INPLASY PROTOCOL

The use of metformin in patients with COVID-19: A protocol for systematic review and meta-analysis

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Review question / Objective: Whether the use of metformin favorably influence the COVID-19 outcomes.
Condition being studied: The benefits and harms of the use of metformin in patients with COVID-19.
Information sources: PubMed, Embase, Cochrane Library, China National Knowledge Infrastructure (CNKI), Wan fang, and Chinese Biomedical Literature Database (CBM)

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 February 2021 and was last updated on 08 February 2021 (registration number INPLASY202120029).
Comparator: Patients with COVID-19 treated without metformin.

Study designs to be included: Perspective and retrospective studies.

Eligibility criteria: Perspective or retrospective studies that analyzed the outcomes of patients with COVID-19 treated with and without metformin.

Information sources: PubMed, Embase, Cochrane Library, China National Knowledge Infrastructure (CNKI), Wanfang, and Chinese Biomedical Literature Database (CBM).

Main outcome(s): Death, intubation, admission to ICU, deterioration, the length of stay, and adverse events.

Quality assessment / Risk of bias analysis: Cochrane Collaboration’s bias risk tool or Newcastle-Ottawa Scale (NOS) will be used.

Strategy of data synthesis: The odds ratio, relative risk, or hazard ratio, and its 95% confidence interval (CI), or mean difference will be calculated using Review Manager.

Subgroup analysis: The subgroup analysis will be performed based on age, diabetes, and obesity.

Sensitivity analysis: Removing 1 study each time from pooled analysis and reporting the results in a summary table.

Language: English or Chinese.

Country(ies) involved: China.

Keywords: COVID-19, SARS-CoV-2, metformin, clinical outcomes, efficacy, safety.

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