

INPLASY PROTOCOL

To cite: Li et al. The Efficacy of antifungal drugs combined with hormones in the treatment of allergic bronchopulmonary aspergillosis: A protocol for systematic review and meta analysis. Inplasy protocol 202250073. doi: 10.37766/inplasy2022.5.0073

Received: 12 May 2022

Published: 12 May 2022

Corresponding author:
Chang Li

wangyong2937@163.com

Author Affiliation:
Chongzhou People's Hospital.

Support: Q19057.

Review Stage at time of this submission: Preliminary searches.

Conflicts of interest:
None declared.

The Efficacy of antifungal drugs combined with hormones in the treatment of allergic bronchopulmonary aspergillosis: A protocol for systematic review and meta analysis

Li, C¹; Sun, L²; Liu, Y³; Zhou, HB⁴; Chen, JG⁵; She, M⁶; Wang, Y⁷.

Review question / Objective: Allergic bronchopulmonary aspergillosis (ABPA) is one of the most common respiratory fungal diseases. *Aspergillus fumigatus* is the most common pathogenic fungus, while *Aspergillus flavus* and *Aspergillus niger* can also be seen. Although there is some evidence that antifungal drugs and combination regimens can effectively relieve ABPA, high-quality evidence is still lacking. Therefore, this study adopts the method of systematic review to further evaluate the efficacy and safety of antifungal drug combination in the treatment of ABPA, and to provide more reliable evidence-based medical evidence for the formulation of clinical programs for ABPA.

Information sources: Cochrane Library, Embase, PubMed, CNKI, Wanfang Database, China Biomedical Literature Database (SinoMed).

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 May 2022 and was last updated on 16 May 2022 (registration number INPLASY202250073).

INTRODUCTION

Review question / Objective: Allergic bronchopulmonary aspergillosis (ABPA) is one of the most common respiratory fungal diseases. *Aspergillus fumigatus* is the most common pathogenic fungus, while

Aspergillus flavus and *Aspergillus niger* can also be seen. Although there is some evidence that antifungal drugs and combination regimens can effectively relieve ABPA, high-quality evidence is still lacking. Therefore, this study adopts the method of systematic review to further

evaluate the efficacy and safety of antifungal drug combination in the treatment of ABPA, and to provide more reliable evidence-based medical evidence for the formulation of clinical programs for ABPA.

Condition being studied: The retrieval time is as of May 1, 2022. Two researchers independently searched Cochrane Library, Embase, PubMed, CNKI, Wanfang Database, China Biomedical Literature Database (SinoMed) to obtain relevant treatment regimens for clinical research of ABPA. The quality of included studies will be determined by Two reviewers independently assessed using the Physiotherapy Evidence Database scale. A meta-analysis will be performed using Review Manager version 5.3 software to assess the effect of combined antifungal and hormonal therapy for ABPA. The quality of the included studies was assessed using the Cochrane risk of bias assessment tool.

METHODS

Participant or population: Patients diagnosed with ABPA.

Intervention: The experimental group was treated with hormones combined with antifungal drugs.

Comparator: The control group was treated with hormones.

Study designs to be included: RCT.

Eligibility criteria: According to the diagnostic criteria and related gold standards established by the American Society of Infectious Diseases, patients diagnosed with ABPA were included in this study.

Information sources: Cochrane Library, Embase, PubMed, CNKI, Wanfang Database, China Biomedical Literature Database (SinoMed).

Main outcome(s): The outcome including the number of markedly effective, effective

and ineffective, the disappearance time of signs, the disappearance time of mucus sputum plug, the disappearance time of pulmonary patch shadows, the number of patients with aggravated ABPA, the number and incidence of adverse reactions.

Quality assessment / Risk of bias analysis: The quality of the included studies was assessed using the Cochrane risk of bias assessment tool. The evaluation criteria include whether randomization, whether allocation is hidden, whether blinding is used, whether uncompleted data are reported, whether outcome indicators are selectively reported, and whether there are other biases. Each item can be evaluated as low bias and uncertain. or high bias.

Strategy of data synthesis: For data that cannot be quantitatively combined, only descriptive analysis is performed. For data that can be quantitatively merged, perform heterogeneity test: use I^2 to evaluate the size of heterogeneity, such as $P > 0.1$, $I^2 < 50\%$, it is judged to be homogeneous, and a fixed effect model is used to analyze the combined comprehensive effect; such as $P < 0.1$, and $I^2 \geq 50\%$ was judged to be heterogeneous, and a random effect model was used to analyze the combined comprehensive effect. Meta-analysis of outcome indicators was performed using RevMan 5.3 software, and forest plots were made. Standardized mean difference (SMD) was used as the effect analysis statistic for measurement data, and OR or RD and 95% CI were used as effect measurement value for enumeration data.

Subgroup analysis: Subgroup analyses were performed according to disease duration, age and sex.

Sensitivity analysis: Sensitivity analysis was performed using stata software, and the effect size and changes after deleting an article reflected the sensitivity of the article.

Country(ies) involved: China.

Keywords: Allergic bronchopulmonary aspergillosis, Glucocorticoids, Antifungal agents, Meta- analysis.

Contributions of each author:

Author 1 - Chang Li.

Email: lichang3485@163.com

Author 2 - Lin Sun.

Email: sunermum@163.com

Author 3 - Yin Liu.

Email: liuyin820526@163.com

Author 4 - Hongbing Zhou.

Email: zhb19771220@163.com

Author 5 - Jianguo Chen.

Email: adams3345@126.com

Author 6 - Min She.

Email: smcd007@163.com

Author 7 - Yong Wang.

Email: wangyong2937@163.com