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Time to Diuretic in Acute Heart Failure



We read with great interest the analysis regarding the effect of door-to-diuretic time on clinical outcomes in patients with acute heart failure (AHF) (1). May we ask the authors to provide additional analysis to better support their conclusion?

First, unfortunately several inappropriate statistical tests seem to have been applied when describing the laboratory findings in Table 1 in the article by Park et al. (1). It would be helpful if the authors could provide medians and interquartile ranges for the variables obviously not having a normal distribution including B-type natriuretic peptide, N-terminal prohormone of B-type natriuretic peptide, and troponin I and T. Second, we are concerned that other errors may have been introduced in the binary logistic regression model: for example, ischemic heart disease was more common in the early compared to the delayed treatment group (Table 1: 33.5% vs. 27.6%, respectively), but reported as a predictor of delayed

door-to-diuretic time in Table 2. This finding is rather difficult to explain and may have been introduced by substantial confounding in the model. Third, despite a 95% confidence interval clearly passing the 1.00, a highly significant p-value was reported for chronic obstructive pulmonary disease, New York Heart Association functional class, and heart rate. Could the authors explain this in more detail?

Fourth, only patients hospitalized for AHF were included in this analysis. It would be interesting to know how many AHF patients receiving intravenous furosemide in the emergency department were directly discharged and, therefore, excluded. Fifth, to avoid confounding by a delayed or missed diagnosis, in a similar analysis regarding door-to-diuretic time (2), patients were only included if diagnosed with AHF within 3 h of their first evaluation by the attending emergency department physician. Can the authors add a similar analysis restricted to patients diagnosed with AHF within 3 h? Sixth, previous large intercontinental studies have documented differences in outcomes between East Asian and Western populations with AHF, with greater mortality in Western populations (3). Can the authors comment on whether this could increase the importance of door-to-diuretic time on clinical outcomes?

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