

INPLASY

Comparison of the effects of drug-coated balloon and bare metal stent in the treatment of lower extremity arteriosclerosis obliterans: a meta-analysis

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ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202650111

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 May 2026 and was last updated on 19 May 2026.

INTRODUCTION

Review question / Objective To compare the efficacy of drug-coated balloons (DCB) and bare metal stents (BMS) in treating lower extremity arteriosclerosis obliterans (LEASO).

Condition being studied Lower extremity arteriosclerosis obliterans (LEASO) is a chronic progressive disease mainly caused by atherosclerosis of lower extremity arteries. Currently, angioplasty using a bare metal stent (BMS) or drug-coated balloon (DCB) is the most commonly used procedure for treating LEASO. However, studies comparing the clinical efficacy of BMS and DCB in treating LEASO. are still scarce.

METHODS

Search strategy (((drug coated balloon) OR (DCB)) AND ((stent) OR (SEMS))) AND (arteriosclerosis) AND (lower extremities).

Participant or population Patients with LEASO.

Intervention DCB group.

Comparator BMS group.

Study designs to be included Comparative studies.

Eligibility criteria The inclusion criteria were: (a) comparative studies; (b) studies enrolling patients diagnosed with LEASO; (c) studies including the comparison between DCB and BMS; and (d) no language restrictions. Studies that were (a) single-arm investigations, (b) reviews, or (c) animal or preclinical studies were excluded.

Information sources PubMed, Wanfang, and Web of Science.

Main outcome(s) Re-intervention rate.

Quality assessment / Risk of bias analysis The quality of randomized controlled trials (RCTs) was assessed using the Cochrane risk-of-bias tool, examining selection, detection, performance,

attrition, and reporting biases. Non-randomized studies were appraised via the Newcastle-Ottawa Scale, focusing on selection, comparability, and exposure domains.

Strategy of data synthesis Meta-analyses were conducted using RevMan 5.3.

Subgroup analysis Subgroup analysis was conducted based on the RCT.

Sensitivity analysis Yes.

Country(ies) involved China.

Keywords LEASO; DCB; BMS.

Contributions of each author

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