

PLASMA GROWTH ARREST-SPECIFIC PROTEIN 6 CONCENTRATIONS IS ASSOCIATED WITH CIRCULATING ENDOTHELIAL PROGENITOR CELL LEVEL IN PATIENTS WITH ISCHEMIC CHRONIC HEART FAILURE

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Objectives: Growth arrest-specific protein 6 (Gas6) promotes proliferation and migration of human endothelial progenitor cells (EPCs) derived from peripheral blood in vitro. However, direct clinical evidence linking Gas6 to EPC mobilization is lacking. In this study we investigated whether plasma Gas6 concentrations are associated with circulating EPC levels in chronic heart failure (CHF) of ischemic etiology.

Methods: We evaluated plasma Gas6, circulating EPCs, as well as other laboratory indexes and clinical parameters in 162 subjects. Spearman's rank correlation analyses and multivariate analyses were performed to identify the association of plasma Gas6 concentrations and circulating EPC levels.

Results: Plasma Gas6 concentrations were significantly lower in ischemic CHF group than the other groups (8.56 ± 1.62 ng/ml, vs. 9.38 ± 1.69 ng/ml and 10.79 ± 1.44 ng/ml, $P < 0.05$). Circulating EPC counts were positively correlated with plasma Gas6 values ($r = 0.443$, $P < 0.001$). In multivariate analyses, plasma Gas6 concentrations independently predict circulating EPC levels, even after adjustment for traditional cardiovascular risk factors and potential confounders ($\beta = 0.284$, $P < 0.001$).

Conclusions: Plasma Gas6 concentration is associated with circulating EPC level, thus supporting a potential role of Gas6 in the setting of ischemic CHF by modulating EPC mobilization.

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