INPLASY PROTOCOL

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Support: **None.**

Review Stage at time of this submission: **Preliminary searches.**

Conflicts of interest:
None declared.

Side-by-side versus stent-in-stent bilateral stenting for malignant hilar biliary obstruction: a meta-analysis

Chen, ZX[1].

Review question / Objective: **Both side-by-side (SBS) and stent-in-stent (SIS) bilateral stenting have been used for patients with malignant hilar biliary obstruction (MHBO). However, it is unclear about which technique is better. This meta-analysis is conducted to investigate the clinical efficacy and safety of SBS and SIS bilateral stenting for patients with MHBO.**
Condition being studied: **Both side-by-side (SBS) and stent-in-stent (SIS) bilateral stenting have been used for patients with malignant hilar biliary obstruction (MHBO). However, it is unclear about which technique is better.**
Information sources: **Two researchers independently extracted the relative data from the included studies, and the bifurcation was solved by a third researcher. The baseline data of each study included first author's name, publication year, countries, types of design, cancer types, stening approaches, Bismuth types, sample size, age, and gender.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 09 October 2021 and was last updated on 09 October 2021 (registration number INPLASY2021100031).

INTRODUCTION

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METHODS

Search strategy: (((side-by-side OR (SBS)) AND ((stent-in-stent) OR (SIS))) AND (((hilar OR (biliary)) OR (Cholangiocarcinoma)).

Participant or population: Patients with MHBO.

Intervention: SBS stenting.

Comparator: SIS stenting.

Study designs to be included: Inclusion criteria included:(a) Type of study: comparative studies;(b) Disease: patients with MHBO;(c) Types of interventions: SBS versus SIS bilateral metal stenting;(d) Languages: all.

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Main outcome(s): The outcomes of each study included technical success, functional success, complication rates, re-obstruction rates, stent patency, and overall survival (OS).

Quality assessment / Risk of bias analysis: The Cochrane risk of bias tool was used to evaluate the potential bias of randomized controlled trials (RCTs). The items of Cochrane risk of bias tool include selection, detection, performance, reporting, attrition, and other biases. Non-RCTs were evaluated by the 9-point Newcastle-Ottawa scale (NOS), with scores of ≥ 7, 4-6, and < 4 corresponding to low, moderate, and high bias risk, respectively. The items of NOS include selection (4 points), comparability (2 points), and exposure (3 points).

Strategy of data synthesis: RevMan v5.3 and Stata v12.0 were used for this meta-analysis. Pooled odds ratios (ORs) with 95% confidence intervals (CIs) was calculated for dichotomous variables, and continuous variables were calculated by mean differences (MDs) with 95% CIs. Pooled stent patency duration and OS were calculated by hazard ratios (HRs) with 95% CI. The heterogeneity was determined by the I2 statistic and Q test. There was high heterogeneity when I2 > 50%, then the random effect model was used; otherwise, the fixed effect model was used. Sources of heterogeneity were evaluated by sensitivity and subgroup analyses. Egger test was used to evaluate publication bias. P < 0.05 was considered as a significant publication bias.

Subgroup analysis: Yes. Not described.

Sensitivity analysis: Yes. Not described.

Country(ies) involved: China.

Keywords: Side-by-side; Stent-in-stent; Bilateral; Hilar.

Contributions of each author:
Author 1 - Zhong-Ke Chen.