening, removing the fistula, using biological patches or anal plug filling, and

video-assisted surgery. Given that in recent years, there have been increasing literature reports on the treatment of anal fistula with improved LIFT, but most of them are small-scale studies. Moreover, there needs to be a more systematic evaluation of its therapeutic effect in literature research. Therefore, this study aims to include literature from randomized clinical trials comparing modified liver transplantation and liver transplantation for meta-analysis, extract effective data, and provide evidence-based support for clinical practice.

METHODS

Search strategy We will review databases, including China National Knowledge Infrastructure (CNKI), Chinese Science and Technology Periodical Database (VIP), Wanfang database (Wanfang), China Biology Medicine disc (CBM), PubMed, MEDLINE, and Cochrane Library. The search date for the system was built to December 1, 2023. We used keyword combinations to retrieve literature, such as anal fistula OR Rectal

Fistula, modified LIFT OR ligation of intersphincteric fistula tract.

Participant or population All randomized control trials of modified LIFT for anal fistula were included.

Intervention The experimental group was treated with improved LIGHT, with the same method of improvement.

Comparator The control group was treated with LIGHT without any other treatment measures;.

Study designs to be included Randomized controlled trials (RCTs) on anal fistula were included, including English and Chinese literature.

Eligibility criteria The symptoms and signs of the study subjects meet the diagnostic criteria for anal fistula in the Clinical Diagnosis and Treatment Guidelines for Anal Fistula (2006 Edition) or other recognized standards at home and abroad. The source of cure rate and recurrence rate is the same as above.

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Main outcome(s) Hospitalization time, Cure rate, Postoperative pain score, Postoperative anal function, Rectal resting pressure, Anal canal squeeze pressure, Wound healing time, Recurrence rate, and operative time.

Quality assessment / Risk of bias analysis Two researchers will independently examine the methodological quality of the included trials through the Cochrane risk-of-bias tool. If there are insufficient data, we will try to contact the authors. We will exclude the study if we can not contact the authors or if the data is missing.

Strategy of data synthesis We used RevMan 5.4 software for meta-analysis and heterogeneity tests of literature. I-square test was used to detect the heterogeneity among included trials. The trials with significant heterogeneity (P 50%) were analyzed by

random effects model. For the trials with small heterogeneity ($P > .10$, $I^2 < 50\%$), fixed effects model was used for analysis. The number of studies in each comparison was small, so no subgroup analysis was performed. We used the method of excluding each study one by one for the sensitivity analysis. The Grading of Recommendations Assessment, Development and Evaluation (GRADE) tool was applied to assess the quality of evidence for each outcome.

Subgroup analysis We will conduct subgroup analysis based on the site of onset. If the number of studies in each comparison is small, no subgroup analysis will be performed.

Sensitivity analysis We will use the method of excluding each study one by one for the sensitivity analysis.

Country(ies) involved China.

Keywords anal fistula; Meta-analysis; Modified ligation of intersphincteric fistula.

Contributions of each author

Author 1 - Haixuan Zhang.
Email: 1786708997@qq.com
Author 2 - Yibin Hu.
Email: 1301163720@qq.com
Author 3 - Kun Zhang.
Email: zhkun1982@126.com