INPLASY

Sivelestat for septic patients with acute respiratory distress syndrome: a systematic review and meta-analysis

INPLASY202560111

doi: 10.37766/inplasy2025.6.0111

Received: 28 June 2025

Published: 28 June 2025

Zheng, WH; Hu, YG; Yu, DX; Huang, HB.

Corresponding author:
Hui-Bin Huang

psyc6789@163.com

Author Affiliation:
Guang'anmen Hospital, China Academy of Chinese Medical Sciences.

ADMINISTRATIVE INFORMATION

Support - Fujian Provincial Senior Talent Training Program on Western Medicine Doctors Learning from Traditional Chinese Medicine.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202560111

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 28 June 2025 and was last updated on 28 June 2025.

INTRODUCTION

Review question / Objective The current systematic review and meta-analysis aimed to evaluate the effectiveness of sivelestat in reducing mortality and improving other important outcomes in this patient population.

Condition being studied Condition being studied The research team comes from the Department of Critical Care Medicine of a tertiary hospital in China, and all the team members have perfect clinical experience in critical care and resuscitation. Moreover,our team members have published more than 40 meta-analyses, which can guarantee the successful completion oOf the current research.

METHODS

Participant or population Participants: adult patients aged 18 years or older who have been diagnosed with sepsis and ARDS/ALI.

Intervention Sivelestat therapy.

Comparator standard care or placebo.

Study designs to be included Not limited.

Eligibility criteria studies comparing sivelestat in septic patients with ARDS against controls.

Information sources PubMed, Embase, Web of Science, and the Cochrane Library.

Main outcome(s) The primary outcomes were mortality at the longest follow-up available.

Quality assessment / Risk of bias analysis The Cochrane Risk-of-Bias (ROB), a tool developed by Cochrane for RCTs, was used to assess the quality of each study.

Strategy of data synthesis Meta-analysis.

Subgroup analysis Subgroup analyses were conducted based on disease severity, sample size, and study design.

Sensitivity analysis Sensitivity analyses were performed by sequentially excluding each study to assess the robustness of the results.

Country(ies) involved China.

Keywords sivelestat; cardiac surgery; partial pressure of oxygen/fraction of inspiration oxygen; mortality; meta-analysis.

Contributions of each author

Author 1 - Wen-He Zheng.
Author 2 - Yan-Ge Hu.
Author 3 - Da-Xing Yu.
Author 4 - Hui-Bin Huang.
Email: psyc6789@163.com