

Use of Intravenous Morphine for Acute Decompensated Heart Failure

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Background: Current guidelines regarding the use of intravenous morphine (IM) in the management of patients with acute decompensated heart failure (ADHF) are discordant; whereas the American guidelines reserve IM for terminal patients, the European guidelines recommend its use in the early stage of treatment. **Aim:** To determine the impact of IM on outcomes of consecutive ADHF patients enrolled in a national survey.

Methods: Propensity score analysis of ADHF patients with and without use of IM in a national heart failure survey.

Results: Of the 4102 enrolled patients, we identified 2336 ADHF patients, of whom 218 (9.3%) received IM. IM patients were more likely to have acute coronary syndromes, acute rather than exacerbation of chronic heart failure, diabetes mellitus, and dyslipidemia. They were more likely to have hyperglycemia, leukocytosis, and higher heart rate, and to receive aspirin and statins, but less likely to receive diuretics. Unadjusted in-hospital mortality was 11.5% vs. 5.0% for patients who did or did not receive IM, and the adjusted odds ratio (OR) for in-hospital death was 2.0 (1.1-3.5, $p=0.02$). Using propensity analysis, we identified 211 matched pairs of patients who did or did not receive IM. In multivariable analysis accounting for the propensity score, use of IM was not associated with more in-hospital death (OR 1.2 0.6-2.4, $p=0.55$).

Conclusions: IM was used sparingly in our ADHF cohort, and was independently associated with increased in-hospital death in multivariate analysis, but not in propensity score analysis. Thus, our propensity score analysis did not find a deleterious effect of IM per se. However, IM should be used sparingly and cautiously in the setting of ADHF, given the high-risk profile of pts receiving IM.