

The Risk of Mortality Associated With Opioid Use in Patients With Acute Heart Failure: Systematic Review and Meta-analysis

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Abstract

Aims:

The impact of opioids in acute heart failure (AHF) is unclear. This systematic review with meta-analysis aimed to evaluate the mortality risk associated with opioid use in AHF.

Methods and Results:

An electronic search was performed in MEDLINE, CENTRAL, Web of Science Core Collection, and SCIELO (December 2019) for randomized controlled trials and observational studies evaluating the impact of opioids in in-hospital and 30-day mortality in patients with AHF. Data were screened, extracted, and appraised by 2 independent reviewers. A random-effects meta-analysis to estimate the pooled odds ratios (OR) with 95% confidence intervals (CI) was performed and heterogeneity was evaluated using the I^2 statistics. Six observational retrospective studies with 151,735 participants were included. Pooled results showed a statistical significant association between morphine and in-hospital mortality (OR 1.78; 95% CI 1.01–3.13; $I^2 = 92\%$; 6 studies) and 30-day mortality (OR 1.56; 95% CI 1.14–2.15; $I^2 = 0$; 2 studies). Both outcomes were rated as having a serious risk of bias and had a very low Grading of Recommendation, Assessment, Development, and Evaluation evidence.

Conclusions:

Opioids seem to be associated with an increased risk of short-term mortality in AHF patients; however, the confidence in the estimated effect is very low, which highlights the need of further research to evaluate this question.