ASSOCIATION OF HYPONATREMIA AND OUTCOMES IN PULMONARY HYPERTENSION AND RIGHT VENTRICULAR FAILURE

ACC Oral Contributions
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Background: Hyponatremia is an important marker and prognosticator of left-sided heart failure. The degree of hyponatremia parallels the severity of heart disease and prognosis. However, less is known about the significance of hyponatremia in isolated right ventricular (RV) failure. The objective of this study was to determine the prognostic role of hyponatremia in patients with pulmonary hypertension and right heart failure.

Methods: We retrospectively identified all adult patients who were admitted between 1999 and 2008 with pulmonary hypertension. They were divided into hyponatremia (Na<135 mEq/L) and normonatremia (135 mEq/L ≤ Na ≤ 145 mEq/L) cohorts. Patients with left ventricular dysfunction or hypernatremia (Na>145 mEq/L) were excluded. The primary endpoints were all-cause mortality and re-admission rates within 1 year. The secondary endpoint was in-hospital length of stay.

Results: One year mortality rates in the hyponatremic (N=886) and normonatremic (N=2616) groups were 40% and 26%, respectively (p<0.001). Additionally, at one year, hyponatremic patients showed a higher rate of hospital re-admission for any cause (59% vs 26%, p<0.001) or for pulmonary hypertension and decompensated RV failure specifically (14% vs. 11%, p=0.01). Normonatremic patients also had a shorter mean length of stay than hyponatremic patients (9.3 vs 11.2 days, respectively, p<0.001).

Conclusions: Hyponatremia is associated with worse outcomes in patients with pulmonary hypertension and RV failure.