INPLASY PROTOCOL

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None declared.

Meta analysis on the treatment of acute exacerbation of chronic obstructive pulmonary disease with lung dispersing therapy

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Review question / Objective: **The purpose of this study is to investigate the effect of Xuanfei method combined with conventional western medicine and the situation of simple western medicine or other internal medicine methods of traditional Chinese medicine. The selected research method is randomized controlled trial.**
Main outcome(s): **Including effective rate, pulmonary function [forced expiratory volume in the first second, percentage of FEV1 in predicted value, forced vital capacity and/or FEV1/FVC], single TCM syndrome score (cough, expectoration, wheezing and/or shortness of breath), inflammatory indicators [C-reactive protein, interleukin-8, tumor necrosis factor- α 、 Leukotriene B4], arterial partial pressure of oxygen.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 19 November 2022 and was last updated on 19 November 2022 (registration number INPLASY2022110094).

INTRODUCTION

Review question / Objective: **The purpose of this study is to investigate the effect of Xuanfei method combined with conventional western medicine and the situation of simple western medicine or other internal medicine methods of traditional Chinese medicine. The selected research method is randomized controlled trial.**

Condition being studied: **treatment of acute exacerbation of chronic obstructive pulmonary disease with lung dispersing therapy.**

METHODS

Participant or population: Patients with acute exacerbation of chronic obstructive pulmonary disease.

Intervention: On the basis of western medicine treatment, oral Chinese medicine decoction is used for treatment, and the decoction is explicitly proposed to be formulated by the method of dispersing the lung or the method of dispersing the lung.

Comparator: Western medicine or other internal medicine therapies of traditional Chinese medicine.

Study designs to be included: RCT.

Eligibility criteria: It was determined by comprehensive analysis of clinical manifestations, exposure history of risk factors, physical signs and laboratory examination data. The main symptoms of COPD [chronic cough, expectoration and (or) dyspnea], history of exposure to risk factors, and presence of incomplete reversible airflow restriction are the necessary conditions for diagnosis of COPD. Pulmonary function index is the gold standard for diagnosing COPD. The forced expiratory volume (FEV1)/vital capacity (FVC)<70% in the first second after the use of bronchodilators can be determined as incomplete reversible airflow restriction. Acute exacerbation refers to the continuous deterioration of patients beyond daily conditions and the need to change the basic medication. Usually, in the course of disease, the patient's cough, expectoration, shortness of breath and (or) wheezing increase in a short period of time, and the amount of sputum increases, which is purulent or mucopurulent, and can be accompanied by fever and other obviously aggravated manifestations of inflammation.

Information sources: Wangfang, CNKI, CBM and VIP, PubMed, Web of Science, Cochrane Library and Embase

Main outcome(s): Including effective rate, pulmonary function [forced expiratory volume in the first second, percentage of FEV1 in predicted value, forced vital capacity and/or FEV1/FVC], single TCM syndrome score (cough, expectoration, wheezing and/or shortness of breath), inflammatory indicators [C-reactive protein, interleukin-8, tumor necrosis factor- α 、 Leukotriene B4], arterial partial pressure of oxygen.

Quality assessment / Risk of bias analysis: Cochrane Evaluation Manual.

Strategy of data synthesis: Meta analysis was conducted with Stata14.0 software. In the study, risk ratio (RR) was used for qualitative distribution data variables, and standardized mean difference was used for quantitative distribution data variables Mean difference (SMD) or weighted mean difference (WMD), each outcome indicator is measured by the effect value and 95% confidence interval (CI). use χ 2. Test for heterogeneity. If P value > 0.05 and I2 < 50%, it can be considered that there is no heterogeneity, and the fixed effect model is used for analysis; On the contrary, there is heterogeneity, which is analyzed by random effect model. If the heterogeneity among the research indicators is large and the number of studies meets certain application requirements, sensitivity analysis or subgroup analysis shall be conducted to explore the source of heterogeneity. In addition, funnel plot and shear compensation method were used to detect whether there was publication bias in the included literature. Finally, TSA v0.9 software was used to conduct a sequential analysis of the effectiveness.

Subgroup analysis: Subgroup analysis of patients with constipation.

Sensitivity analysis: Stata software conducts sensitivity analysis, and reflects the sensitivity of the article by deleting the change of the effect amount after one of the articles.

Country(ies) involved: China.

Keywords: Lung dispersing method; Chronic obstructive pulmonary disease; Acute exacerbation; Meta analysis.

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