Pulmonary Hypertension in Heart Failure Patients with Reduced Versus Preserved Systolic Function

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Background: The presence of pulmonary arterial hypertension (PHT) in heart failure (HF) is associated with increased mortality. It is less clear however, whether the prognostic implications of PHT are different between reduced and preserved systolic function HF patients. Accordingly, in the current study we compared between the prevalence and prognostic implications of PHT in 606 reduced systolic heart failure (SHF) patients, and 115 HF patients with preserved systolic function (HFPSF), [defined as LVEF<50% and ¡Ý50%, respectively].

Methods: We evaluated the records of 606 SHF and 115 HFPSF consecutive patients, out of which 133 (22%) SHF and 57 (50%) HFPSF patients had PHT (defined as SPAP>50 mmHg per echocardiogram on their first visit in the clinic). We analyzed the impact of PHT and mortality in these patients.

Results: As expected, comparing to the HFPSF, the SHF patients were younger (mean age 67±11.5 vs.73.1±9.2 years; p=0.001), dominantly male prevalence (78% vs. 40%; p<0.001), and with more frequent ischemic etiology (63% vs. 26%; p<0.001). The NYHA class was similar between the two groups (2.9±0.8 vs. 3±0.7; p=0.265). The prevalence of PHT was more than doubled in the HFPSF patients (50% vs. 22%) and the severity of the PHT was worse in the HFPSF patients (mean SPAP 60±9mmhg vs. 67±14mmHg; p<0.001). During a mean follow-up period of 26 ± 17months, 36% (69 patients) of the PHT cohort died [35% of SHF patients and 38% of HFPSF patients; p=0.742).

Conclusion: The presence of PHT in HF patients in general is associated with a significant increase in mortality. Although compared to SHF the prevalence of PHT is more than twice as common in HFPSF patients and the severity is higher, the mortality rates in both groups were similar (Figure-1).