INPLASY PROTOCOL

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Conflicts of interest:
None declared.

Efficacy and safety of the combination of modern medicine and traditional Chinese medicine in pulmonary fibrosis caused by novel coronavirus disease(COVID-19) A protocol for Bayesian network meta-analysis

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Review question / Objective: **The aim of this meta-analysis of randomized controlled trials is to evaluate the efficacy and safety of the combination of modern medicine and traditional Chinese medicine in pulmonary fibrosis caused by novel coronavirus disease(COVID-19)**
Condition being studied: **Since December 2019, COVID-19 -19 has been discovered in Wuhan and spread rapidly all over the world, which seriously threatens people's health and safety. Clinical studies have found that some patients have varying degrees of inflammation after discharge, and severe pulmonary fibrosis is particularly serious in critically ill patients. This serious threat to prognosis is worthy of our attention. Early combined treatment with traditional Chinese medicine and modern medicine has important clinical significance for the recovery of pulmonary function and the prognosis of covid-19 in patients with pulmonary fibrosis caused by covid-19.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 17 November 2021 and was last updated on 17 November 2021 (registration number INPLASY2021110061).

INTRODUCTION

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Wuhan and spread rapidly all over the world, which seriously threatens people's health and safety. Clinical studies have found that some patients have varying degrees of inflammation after discharge, and severe pulmonary fibrosis is particularly serious in critically ill patients. This serious threat to prognosis is worthy of our attention. Early combined treatment with traditional Chinese medicine and modern medicine has important clinical significance for the recovery of pulmonary function and the prognosis of covid-19 in patients with pulmonary fibrosis caused by covid-19.

METHODS

Participant or population: Patients diagnosed with pulmonary fibrosis caused by covid-19. The patient should be in the convalescent stage of covid-19 and have pulmonary fibrosis, which meets the diagnostic criteria of pulmonary fibrosis. Regardless of age, gender, race and nationality.

Intervention: The treatment group will receive modern drugs plus traditional Chinese medicine or traditional Chinese medicine alone.

Comparator: The control group will receive conventional modern drugs or placebo with conventional modern drugs.

Study designs to be included: RCTs published in China and internationally in combination with traditional Chinese medicine and modern medicine in the treatment of pulmonary fibrosis caused by covid-19. The language is limited to Chinese and English.

Eligibility criteria: Inclusion criteria Research type. We will include randomized controlled trials (RCTs) published in China and internationally in combination with traditional Chinese medicine and modern medicine in the treatment of pulmonary fibrosis caused by covid-19. The language is limited to Chinese and English. Participants. Patients diagnosed with pulmonary fibrosis caused by covid-19. The patient should be in the convalescent stage of covid-19 and have pulmonary fibrosis, which meets the diagnostic criteria of pulmonary fibrosis. Regardless of age, gender, race and nationality. Intervention. Patients will be randomly divided into treatment group or control group. The treatment group will receive modern drugs plus traditional Chinese medicine (such as Lianhua Qingwen granule, Qingfei Paidu decoction, etc.) or traditional Chinese medicine alone, while the control group will receive conventional modern drugs or placebo of conventional modern drugs. Conventional modern drugs mainly include pirfenidone, nidanib, N-acetylcysteine and so on. There are no restrictions on dosage, usage and course of treatment.Results. Pulmonary function index, blood oxygen saturation and quality of life. Pulmonary function parameters mainly include vital capacity (VC), total vital capacity (TLC), FVC, flv, etc., and a 6-minute walking distance test will be conducted according to the American Thoracic Society (ATS) standard to evaluate pulmonary function. Blood oxygen saturation will be monitored by arterial oxygen saturation (SaO2) and oxygen partial pressure (PaO2) and other indicators measured by pulse oximeter. SF-36 form, SCL-90 form, SAS form and SDS form will be used as evaluation criteria for quality of life.Exclusion criteriaAnimal experiments and other studies, non randomized controlled trials, studies without clear efficacy evaluation criteria, reviews, poorly designed studies, cross-sectional studies, repeated or plagiarized articles.

Information sources: From December 2019 to November 2021, we will comprehensively search the following databases: PubMed, China National Knowledge Infrastructure (CNKI), Wanfang database, Cochrane Library, VIP database (VIP), China biomedical literature database (sinomed), EMBASE, ScienceNet and Cochrane Central Register of controlled trials and clinical trials. Government clinical registration system.

Main outcome(s): Pulmonary function index, blood oxygen saturation and quality of life.

Quality assessment / Risk of bias analysis: Two workers will be evaluated separately according to the Cochrane collaborative deviation risk tool. In this study, two researchers (LFR and WGY) will use the deviation risk assessment tool recommended in Cochrane system evaluator manual 5. 3 evaluate the quality of the included literature. If there is disagreement between the two researchers, corresponding decisions will be made through discussion. If necessary, a third researcher (zcq or ZW) will make a decision and explain the reasons. The following aspects will be used as evaluation criteria: correct application of randomization, application allocation concealment, blindness of participants and researchers, integrity of results and data, selective reporting of results and other relevant deviations. According to the above criteria, the deviation risk in the study is divided into three levels: "low deviation risk", "high deviation risk" and "fuzzy deviation risk".

Strategy of data synthesis: A data extraction form will be developed based on the Cochrane handbook checklist of items to consider for data collection (section 7.3.a of the handbook). Two authors will independently extract the data from included studies. Disagreements will be resolved by discussion between the two reviewers and reviewing of the trial information. When needed the trial authors will be contacted for clarifications.

Subgroup analysis: Subgroup analysis. Assuming that there is significant statistical heterogeneity, we will perform subgroup analysis according to various heterogeneity sources. For example, the patients were grouped according to their age, sex, disease duration, and disease severity.

Sensitivity analysis: We will perform a sensitivity analysis by excluding literature to determine whether the literature affects heterogeneity. If the heterogeneity changes after excluding a document, indicating that the document affects the heterogeneity, we will analyze the reasons. On the contrary, if there is no significant change in heterogeneity, the results are reliable.

Country(ies) involved: China.

Keywords: pulmonary fibrosis, COVID–19, network meta-analysis, traditional Chinese medicine, Modern medicine.

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