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Comparison of immediate and staged complete revascularization in patients with acute coronary syndrome and multivessel coronary disease

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ADMINISTRATIVE INFORMATION

Support - Taizhou Municipal Hospital.

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 26 August 2023 and was last updated on 26 August 2023.

INTRODUCTION

Review question / Objective Our objective is to compare the effect of immediate and staged complete revascularization in patients with acute coronary syndrome and multivessel coronary disease.

Condition being studied Multivessel coronary artery disease, which is associated with an increase in fatalities and generally poorer clinical outcomes, is present in a significant majority of individuals with acute coronary syndrome. Although the benefit of complete coronary revascularization is established by multiple RCTs, the appropriate timing to treat non-culprit lesions remains unclear.

METHODS

Search strategy The search strategy included a combination of “ACS”, “multivessel”, “staged”, “immediate” and “revascularization”.

Participant or population Patients with ACS and multivessel coronary disease.

Intervention Immediate complete revascularization.

Comparator Staged complete revascularization.

Study designs to be included RCTs.

Eligibility criteria 1. patients with ACS and multivessel coronary disease; 2. Immediate and staged complete revascularization are compared in studies; 3. The endpoint is one of the main outcomes in our study; 4. RCTs published in English. Exclusion criteria: 1. patients with previous coronary artery bypass surgery, cardiogenic shock, single-vessel coronary disease, and the presence of a coronary chronic total occlusion; 2. Patients without a clear culprit lesion.

Information sources PubMed, Embase, Cochrane Central Register of Controlled Trials, the clinical trial registry maintained at ClinicalTrials.gov, and grey literature databases were searched.

Main outcome(s) The composite of all-cause death, myocardial infarction, unplanned ischemia-driven revascularization, or cerebrovascular events at 30 days and 1 year.

Additional outcome(s) The components of the composite outcomes.

Quality assessment / Risk of bias analysis A version of ROB2 for individually randomized, parallel-group trials is applied to included studies. GRADE assessment was used to evaluate the quality of outcomes.

Strategy of data synthesis Stata Statistical Software version 17.0 was used for the analysis. The two-sided P values were evaluated for significance at an alpha level of 0.05. A pooled HR and 95% confidence intervals were calculated. Trim-and-Fill method was applied to identify and correct for funnel plot asymmetry arising from publication bias.

Subgroup analysis Subgroup analysis was performed according to patients and trial characteristics.

Sensitivity analysis Leave-one-out meta-analysis was performed to identify studies that may have disproportionately influenced the summary treatment effect.

Language restriction Studies were restrictied in English.

Country(ies) involved China.

Keywords staged revascularization; immediate revascularization; acute coronary syndrome; multivessel coronarydisease.

Contributions of each author
Author 1 - Jing-Chao Sun.
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