INPLASY PROTOCOL

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Review Stage at time of this submission: **The review has not yet started.**

Conflicts of interest:
There is no conflict of interest in this study.

A comparison of efficacy and safety of complementary and alternative therapies for Severe mycoplasma pneumonia in children: A protocol for systematic review and meta analysis

Wang, X[1]; He, HA[2]; Zheng, JL[3]; Wang, JJ[4]; Zheng, H[5]; Zhang, BQ[6].

Review question / Objective: **In recent years, the incidence rate of children with severe Mycoplasma pneumoniae pneumonia (SMPP) is increasing, which poses a great threat to children's life and safety. There are some limitations in the existing drugs for the treatment of SMPP, and the supplementary and alternative therapy of SMPP plays an irreplaceable role in the treatment of this disease. This study will evaluate the efficacy and safety of various complementary and alternative therapies for SMPP by means of mesh meta-analysis. In order to provide the basis for clinical rational use.**
Condition being studied: **Two researchers will independently and comprehensively searched the Cochrane Central controlled trials registry, Cochrane Library, PubMed, web of science, EMBASE, CNKI and Wanfang database to collect RCT studies on complementary and alternative therapies for SMPP. And the relevant references included in the systematic review / meta-analysis are screened. The retrieval time limit is from the establishment of the database to November 2020. We will use Revman 5.3 software for meta analysis and use grade to grade the quality of evidence in the net meta-analysis (NMA).**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 18 November 2020 and was last updated on 18 November 2020 (registration number INPLASY2020110079).

INTRODUCTION

Review question / Objective: **In recent years, the incidence rate of children with severe Mycoplasma pneumoniae pneumonia (SMPP) is increasing, which poses a great threat to children's life and safety. There are some limitations in the existing drugs for the treatment of SMPP, and the supplementary and alternative therapy of SMPP plays an irreplaceable role in the treatment of this disease. This study**

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METHODS

Participant or population: Children with SMPP are diagnosed.The age is between 1 and 15 years old.There are no restrictions on gender and race.

Intervention: On the basis of conventional western medicine treatment, the treatment group is treated with SMPP supplement and replacement therapy. The basic intervention measures include magnetic therapy, acupoint application, cupping, acupuncture, massage and Chinese herbal medicine therapy. It can be used alone or in combination.

Comparator: On the basis of conventional western medicine treatment, the control group is treated with other methods except conventional western medicine treatment or intervention measures.

Study designs to be included: On the basis of conventional western medicine treatment, the treatment group is treated with SMPP supplement and replacement therapy. The basic intervention measures include magnetic therapy, acupoint application, cupping, acupuncture, massage and Chinese herbal medicine therapy. It can be used alone or in combination. On the basis of conventional western medicine treatment, the control group is treated with other methods except conventional west.

Eligibility criteria: Randomized controlled trials (RCT), whether blind method is used or not, and systematic reviews / meta-analysis of supplementary and alternative therapies for SMPP, including magnetic therapy, acupoint application, cupping, acupuncture, massage, Chinese herbal medicine, etc.

Information sources: We will search Cochrane Central Register of Controlled Trials, Cochrane Library, PubMed, Web of Science, EMBASE, CNKI and Wanfang databases to collect RCT studies on complementary and alternative therapies for the treatment of SMPP. At the same time, the relevant references included in the systematic review / meta-analysis are screened, and the retrieval time limit is from the establishment of the database to November 2020. The subject words and free words are used to search. If there are differences in opinion during the process, they can be resolved through relevant discussions or through consultation with a third researcher. The reasons for the differences need to be explained.

Main outcome(s): The main outcome measures, the total effective rate = (cured cases + effective cases + markedly effective cases) / total number of cases × 100%. The curative effect is evaluated according to the following: (1) Cure. After the treatment, the symptoms of cough and expectoration disappeared, the body temperature is normal, and the body test indexes are normal (lung dry and wet rales and X-ray examination of lung results shadow disappeared). (2) Significant effect. After the treatment, the symptoms of cough and expectoration are significantly improved, the body temperature is significantly decreased, and the detection indexes of the body are significantly improved (lung dry and wet rales, and shadow of X-ray examination of lung results are reduced). (3) Effective. After the

treatment, the symptoms of cough and expectoration are relieved, the body temperature is basically normal, and the physical indicators gradually returned to normal (lung dry and wet rales, as well as the shadow of X-ray examination of lung results are reduced). (4) Invalid. After the treatment, the clinical symptoms such as cough and body temperature did not improve or worsen, and other detection indexes did not tend to normal value (lung dry and wet rales, and X-ray examination of

Additional outcome(s): The secondary outcome measures, such as the time to return to normal of clinical symptoms (temperature, cough), length of hospital stay and incidence of adverse reactions during treatment.

Quality assessment / Risk of bias analysis: All references to risk bias in the included literature refer to Cochrane Handbook standards.It includes random method, allocation concealment, blind method, integrity of data results, selective report of research results and other factors that may affect authenticity. The judgment of "low" (low bias), "high" (high bias) and "unclear" (lack of relevant information or uncertainty of bias) are made for the above six items. The quality of each trial will be independently assessed by two researchers.

Strategy of data synthesis: In the process of literature screening, we first screen the title of the article, then read the abstract and the full text, and strictly follow the inclusion criteria and exclusion criteria to determine whether the final inclusion. All extraction process and data are recorded by Microsoft Excel 2019 software. The specific contents of the final record are as follows: (1) The basic information of the article (including the title of the article, the name of the author, the year of publication, and the publication journal, etc.); (2) The characteristics of the subjects (including age, gender, course of disease, diagnostic criteria of SMPP); (3) Intervention methods (including intervention measures, basic treatment methods, control measures and treatment courses); (4) Outcome indicators (including main outcome indicators, secondary outcome indicators and adverse reactions, etc.).

Subgroup analysis: If $P < 0.10$, $I2 > 50\%$, it indicates that there is heterogeneity, analyze the causes of heterogeneity, conduct subgroup analysis, and use fixed effect model for analysis.

Sensibility analysis: If $P \geq 0.10$, $I2 \leq 50\%$, there is no heterogeneity, and the fixed effect model is used for analysis.

Country(ies) involved: China.

Keywords: severe Mycoplasma pneumoniae pneumonia in children, complementary and alternative therapy, net meta-analysis, protocol, systematic review.

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