INPLASY PROTOCOL

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None declared.

The Comparison of the efficacy of different Chinese classical prescriptions in the adjuvant treatment for mycoplasma pneumonia in pediatric patients: A protocol for systematic review and Network Meta-analysis

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Review question / Objective: **This study will aim to thoroughly compare the efficacy of different adjuvant treatments of mycoplasma pneumonia in children and rank their efficacy such that it will be able to provide an evidence-based basis for future clinical application.**
Condition being studied: **Mycoplasma pneumonia is a common respiratory disease in children with a high incidence and long treatment time. If not treated promptly, as a very harmful disease it can cause a variety of complications. TCM classical prescriptions is the brainchild of Chinese people using natural medicines since the antic, and now is still often used as an adjunct treatment for mycoplasma pneumonia in children. However, there are no studies comparing the efficacy and safety of different TCM classical herbal prescriptions as the adjuvant treatment for mycoplasma pneumonia in pediatric patients. Therefore, in order to provide a reference for clinical use, this study was conducted to compare them through a Network Meta-analysis method.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 November 2022 and was last updated on 24 November 2022 (registration number INPLASY2022110118).

INTRODUCTION

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METHODS

Search strategy: We will Search 7 common Chinese and English databases, including the China National Knowledge Infrastructure (CNKI), Wan Fang Data (WAN FANG DATA), VIP Information(VIP), the Chinese Biomedical Literature Database (Sino Med), PubMed, Embase and Cochrane Library. The retrieval time is from the database construction to March 31, 2023.No language or sample-size restrictions were used. The patient's age is under 18 year old.

Participant or population: Test subjects for the treatments will be the pediatric patient diagnosed with pediatric mycoplasma pneumonia, whose age was less than 18 years of age, but with no other restrictions on gender, race, case source, or follow-up time.

Intervention: The treatment group was treated with TCM classical prescriptions combined with conventional interventions of Western medicine. TCM classical prescriptions can be changed by a physician according to his/her clinical experience; the specifications or doses of western conventional treatment drugs were not to be limited, and the duration of each intervention and the mode of administration were not to be limited.

Comparator: The control group was treated with conventional Western medicine, such as azithromycin, erythromycin, minocycline hydrochloride, doxycycline, and adrenal glucocorticoids (used alone or in a mix), in combination or not with TCM classical prescriptions.

Study designs to be included: This systematic evaluation included clinical randomized controlled studies (RCTs) on both conventional Western treatment and TCM classical treatment for pediatric mycoplasma pneumonia, with no restrictions on country of publication or language of publication.

Eligibility criteria: The inclusion criteria for this study were established based on PICOS principles.1.Type of studies This systematic evaluation included clinical randomized controlled trials (RCTs) of both conventional Western treatment and TCM classical treatment for pediatric mycoplasma pneumonia. Hence, there will be no restrictions on the country of publication or language of publication.2. Type of participants The included subjects will be the pediatric patient that had been diagnosed with pediatric mycoplasma pneumonia, and the age will be restricted to under 18 years of age, with no other restrictions on gender, race, case source, or follow-up period. The diagnosis and efficacy criteria had been based on the relevant content of Mycoplasma pneumoniae pneumonia in the Expert Consensus on the Diagnosis and treatment of Mycoplasma pneumoniae pneumonia in children (2015 edition) ,the Expert Consensus on the diagnosis and treatment of Mycoplasma pneumoniae pneumonia in children with Integrated Traditional Chinese and Western Medicine (2017 edition) or the Zhufutang Practical Pediatrics (8th edition).3. Type of interventions and comparators The control group had been treated with conventional Western medicine such as azithromycin, erythromycin, minocycline hydrochloride, doxycycline, and adrenal glucocorticoids (used alone or in a mix), in conjunction with or without the usage of TCM classical prescriptions. The treatment group had been treated with TCM classical prescriptions integrated with conventional interventions of Western medicine. At the same time, the TCM classical prescriptions

can be altered by a physician according to his/her clinical experience and there will be no limitations to the specifications or dosage of drugs for western conventional treatment drugs, duration of each intervention as well as the mode of administration.4. Type of outcomes The predominant outcome indicators consist of total clinical efficiency, time for defervescence, cough recovery time, as well as lung rale disappearance time.

Information sources: The China National Knowledge Infrastructure (CNKI), Wan Fang Data (WAN FANG DATA), VIP Information(VIP), the Chinese Biomedical Literature Database (Sino Med), PubMed, Embase ,and Cochrane Library.

Main outcome(s): The main outcome indicators include time to defervescence, cough recovery time, and lung rale disappearance time.

Quality assessment / Risk of bias analysis: Two researchers will use the RCT bias risk assessment tool recommended by the Cochrane Collaboration Network bias risk assessment tool to assess the risk of bias among the included studies. Disagreements will be resolved by consulting a third researcher.

Strategy of data synthesis: The Stata 17.0 software will be utilized for the statistical analysis while the Risk ratio (RR) is utilized as the effect analysis statistic for dichotomous variables. Simultaneously, when the outcome indicators are continuous variables, the weighted mean difference (Weighted Mean Difference, WMD) will be utilized to combine effect sizes if the units of measurement were the same. Lastly, the Standardized Mean Difference (Standard Mean Difference, SMD) will be utilized to combine the effect sizes if the units of measurement are different or if the means of the original data differ significantly. A 95% confidence interval (CI) must be provided for each effect size.Data extraction was carried out independently by two researchers and cross-checked. Any disagreements that arose between them were resolved through discussion, or via a verdict made with the help of a third researcher, when they were unable to reach a consensus. Data extracted included basic information about the study (such as study title, name of the researcher, country, language, journal of publication); basic characteristics of the study population (sample size, case source, age, disease duration, diagnostic criteria, inclusion criteria, exclusion criteria); interventions and controls measures; and outcome indicators.

Subgroup analysis: None.

Sensitivity analysis: None.

Language restriction: There is an English language summary.

Country(ies) involved: China.

Keywords: Network meta-analysis, Mycoplasma pneumonia, classical formula/ prescription.

Contributions of each author:

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