

Abstract Type : Oral

Abstract Submission No. : 1146

Increased Right Ventricular Pressure as a Predictor of Acute Decompensated Heart Failure in End-Stage Renal Disease Patients on Maintenance Hemodialysis

Byung Hwa Park, Jihyun Jung, Boyoung Park, Hwayoung Seo, Kyungmi Kim, Ye Na Kim, Ho Sik Shin, Yeonsoon Jung, Hark Rim
Department of Internal Medicine-Nephrology, Kosin University Gospel Hospital, Korea, Republic of

Objectives: Many patients with end-stage renal disease (ESRD) on hemodialysis (HD) have reduced vascular compliance and are likely to develop heart failure (HF). This study aimed to determine the factors associated with acute decompensation events among ESRD patients undergoing HD

Methods: We retrospectively investigated ESRD patients on HD using a medical record review. We divided the patients into those admitted to hospital due to acute decompensated heart failure (ADHF) and those who were not. We compared the medical histories, electrocardiograms, and echocardiographic and laboratory data between the two groups.

Results: Of the 188 ESRD patients on HD, 87 were excluded, and 101 were enrolled (mean age: 63.7 years; 52.1% male). Thirty patients (29.7%) were admitted due to ADHF. These patients exhibited similar left ventricular ejection fraction (LVEF), left ventricular (LV) mass index, and E/E' values compared to the non-ADHF group. However, the ADHF group exhibited significantly higher tricuspid regurgitation (TR) jet velocity (2.9 ± 0.6 vs. 2.5 ± 0.4 m/s; $p=0.004$) and right ventricular systolic pressure (RVSP) (43.5 ± 17.2 vs. 34.2 ± 9.9 mmHg; $p=0.009$) than the non-ADHF group, respectively. A multivariate logistic regression analysis demonstrated that the TR jet velocity (odds ratio, 8.356; 95% confidence interval, 1.806–38.658; $p=0.007$) was an independent predictor of ADHF after adjusting for age and sex, while the LVEF and E/E' were not.

Conclusions: Our data showed that an increased TR jet velocity was an independent predictor of ADHF events in ESRD patients on HD, but the LVEF and E/E' were not.

Table 1