ASSOCIATION BETWEEN ELECTROLYTE IMBALANCE AT ADMISSION AND PROGNOSIS IN PATIENTS WITH DECOMPENSATED HEART FAILURE: LONG-TERM RESULTS

MD, Fazulina Christina Sergeevna
Russian National Research Medicine University, Moscow, Russia

BACKGROUND
This prospective study baseline on the data of 52 consecutive patients admitted to the hospital due to acute decompensation of heart failure.
Heart failure physiology is extremely complex with a secondary sympathetic and neurohormonal activation. Electrolyte disorders are common and potentially fatal laboratory findings for emergency patients, hence more frequent monitoring of the serum electrolyte concentrations becomes very important for the patients with heart failure.

OBJECTIVES
The present study was conducted with the aim to estimate association between electrolyte levels measured at admission and morbidity/mortality within the first year after an episode of acute decompensation of heart failure.

METHODS
All the patients were severely admitted to the cardiology department of the state hospital №24 named Katerine_II, attached to Russian National Medical University named N.I._Pirogov during the period of February-June 2015.
Inclusion criteria: the patients were hospitalized for acute decompensation of congestive heart failure with compromised left ventricle function due to either low LVEF or mitral/aortic valve stenosis or regurgitation. On the other hand, the informed consent was obtained by each of them and the age of inclusion was more than 18 years old.
Exclusion criteria: Acute de novo heart failure, patients with myocarditis, infective endocarditis, active cancer process. Also, patients with conditions causing electrolyte imbalance such as - vomiting, diarrhea, salt-losing nephropathy, diabetic ketoacidosis, cirrhosis, nephrotic syndrome, chronic kidney disease.

RESULTS
Prevalence of electrolyte imbalance occurred in 19 patients 37%; hyponatremia 9 (17%); dyskalemia 10 (19%) among which hypokalemia 6 (12%) hyperkalemia 4 (8%). Known as an indicator of severity - in this study hyponatremia was associated with four times increased the 1-year mortality of any cases [RR 3.89 CI 1.55-10.24, p<0.05]. The same pattern is seen in patients with hypo- and hyperkalemia with a 20% and 30% 1-year mortality increase [RR 1.34, CI 0.88-2.07, p >0.05; RR 1.21 CI 0.66-2.24 p >0.05] respectively, although obtained results may not be considered statistically significant, perhaps it was due to a small sample size.

CONCLUSION
Hyponatremia have long-term prognostic value in patients hospitalized for acute decompensation of heart failure. It is a predictor of mortality, dyskalemia had the same trend thus statistically insignificant, perhaps due to a small sample size.