INDEPENDENT PROGNOSTIC VALUE OF ELEVATED CIRCULATING ADIPONECTIN LEVELS IN CHRONIC HEART FAILURE

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__BACKGROUND:__ Wasting in chronic heart failure (CHF) has long been known but is seldom investigated. Adipokines are markers for wasting; however, clinical data about their prognostic values in CHF are sparse. In this study, we sought to determine whether various adipokines can provide prognostic information in patients with CHF.

__METHODS:__ We measured circulating levels of three adipokines (adiponectin, resistin, and leptin) and N-terminal pro-B-type natriuretic peptide (NT-proBNP) in 96 patients (age 53 ± 15 years, BMI 23 ± 5 kg/m2) with dilated cardiomyopathy and left ventricular ejection fraction (LVEF)$<40\%$. Major adverse cardiac events (MACE), including death, heart transplantation or hospitalization with worsening heart failure during a median follow-up period of 216 days were determined.

__RESULTS:__ Among the three adipokines, only the concentrations of adiponectin in this study population increased with the severity of CHF and were significantly negatively correlated with LVEF. The adiponectin levels were significantly associated with NT-proBNP levels and were inversely associated with BMI. Significantly higher adiponectin levels were also noted in those patients who had MACE during the follow-up period. After adjustment for clinical variables associated with CHF severity (age, gender, diabetes mellitus, systolic blood pressure, LVEF, serum sodium level, and creatinine clearance) and for resistin, leptin, and NT-proBNP, the hazard ratio of MACE for values in the highest tertile relative to the lowest tertile of adiponectin (corrected for BMI) was 2.95 (p=0.037).

__CONCLUSIONS:__ These findings suggest that elevatation of adiponectin level is a predictor of prognosis in CHF independent of risk markers of CHF severity.

Key words: Heart failure, Adipokine, Prognosis