

中文題目：探討敗血性心肌病變與敗血症病人死亡率的關聯性：系統性回顧與統合分析

英文題目：The Association of Sepsis-induced Cardiomyopathy and Mortality: A systemic review and meta-analysis

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## **Background**

Sepsis is a major cause of mortality, and patients with sepsis often involve end organ damage, including heart. Although sepsis-induced cardiomyopathy (SIC) was regarded as a reversible myocardial dysfunction, some studies showed that septic cardiomyopathy may be associated with the prognosis. So far, the evidence remained sparse and controversial. Therefore, against the background, this study aimed to perform a systematic review to assess the association of SIC and mortality among patients with sepsis.

## **Methods**

We systematically searched literature in Pubmed and EMBASE from inception to July 2021. Searching strategy was to combine the synonymous free texts and controlled vocabulary of ‘sepsis’, ‘cardiac dysfunction’ and ‘mortality’. Article types were restricted to cohort study and case control study. Sepsis defined using sepsis-2 or sepsis-3 consensus were included. Pediatric, pregnant or animal model researches were excluded. Dichotomous variables were pooled using a random-effects model and presented with a risk ratio (RR) and 95% confidence interval (CI). Primary outcomes were included in-hospital mortality, and one-month mortality after sepsis. Secondary outcomes included mortality in intensive care units (ICU) and the length of ICU. Subgroup analyses stratified the type of sepsis-induced cardiomyopathy, the method of defining SIC, and right or left heart involved in SIC. Newcastle Ottawa scale was used for appraisal and meta-analysis was carried on in the RevMan software.

## **Results**

A total of 21 articles including 4,343 patients were eligible for the analyses. During hospitalization, patients complicated with sepsis-induced cardiomyopathy have a higher risk of mortality, compared with those without septic cardiomyopathy, i.e., RR 1.69, (95% CI: 1.12 to 2.54);  $p < 0.0001$ ,  $I^2 = 78\%$ . Other subgroup and sensitivity analyses remained ongoing.

## **Conclusion**

In our preliminary findings, SIC is associated with a higher risk of in-hospital mortality among patients with sepsis. More analyses are warranted to assess the robustness of the results.