INPLASY PROTOCOL

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

Conflicts of interest:
None declared.

Conservative or liberal oxygen therapy in acutely ill adults of cardiovascular disease: a systematic review and meta-analysis

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Review question / Objective: **We sought to conduct a systematic review and meta-analysis to evaluate the efficacy and safety in acutely ill adults of cardiovascular disease treated with liberal versus conservative oxygen therapy.**
Eligibility criteria: **(1) Patients with acutely ill adults of cardiovascular disease. (2) Treat with liberal or conservative oxygen therapy. (3) Outcomes Indicators: Death from any cause/ In-hospital cardiac arrest/ In-hospital cardiac shock/ In-hospital recurrent myocardial infarction/ MACEs/ cTnT / Median peak/ Infarct size on CMR*Median proportion of LV mass /SpO2 at ED ≥94%/ neuron-specific enolase, including one.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 03 January 2023 and was last updated on 03 January 2023 (registration number INPLASY202310008).

*Chang Meng, Jing Sun and Yintang Wang have contributed equally to this work.

INTRODUCTION

Review question / Objective: **We sought to conduct a systematic review and meta-analysis to evaluate the efficacy and safety in acutely ill adults of cardiovascular disease treated with liberal versus conservative oxygen therapy.**

Condition being studied: **Cardiac arrest/ In-hospital cardiac shock/ In-hospital recurrent myocardial infarction/ MACEs/ cTnT /Median peak/ Infarct size on**

CMR*Median proportion of LV mass /SpO2 at ED ≥94%/ neuron-specific enolase.

METHODS

Participant or population: Patients with acutely ill adults of cardiovascular disease.

Intervention: Liberal versus conservative oxygen therapy.

Comparator: Liberal versus conservative oxygen therapy.

Study designs to be included: The search strategy was RCT.

Eligibility criteria: (1) Patients with acutely ill adults of cardiovascular disease. (2) Treat with liberal or conservative oxygen therapy. (3) Outcomes Indicators: Death from any cause/ In-hospital cardiac arrest/ In-hospital cardiac shock/ In-hospital recurrent myocardial infarction/ MACEs/ cTnT /Median peak/ Infarct size on CMR*Median proportion of LV mass /SpO2 at ED ≥94%/ neuron-specific enolase, including one.

Information sources: We will search the references in the included trials and personal files. We will request advice from experts in the field. In addition, we will search associated articles from meetings, and contacted the authors of included trials, if need.

Main outcome(s): Death from any cause.

Quality assessment / Risk of bias analysis: We evaluated the methodological quality of the individual studies using the Cochrane risk of bias tool for RCTs.

Strategy of data synthesis: We will consider using the number of participants and deaths between different groups for analysis. Mortality may also be reported.

Subgroup analysis: Subgroup analysis was performed on myocardial infarction and cardiac arrest.

Sensitivity analysis: We conducted sensitivity analyses to investigate the influence of a single study on the overall pooled estimate of each predefined outcome.

Country(ies) involved: China.

Keywords: liberal oxygen therapy, conservative oxygen therapy, myocardial infarction, cardiac arrest.

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