INPLASY PROTOCOL

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None declared.

An Overview of Systematic Reviews of Traditional Chinese Medicine for Pneumonia in Children

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Review question / Objective: **Multiple systematic reviews (SR) have been conducted to assess Efficacy and safety of traditional Chinese medicine (TCM) in children with pneumonia. Here, we aimed to provide an overview to assess the methodological quality and quality of evidence for SR to provide convincing data on CHM for the treatment of childhood pneumonia(including mycoplasma pneumonia, viral pneumonia, and other common types of pneumonia).**
Main outcome(s): **The main outcome index is the clinical cure rate of the disease, other outcome indicators include the time of fever reduction, cough relief time, rales disappearance time, laboratory indicators (IL-6, IgM, TNF-α levels)), the recovery time of chest X-ray lesions, and the incidence of adverse reactions.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 September 2022 and was last updated on 10 September 2022 (registration number INPLASY202290048).

INTRODUCTION

Review question / Objective: **Multiple systematic reviews (SR) have been conducted to assess Efficacy and safety of traditional Chinese medicine (TCM) in children with pneumonia. Here, we aimed to provide an overview to assess the methodological quality and quality of evidence for SR to provide convincing data on CHM for the treatment of childhood pneumonia(including mycoplasma**

pneumonia, viral pneumonia, and other common types of pneumonia).

Condition being studied: Pneumonia in children is an inflammation of the lungs caused by a variety of pathogens, and is a common and frequently-occurring disease in infants and young children. Due to the special physiological characteristics of children, pneumonia is easy to persist and turn into severe disease or produce various complications, which has become the main cause of infant mortality. At present, the disease is still mainly treated by modern medicine, and its main purpose of treatment is to control infection, relieve symptoms, and prevent and treat complications. In recent years, research on the treatment of childhood pneumonia with traditional Chinese medicine has made positive progress in many aspects. There are relatively many meta-analyses on the treatment of childhood pneumonia by traditional Chinese medicine. Although the clinical effects of existing traditional Chinese medicine therapy have been tested in previous reports, further verification is urgently needed. Therefore, this paper intends to re-evaluate the current systematic review of traditional Chinese medicine in the treatment of childhood pneumonia, in order to provide indirect reference evidence for the treatment of childhood pneumonia by traditional Chinese medicine.

METHODS

Participant or population: Childhood pneumonia(including mycoplasma pneumonia, viral pneumonia, and other common types of pneumonia).

Intervention: Traditional Chinese Medicine; Integrative Chinese and Western Medicine ; With or without Western medicine and conventional treatment.

Comparator: Western medicine With or without conventional treatment.

Study designs to be included: Meta.

Eligibility criteria: Eligible studies met the following criteria: 1) Research: a systematic review of randomized controlled trials reported The effect of CHM on childhood pneumonia; 2) Participants: Children who were identified as having childhood pneumonia (including bronchopneumonia, mycoplasma pneumonia, (syncytial) viral pneumonia according to diagnostic criteria. There were no restrictions on age, race, duration and Disease intensity; 3) Intervention: CHM and/or combined western medicine and/or conventional western medicine treatment in the treatment group, regardless of drug form, dose, frequency and duration; 4) Comparison: Western medicine and/or western medicine in the control group Routine treatment or placebo; 5) Results: The main outcome index is the clinical cure rate of the disease, other outcome indicators include the time of fever reduction, cough relief time, rales disappearance time, laboratory indicators (IL-6, IgM, TNF-α levels)), the recovery time of chest X-ray lesions, and the incidence of adverse reactions. Studies meeting the following criteria were excluded: 1) Network meta-analyses, SR no meta-analyses, review articles, editorials, conference abstracts, case reports, and repeated studies; 2) Data-complete documentation was not available; 3) Controls using any of the one or more of two CHM therapies.

Information sources: PubMed, Embase, Cochrane Library, China Biomedical Literature Database, China National Knowledge Infrastructure, Wan Fang Database of China.

Main outcome(s): The main outcome index is the clinical cure rate of the disease, other outcome indicators include the time of fever reduction, cough relief time, rales disappearance time, laboratory indicators (IL-6, IgM, TNF-α levels)), the recovery time of chest X-ray lesions, and the incidence of adverse reactions.

Quality assessment / Risk of bias analysis: The methodological quality of the SR was assessed through AMSTAR-2 . It is a tool

for evaluating methodological quality consisting of 16 items, including seven key items (2, 4, 7, 9, 11, 13, and 15), each item can be evaluated as Yes, Partial Yes, or No. According to the number of violations of key items, the quality of research is divided into four levels: high, medium, low, or extremely low. The quality of the evidence for the outcome is determined by GRADE's four levels (high, medium, low, or extremely low) . When faced with the risk of bias, inconsistency, imprecision, indirectness, or publication bias, the evidence is reduced. Conversely, when faced with large effect sizes, dose-response, and adjustments for confounding factors, the evidence is improved. GRADE profifiler 3.6 software is used to assess the level of evidence.

Strategy of data synthesis: We provide a narrative description of the included SRs. Tabulate all the primary and secondary outcomes, and extract the pooled effect size. The risk ratio (RR) and 95% confifidence interval (CI) were used to summarize the dichotomous variables, and the weighted mean difference (WMD) or standard mean deviation (SMD) and 95% CI were used to summarize the continuous data. Obtain the heterogeneity of each included SR, which is detected by the I2 and Chi2 tests.

Subgroup analysis: Type of disease, treatment.

Sensitivity analysis: We provide a narrative description of the included SRs. Tabulate all the primary and secondary outcomes, and extract the pooled effect size. The risk ratio (RR) and 95% confifidence interval (CI) were used to summarize the dichotomous variables, and the weighted mean difference (WMD) or standard mean deviation (SMD) and 95% CI were used to summarize the continuous data. Obtain the heterogeneity of each included SR, which is detected by the I2 and Chi2 tests.

Country(ies) involved: China.

Keywords: Chinese herbal medicine, traditional Chinese medicine, children, pneumonia, overview, systematic review and meta-analysis.

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