INPLASY

Comparison of Antifungal Drugs in the Treatment of Invasive Pulmonary Aspergillosis: A Systematic Review and Network Meta-analysis

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ADMINISTRATIVE INFORMATION

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 August 2023 and was last updated on 24 August 2023.

INTRODUCTION

Review question / Objective P: invasive pulmonary aspergillosis (IPA); I: different antifungal drugs; C: different antifungal drugs, including combination therapy; O: the overall response (complete and partial response, as defined in each study), all-cause mortality (ACM), and the rate of adverse events. S: RCTs.

Condition being studied Research equipment, personnel, etc.

METHODS

Participant or population patients with probable or proven IP.

Intervention Voriconazole, isavoconazole, posaconazole, amphotericin B and other antifungal agents.

Comparator different Antifungal drugs, including combination therapy.

Study designs to be included We included RCTs that focused on the initial treatment of patients with probable or proven IPA, specifically comparing the efficacy of different therapeutic drugs for IPA. Studies that solely consisted of case reports, studies that did not report on clinical outcomes, and studies with only a single control arm were excluded from our analysis.

Eligibility criteria We included RCTs that focused on the initial treatment of patients with probable or

proven IPA, specifically comparing the efficacy of different therapeutic drugs for IPA. Studies that solely consisted of case reports, studies that did not report on clinical outcomes, and studies with only a single control arm were excluded from our analysis.

Information sources A comprehensive search was conducted on PubMed, Medline, EMBASE, and the Cochrane Central Register of Controlled Clinical Trials to identify all relevant articles on the efficacy of IPA treatment.

Main outcome(s) The overall response (complete and partial response, as defined in each study), all-cause mortality (ACM), and the rate of adverse events.

Quality assessment / Risk of bias analysis The quality of the included studies was assessed by the revised tool for risk of bias.

Strategy of data synthesis STATA software will be used for data analysis. Heterogeneity will be considered if $I^2 > 50\%$ and $P < 0.1$. Random effect combined effect size will be selected if there is heterogeneity, and fixed effect combined effect size will be selected if there is no heterogeneity.

Subgroup analysis Subgroup studies were conducted according to patient conditions or age.

Sensitivity analysis STATA software will be used to perform sensitivity analysis, and the change of effect size after deleting one of the articles will be used to reflect the sensitivity of the articles.

Country(ies) involved China.

Keywords invasive pulmonary aspergillosis, voriconazole, isavoconazole, posaconazole, amphotericin B.

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