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Medicine.Guo, FY¹; Ao, MY²; He, Y³; Liu, Q⁴.**ADMINISTRATIVE INFORMATION****Support** - National Natural Science Foundation of China (No. 82060658).**Review Stage at time of this submission** - Completed but not published.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202420089**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 21 February 2024 and was last updated on 21 February 2024.**INTRODUCTION**

Review question / Objective Inclusion criteria: ① Participant: Children with asthma in the range of 0 to 18 years of age who are in infancy, early childhood, preschool, school age, and adolescence. ② Treatment measures: Chinese herbal compounds, including Chinese herbal medicine, Chinese patent medicine, decoction of herbal medicine, etc. ③ Study design: Clinical studies, including randomized controlled trials (RCT), clinical controlled trials (CCT), etc.

Exclusion criteria: ① Cardiogenic asthma, other diseases secondary to asthma, and asthma diseases with complications. ② Non-children patients. ③ Chemical medicine, a monomer of traditional Chinese medicine, medicine for external use, and interventions are not available. ④ Unclear outcome indicators. ⑤ Basic experiments, review. ⑥ Repeated or suspected plagiarism research. ⑦ Research which full text could not be obtained.

Condition being studied Asthma is a common chronic respiratory disease in children, but also a heterogeneous disease characterized by chronic airway inflammation and airway hyperresponsiveness. The pathogenesis is very complex and has not yet been clarified. The theory of interaction of the mechanism between airway immune-inflammatory and neuromodulation is dominant. "Third epidemiological survey of childhood asthma in urban areas of China" showed that 13,992 cases of asthma were diagnosed, of which about 70%-80% of children with asthma developed in childhood at the age of 4-5 years. In the mid-childhood ages 5-14 years, it is among the top 10 causes. Death rates from asthma in children globally range from 0.0 to 0.7 per 100000. In recent years, with the deterioration of environment, the number of its incidence has shown a dramatic increase and has become a severe public health problem globally.

The most significant advantage of prescription screening based on net Meta-analysis is that it can

analyze the relative effectiveness of different interventions for treating the same disease in a comprehensive and quantitative manner through indirect comparisons, and it can rank the advantages and disadvantages of the efficacy and safety, which can provide a reliable, comprehensive, and powerful evidence-based basis for the selection of clinical treatment options.

METHODS

Search strategy ((Child*[tw] OR "child patient"[tw] OR infant[tw]) AND (Asthma[mh] OR "allergic asthma"[tw] OR "bronchial asthma"[tw] OR "cough variant asthma"[tw] OR "Chronic inflammation of the airway"[tw] OR "airway hyperreactivity"[tw] OR "Croup card"[tw] OR "syndrome characterized by dyspnea"[tw] OR "gasp syndrome"[tw] OR "childhood asthma"[tw]) AND ("traditional Chinese medicine"[tw] OR "traditional Chinese herb*[tw] OR "Chinese materia medica"[tw] OR decoction[tw] OR powder[tw] OR pill[tw] OR "Chinese medicinal herb"[tw] OR "prescription of Chinese medicine"[tw]) AND ("Randomized controlled trial"[pt] OR "controlled clinical trial"[pt] OR randomized[tiab] OR placebo[tiab] OR "drug therapy"[sh] OR randomly[tiab] OR trial[tiab] OR groups[tiab])).

Participant or population Children with asthma in the range of 0 to 18 years of age who are in infancy, early childhood, preschool, school age, and adolescence.

Intervention Chinese herbal compounds, including Chinese herbal medicine, decoction of herbal medicine.

Comparator Chemical medicine, a monomer of traditional Chinese medicine, medicine for external use, and interventions are not available.

Study designs to be included Randomized controlled trial (RCT).

Eligibility criteria (1) Inclusion criteria: ① Participant: Children with asthma in the range of 0 to 18 years of age who are in infancy, early childhood, preschool, school age, and adolescence. ② Treatment measures: Chinese herbal compounds, including Chinese herbal medicine, Chinese patent medicine, decoction of herbal medicine, etc. ③ Study design: Clinical studies, including randomized controlled trials (RCT), clinical controlled trials (CCT), etc.(2) Exclusion criteria: ① Cardiogenic asthma, other diseases secondary to asthma, and asthma

diseases with complications. ② Non-children patients. ③ Chemical medicine, a monomer of traditional Chinese medicine, medicine for external use, and interventions are not available. ④ Unclear outcome indicators. ⑤ Basic experiments, review. ⑥ Repeated or suspected plagiarism research. ⑦ Research which full text could not be obtained.

Information sources China Journal Full-text Database (CNKI), Wanfang Data Knowledge Service Platform (Wanfang), VIP Chinese Science and Technology Journal Full-text Database (VIP), Chinese Biomedical Literature Service System (SinoMed), Web of Science (WOS), PubMed, EMbase, Cochrane Library.

Main outcome(s) Overall Clinical Efficacy, FEV1, FVC, PEF, Adverse Reactions.

Quality assessment / Risk of bias analysis The Cochrane risk of bias assessment.

Strategy of data synthesis Network Meta-analysis was performed according to the frequency model, using the number of iterations set to 10,000, dichotomous variables were presented using ratio-ratio as the effect analysis statistic, and continuous variables were presented using difference in means as the effect analysis statistic, with 95% confidence intervals provided for each effect size. Surface under the cumulative ranking curve. SUCRA to visualize the relative merits of efficacy and safety among drugs, with larger SUCRA values indicating better efficacy.

Subgroup analysis Subgroup analysis is not set in this study.

Sensitivity analysis "Comparison-correction" funnel diagram for sensitivity analysis.

Country(ies) involved China.

Keywords Childhood asthma, Chinese medicine compounds, Network Meta-analysis.

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