Heart Failure

SERIAL MEASUREMENT OF GALECTIN-3 PREDICTS CHRONIC HEART FAILURE OUTCOMES AND VENTRICULAR REMODELING: RESULTS FROM THE PROBNP OUTPATIENT TAILORED CHRONIC HEART FAILURE THERAPY (PROTECT) STUDY

Poster Contributions
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Background: Galectin-3 is a prognostic heart failure (HF) biomarker that may mediate cardiac fibrosis.

Methods: 151 subjects with left ventricular systolic dysfunction (LVSD) were followed through 908 visits over 10 ± 3 months. Time spent relative to a galectin-3 level ≤20.0 ng/mL was considered across study visits, and used to assess risk for adverse cardiovascular (CV) events and associations with LV remodeling. Medication effects on galectin-3 were examined.

Results: Median galectin-3 values at baseline, 3 months, and 6 months were higher in patients with CV events (21.7 vs. 18.4 ng/mL, p = 0.03; 21.7 vs. 16.5 ng/mL, p = 0.03; 23.2 vs. 16.0 ng/mL, p = 0.007). Galectin-3 concentration changed in 35.2% of subjects during study procedures. Duration of time spent ≤20.0 ng/mL was significantly associated with a lower rate of CV events (Figure), independently predicted CV events even when adjusted for relevant variables including NT-proBNP and renal function (OR = 0.90; 95% confidence interval [CI] = 0.82-0.99, p = 0.04), and was predictive of increase in LV ejection fraction (OR = 1.20; 95% CI = 1.01-1.42, p = 0.04). Serial galectin-3 measurement at 6 months added prognostic value beyond baseline level (p = 0.02), and increases in loop diuretics were associated with galectin-3 increase (p = 0.01).

Conclusions: In chronic HF due to LVSD, serial galectin-3 measurement adds incremental prognostic information and predicts LV remodeling. In this study, most HF therapies did not significantly change galectin-3 levels.