MÆDICA - a Journal of Clinical Medicine

JOURNAL CLUB

Levosimendan vs Dobuatimine: life-expentancy in acute heart failure patients on betablockers, SURVIVE Study

V lad VINTILA, MD, PhD fellow*

Specialist in Internal Medicine, Emergency University Hospital, Bucharest, Romania

Among proven therapies in heart failure, betablockers play a central role. This therapy was proved to be safe and life-saving in chronic heart failure. The problem arises when a patient with chronic heart failure becomes decompensated and needs hospitalization. The current guidelines recommend decreasing the dose of betablockers. The study investigates response to acute inotropic medication on-top of chronic medication. The aim of the study was to assess the outcome of patients receiving a single intravenous infusion of levosimendan or dobutamine.

The **SURVIVE** study was a randomized, blinded, double-dummy, multi-center trial which enrolled 1327 patients having acute decompensation of heart failure, 1171 (88%) having previous chronic heart failure (CHF), 669(50%) receiving betablockers within 24 hours prior to admission to hospital. 51% of patients with CHF history (602 of 1171) were receiving betablockers. Patients received standard dosage of levosimendan or dobutamine. All cause mortality was studied at 5, 14 and 31 days. All cause mortality in previous CHF patients (1171) was lower in levosimendan group, statistically significant at 14 days, with a trend at 5 days (7.0 vs. 10.3%, HR, 0.67, CI 0.45-0.99, p = 0.045). When the use of betablockers was considered, those treated with levosimendan had a better survival rate at 5 days (p=0.03), which remained only a trend at 14 and 31 days. In the levosimendan treated group, all cause mortality was lower in those associating CHF and usage of betablockers. This supports the idea of an additive effect between betablockers and levosimendan, finding supported by other studies as well (LIDO, BEAT-CHF). It appears that haemodinamic response is better in levosimendan group of patients being already on betablockers, while dobutamine diminishes initially (the first 5 days) the favorable effect of betablockers. At 31 and 180 days the differences were no longer significant, maybe due to the small numbers of patients and post-hoc analysis, not predefined analysis. ❑

CONCLUSION

There is a possible advantage of usage of levosimendan instead of dobutamine in patients with acute decompensated heart failure, especially in previous CHF patients treated with betablockers. ❑

Comment on the paper:
Mebazza A, Niminen MS, et al – Levosimendan vs. Dobutamine: outcomes for acute heart failure patients on betablockers in SURVIVE. *Eur JHF* 2009; 11:304-311