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Heart Failure and Cardiomyopathies

SUBCLINICAL HYPOTHYROIDISM IN THE ACUTE DECOMPENSATED PHASE IS A NOVEL PREDICTOR FOR ADVERSE CARDIAC EVENTS IN PATIENTS WITH HEART FAILURE

Poster Contributions
Hall C
Saturday, March 29, 2014, 10:00 a.m.-10:45 a.m.

Session Title: Heart Failure and Cardiomyopathies: Role of Biomarkers in Heart Failure
Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical
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Background: Hypothyroidism can cause reduced cardiac contractility and deterioration of heart failure (HF), whereas the decrease in thyroid hormone levels during severe illness could be protective against excessive tissue catabolism. Although the prognostic impact of subclinical hypothyroidism (SCH) in the chronic phase of HF has been reported, its impact in the acute decompensated phase has not been investigated.

Methods: We examined consecutive 192 patients with acute decompensated HF (ADHF) who received thyroid function tests at admission (age 67±14 years, 110 male). We compared the following 2 groups determined by thyroid-stimulation hormone (TSH) level: euthyroidism (n=127) defined as TSH of 0.45 to 4.49 mIU/L and SCH (n=46) as TSH of 4.5 to 19.9 mIU/L with normal free thyroxine level.

Results: Although age, sex, etiology of HF, left ventricular ejection fraction (LVEF) and B-type natriuretic peptide (BNP) level were comparable between the 2 groups, SCH patients had lower estimated glomerular filtration rate (eGFR) than euthyroidism patients (67±33 vs. 81±35 ml/min/1.73m2, p=0.018) and a higher prevalence of adverse cardiac events (Figure). Cox proportional hazards model analysis revealed that SCH was an independent predictor of adverse cardiac events (HR 2.55, 95% CI 1.50-4.33, p < 0.001) among variables including age, sex, LVEF, BNP and eGFR.

Conclusions: SCH in ADHF patients is an independent predictor of adverse cardiac events.