INPLASY

The effect of diabetes mellitus on restenosis after percutaneous transluminal angiography or stenting: A meta analysis

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ADMINISTRATIVE INFORMATION

INTRODUCTION

*R*eview question / Objective Is the target lesion restenosis after balloon angioplasty or stenting associated with diabetes?

Condition being studied Diabetes mellitus is thought to be closely related to arterial stenotic or occlusive disease caused by atherosclerosis. However, there is still no definitive clinical evidence to confirm that patients with diabetes have a higher risk of restenosis.

METHODS

Participant or population Eligibility criteria: (1) RCTs of patients with or without DM; (2) lesions confined to the coronary arteries or femoralpopliteal artery; (3) endovascular treatment via PTA or stenting. Exclusion criteria: (1) the proportion of patientslost to follow-up was higher than 20%; and (2) a secondary restenosis operation.

Intervention Trials were included if they satisfied the following eligibility criteria: (1) RCTs of patients with or without DM; (2)lesions confined to the coronary arteries or femoral popliteal artery; (3) endovascular treatment via PTA orstenting; and (4) studies had to include an outcome of angiographic follow-up of the lesion site, target lesionrevascularization (TLR) or target vessel revascularization (TVR). The exclusion criteria included the following: (1)the proportion of patients lost to follow-up was higher than 20%; and (2) a secondary restenosis operation.

Comparator Patients with or without diabetes who received PTA or Stent.

Study designs to be included RCT.

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Information sources PubMed/MEDLINE, EMBASE and Cochrane. Searched from 01/1990 to 06/2023.

Main outcome(s) Restenosis. Confirmed by angiography or ultrasound during follow-up time; Measures of effect; RR.

Quality assessment / Risk of bias analysis The Cochrane risk of bias assessment tool.

Strategy of data synthesis Two researchers independently scanned the titles and abstracts of the retrieved studies for the topic. Then, the researchers obtained the full texts of potentially eligible studies and examined these texts independently for suitability according to the inclusion and exclusion criteria. In the case of disagreement between the two researchers, a third researcher was consulted to reach a consensus on whether to include the trial or not.

Subgroup analysis Restenosis and glycemic control levels.

Sensitivity analysis For dichotomous data (for example, the presence or absence of restenosis), we calculated Mantel-Haenszel relative ratios (RRs) and 95% confidence intervals (CIs). Heterogeneity across studies was assessed by Cochran's Q statistic with a P value set at 0.1. The I^2 statistic was also taken into account regardless of the P value. An I^2 of $\geq$ 50% was prespecified as the threshold considered too high to provide consistent analysis. A random effects model was used for the analysis. Tests were two-tailed, and a P value of < 0.05 was considered statistically significant. Funnel plots were used to assess publication bias. STATA 16.0 (Statacorp, USA) was used to analyze the data.

Country(ies) involved China.

Keywords diabetes mellitus, restenosis.

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