

# INPLASY PROTOCOL

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**Conflicts of interest:**  
None declared.

## Effects of albumin infusion on the treatment of complications in cirrhosis patients with hypoproteinemia: a systematic review and meta-analysis

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**Review question / Objective:** This review aims to investigate effects of intravenous albumin infusion on the treatment of complications in cirrhosis patients with hypoproteinemia.

**Condition being studied:** The liver is an important organ for synthesis, decomposition and energy metabolism. For protein, fat and carbohydrate metabolism of three nutrients Plays a pivotal role. Patients with cirrhosis due to the number of effective hepatocytes reduction and metabolic dysfunction, prone to different degrees of low protein blood Disease, and hypoalbuminemia is ascites, spontaneous bacterial peritonitis hair If there is no timely intervention, the quality of life of patients will be seriously affected Quantities and disease progression. For cirrhosis hypoproteinemia, conventional treatment The method is direct infusion of human blood albumin (HSA), which needs repeated application. Treatment costs are high. Therefore, the purpose of this study was to investigate the effect of albumin infusion on the related complications in cirrhosis patients with hypoproteinemia.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 16 March 2021 and was last updated on 16 March 2021 (registration number INPLASY202130052).

### INTRODUCTION

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## METHODS

**Participant or population:** Our inclusion criteria for this systematic review and meta-analysis were all clinical trials in human subjects that met our pre-defined inclusion criteria: Population: Patients with hypoproteinemic cirrhosis (defined as ALB<35g/l), regardless of gender, age, etiology of liver disease.

**Intervention:** Albumin infusion of 1 weeks.

**Comparator:** Standard medical therapy without intravenous albumin.

**Study designs to be included:** RCT.

**Eligibility criteria:** The subjects were randomized into groups, the control group was set up, and the blind method was applied.

**Information sources:** PubMed, Embase, Cochrane and ClinicalTrial.gov (ClinicalTrials.gov) 18 The incidence of related complications.

**Main outcome(s):** The incidence of related complications.

**Additional outcome(s):** Pulmonary edema, Hepatic encephalopathy, renal function, Gastrointestinal bleeding, mortality rate, Infection rates.

## Quality assessment / Risk of bias analysis:

The quality of this study will be independently assessed by the two authors against the Cochrane Collaborative Bias Assessment Tool (Haggins 2011, Sterne Jac 2019). If there are objections, they will be resolved through the third opinion re-evaluation and discussion.

**Strategy of data synthesis:** Direct analysis was performed using the RevMan random effects model to estimate the combined relative risk (RR) and 95% confidence interval (CI). Heterogeneity was assessed using I-statistics, with a value over 50% indicating significant heterogeneity. Funnel plots will be used to evaluate the effects of small studies.

**Subgroup analysis:** Cirrhosis patients with Hepatic encephalopathy, cirrhosis patients with AKI.

**Sensitivity analysis:** Effect size combination was performed after each included study was eliminated one by one, and effect size combination was performed after changing inclusion and exclusion criteria or excluding certain types of literature.

**Country(ies) involved:** England, India.

**Keywords:** cirrhosis patients, hypoproteinemia, albumin infusion, complications, Pulmonary edema.

## Contributions of each author:

Author 1 - Jiahuang Huang.

Author 2 - Wei Li.