Abstract: P494

Hyponatremia in acute heart failure

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Background: Hyponatremia is a common electrolyte abnormality in acute heart failure (HF), being associated with worst prognosis.

Purpose: Evaluate the impact of hyponatremia in the prediction of clinical gravity (Killip III and IV) at admission and the outcome in acute HF patients.

Methods: Single-centre retrospective study, engaging patients hospitalized for acute HF between 1/01/2008-31/12/2017. Demographic, clinical and blood work data at admission were collected. Hyponatremia was defined as serum sodium level of less than 135 mEq/L. T-student, U Mann-Whitney, Qui square test and Spearman's rank correlation coefficient were used to compare categorical and continuous variables. Logistic regression was performed to assess mortality rates based on the serum sodium levels.

Results: 423 patients were included, mean age 67.81±12.16 years, with 29.8% females, presenting an in-hospital mortality rate of 5.9%. Patients with hyponatremia (27.19%) were similar regarding gender, age, cardiovascular history and mortality rates compared to patients without hyponatremia. On the other hand, hyponatremia patients had higher levels of blood urea nitrogen (67.00±68 vs 54±36, p<0.001) (r= 0.097, p=0.049), creatinine (1.36±0.74 vs 1.15±0.51, p<0.001) (r=-0.239, p<0.001) and B-type Natriuretic peptide (1850±2712 vs 1337±3574, p<0.001) (r=-0.216, p<0.001) at admission. Also, at admission more patients presented with Killip IV (37.7 vs 18.8%) on the hyponatremia group, with an odds ratio 1.008, p=0.004 (confidence interval 1.002-1.013). Logistic regression revealed that hyponatremia was not a predictor of in-hospital, 6-months and 1-year mortality, as well of hospital readmission in the same period.

Conclusions: Hyponatremia was associated with higher Killip class at admission, however, without a direct mortality impact. Hyponatremia was weakly correlated with low hemoglobin values, and higher blood urea nitrogen, creatinine and B-type Natriuretic peptide levels.