INPLASY

Meta-analysis of Self-Blood Acupoint Injection for Chronic Obstructive Pulmonary Disease (COPD)

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ADMINISTRATIVE INFORMATION

Review Stage at time of this submission - Formal screening of search results against eligibility criteria.

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 13 December 2023 and was last updated on 13 December 2023.

INTRODUCTION

*R*eview question / Objective OBJECTIVE: To evaluate the clinical effectiveness of self-blood acupoint injection for chronic obstructive pulmonary disease (COPD).

Condition being studied Chronic obstructive pulmonary disease (COPD) is a heterogeneous disease characterized by chronic respiratory symptoms (dyspnea, cough, sputum, acute exacerbations) due to airway (bronchiectasis, bronchiectasis minor) and/or alveolar anomalies (emphysema) that cause persistent progressive exacerbations of airflow limitation.COPD is one of the leading causes of chronic disability and death worldwide, and information from the World Health Organization indicates that by COPD will rank 5th in the world's economic burden of disease in 2020. Currently, traditional Chinese medicine (TCM) has greater advantages in improving clinical symptoms, improving quality of life and reducing acute exacerbations.

Self-blood acupoint injection therapy is guided by Chinese and Western medicine theories, based on the meridian circulation of acupuncture points, taking its own venous blood injection in certain acupuncture points on its body, based on the injection of different functions of the acupuncture points to prevent and treat different diseases. In recent years, autologous blood therapy has made great progress in respiratory diseases, but in

COPD-related studies, the relevant outcome indicators are not completely consistent, and the quality of each study varies, lacking objective evaluation. Therefore, this paper transports the method of Meta-analysis to comprehensively evaluate the outcome indicators, in order to provide a basis for the self-blood acupoint injection for COPD can improve the clinical efficacy.

METHODS

Participant or population The study was conducted in patients with a confirmed diagnosis of COPD.

Intervention The intervention group was given self-blood acupoint injection (unlimited number of acupoints and courses of treatment) combined with conventional treatment or other traditional Chinese and Western medical therapies.

Comparator The comparator group was given conventional treatment (oxygen therapy, regulation of water-electrolyte balance, anti-infection, etc.) or other traditional Chinese and Western medical therapies.

Study designs to be included Total Effective Rate (TE), 6-minute walking test (6WMT), Chinese medicine syndrome score, St. George's respiratory questionnaire (SGRQ), Chronic Obstructive Pulmonary Self-Assessment Test (CAT score), dyspnea rating scale (mMRC score), pulmonary function (one-second force expiratory volume (FEV1), forceful lung capacity (FVC), first-second forceful expiratory volume/maximum lung capacity ratio (FEV1/ (FVC)), oxygen saturation (SpO2), inflammatory markers (CRP, PCT, IL-6, IL-8), immunoglobulins ((IgA), (IgG), (IgM)), and T-cell subpopulations (CD3 and CD4 cells).

Eligibility criteria Inclusion criteria(1) The study subjects were patients with confirmed COPD; (2) No language restriction; (3) Randomized controlled trial (RCT); (4) Interventions: the treatment group was given autologous blood acupoint injections (unlimited number of acupoints and courses of treatment) combined with conventional treatments or other traditional Chinese and Western medical therapies, and the control group was given conventional treatments (oxygen therapy, regulation of water-electrolyte balance, anti-infections, etc.) or other traditional Chinese and Western medical therapies; (4) Outcome indexes: total efficiency (TE), 6-minute walking test (6WMT), Chinese medicine evidence points, St. George's respiratory questionnaire (SGRQ), chronic

obstructive pulmonary self-assessment test (CAT score), dyspnea grading scale (mMRC score), lung function (one-second force expiratory volume (FEV1), forceful lung capacity (FVC), first-second forceful expiratory volume/maximum lung capacity ratio (FEV1/ (FVC)), oxygen saturation (SpO2), inflammatory markers (C-reactive protein (CRP), procalcitonin (PCT), interleukin 6 (IL-6), interleukin 8 (IL-8)), immunoglobulins (immunoglobulin A (IgA), immunoglobulin G (IgG), immunoglobulin M (IgM)), and T-cell subpopulations (CD3 and CD4 cells).

Information sources Chinese databases: China Knowledge Network (CNKI), China Biomedical Literature Database (CBM), Wanfang Database (WF), Wipro Database (VIP); English databases: Pubmed, Cochrane library, Embase, Web of science.

Main outcome(s) (4) Outcome indexes: total efficiency (TE), 6-minute walking test (6WMT), Chinese medicine evidence points, St. George's respiratory questionnaire (SGRQ), chronic obstructive pulmonary self-assessment test (CAT score), dyspnea grading scale (mMRC score), lung function (one-second force expiratory volume (FEV1), forceful lung capacity (FVC), first-second forceful expiratory volume/maximum lung capacity ratio (FEV1/ (FVC)), oxygen saturation (SpO2), inflammatory markers (C-reactive protein (CRP), procalcitonin (PCT), interleukin 6 (IL-6), interleukin 8 (IL-8)), immunoglobulins (immunoglobulin A (IgA), immunoglobulin G (IgG), immunoglobulin M (IgM)), and T-cell subpopulations (CD3 and CD4 cells).

Quality assessment / Risk of bias analysis Cochrane Revman 5.4 was applied to assess the risk of bias of the enrolled RCTs. The assessment entries were specifically seven items: generation of randomized sequences, allocation concealment, blinding of subjects and intervention providers, blinding of outcome evaluators, incomplete outcome data, selective reporting, and other biases, and the level of risk of bias was categorized as low risk of bias, high risk of bias, and unclear risk of bias for evaluation.

Strategy of data synthesis Meta-analysis of the outcome indicators was performed using RevMan 5.4 software. The M-H method was applied to dichotomous variables, and the effect indicators were odds ratio (OR) and 95% CI; the I-V method was applied to continuous variables, and the effect indicators were mean difference (MD) and 95% CI, with the test level of $\alpha=0.05$. The heterogeneity of the study outcomes was analyzed using the Q-test and the I2 statistic test, and the fixed-effects model was used to analyze the outcome indicators

if the statistical heterogeneity was small (P≥0.1, I2 ≤ 50%); if the statistical heterogeneity was large (P 50%), the fixed-effects If the statistical heterogeneity was large (P50%), the random effect model was used to analyze the outcome indicators, and subgroup analysis or sensitivity analysis was used to analyze the main sources of heterogeneity, in order to determine the reliability and stability of the results of the Meta-analysis. p<0.05 was considered as the difference was statistically significant.

Subgroup analysis None reported.

Sensitivity analysis None reported.

Language restriction Chinese and English.

Country(ies) involved China.

Keywords chronic obstructive pulmonary disease; self-blood acupoint injection; Meta-analysis.

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