

Long term safety of inotropes and/or vasopressors in acute heart failure: results from ESC-HF-LT registry

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On behalf of: on behalf of ESC-HF-LT registry investigators

Introduction: Increasing short term safety concerns have been reported concerning the use of inotropes and/or vasopressors in the initial management of acute heart failure (AHF). However, data on long-term safety of these agents is scarce. We therefore sought to assess safety, especially long term mortality, of intravenous inotropes and/or vasopressors in AHF by a post-hoc analysis of a large AHF registry.

Methods: The European Society of Cardiology Heart Failure Long – Term Registry (ESC-HF-LT) was a multicenter prospective observational registry conducted in 21 countries between 2011 and 2013. Median follow-up duration was 381 [363; 457] days. For present analysis we selected patients (pts) with unscheduled hospitalizations for AHF, for whom intravenous (IV) therapy was needed (n=6900), including 833 (12%) pts who received one or more inotropes and/or vasopressors. A further analysis of 1212 pts was derived using propensity score matching (606 pts in each treatment group) in which 35 baseline variables were balanced as assessed by standardized mean differences. Primary endpoint was long-term all-cause mortality. Secondary endpoints were in-hospital mortality, all-cause post-discharge mortality and post-discharge rehospitalization.

Results: Long-term all-cause mortality was greater in pts receiving IV inotrope and/or vasopressor compared to those who did not, both in the whole (43.7 % vs. 23.2 %) and the matched cohorts (39.8 % vs. 29.4 %). Adjusted hazard ratio (HR) for the association between the use of IV inotrope and/or vasopressor and long-term all-cause mortality was 1.720 [1.498 – 1.975] in the whole cohort and 1.434 [1.128-1.823] in the matched cohort. Adjusted HR for associations between the use of IV inotrope and/or vasopressor and in-hospital mortality were 3.138 [2.432-4.048] in the whole and 1.873 [1.151 – 3.048] in the matched cohorts. Adjusted HR for long-term all-cause mortality in patients discharged alive were 1.249 [1.059-1.474] in the whole and 1.078 [0.769-1.512] in the matched cohorts. No association was found between the use of IV inotrope and/or vasopressor and post-discharge rehospitalization, neither in the whole nor in the matched cohorts (HR 1.101 [0.924-1.311] and 1.117 [0.788-1.582] respectively).

Conclusions: The use of inotropes and/ or vasopressors in AHF was associated with increased long-term risk of all-cause death.

