INPLASY PROTOCOL

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None declared.

Oral versus parenteral antibiotic therapy in adult patients with community-acquired pneumonia: A meta-analysis of randomized controlled trials

Teng, GL[1].

Review question / Objective: **Antibiotic therapy is widely used for patients with community-acquired pneumonia (CAP), yet whether the efficacy of antibiotics differs based on the treatment mode remains unclear. This study aimed to summarize the evidence regarding the efficacy and safety of oral versus parenteral administration of antibiotic therapy for the treatment of patients with CAP.**
Condition being studied: **Studies designed as randomized controlled trials (RCTs) comparing the treatment effectiveness of antibiotic therapy via oral or parenteral administration among patients with CAP were considered eligible.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 March 2022 and was last updated on 15 March 2022 (registration number INPLASY202230069).

INTRODUCTION

Review question / Objective: **Antibiotic therapy is widely used for patients with community-acquired pneumonia (CAP), yet whether the efficacy of antibiotics differs based on the treatment mode remains unclear. This study aimed to summarize the evidence regarding the efficacy and safety of oral versus parenteral administration of antibiotic therapy for the treatment of patients with CAP.**

Condition being studied: **Studies designed as randomized controlled trials (RCTs) comparing the treatment effectiveness of**

antibiotic therapy via oral or parenteral administration among patients with CAP were considered eligible.

METHODS

Search strategy: "antibiotic therapy," "oral administration," and "community-acquired pneumonia".

Participant or population: Adults with CAP, irrespective of severe or non-severe cases.

Intervention: Oral antibiotic therapy.

Comparator: Parenteral antibiotic therapy.

Study designs to be included: The study was required to have an RCT design.

Eligibility criteria: The inclusion criteria were as follows: (1) patients: adults with CAP, irrespective of severe or non-severe cases; (2) intervention: oral antibiotic therapy; (3) control therapy: parenteral antibiotic therapy; (4) outcomes: the trial reported at least one of the following outcomes: clinical success at the end of treatment, clinical success at follow-up, all-cause mortality, or adverse events; and (5) study design: the study was required to have an RCT design.

Information sources: PubMed, Embase, and Cochrane Library

Main outcome(s): Clinical success at the end of treatment, clinical success at follow-up, all-cause mortality, or adverse events.

Quality assessment / Risk of bias analysis: Cochrane quality assessment tool.

Strategy of data synthesis: The relative risk (RR) with 95% confidence interval (CI) were applied to assess estimated effects, and all of pooled analysis results were calculated using the random-effects model, considering the underlying variations across the included trials.

Subgroup analysis: Subgroup analyses were performed according to mean age, male proportion, intervention, control, and follow-up duration, and the differences between subgroups were compared using an interaction test, assuming that the data met normal distribution.

Sensitivity analysis: The robustness of the pooled conclusion was assessed using a sensitivity analysis by sequentially removing a single trial from the overall analysis.

Language: No restriction were placed on published language.

Country(ies) involved: China.

Keywords: oral; parenteral; antibiotic; community-acquired pneumonia; systematic review; meta-analysis.

Contributions of each author:
Author 1 - Ge-Ling Teng.