The predicting system of prognosis for transthyretin amyloid cardiomyopathy

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Funding Acknowledgement: Type of funding sources: None.

Background: The staging systems for transthyretin amyloid cardiomyopathy (ATTR-CM) by high sensitivity cardiac troponin T (hs-cTnT), N-terminal pro-B-type natriuretic peptide (NT-proBNP) and estimated glomerular filtration rate (eGFR) are established. However, this system is not validated in Japan.
Purpose: The aim of study was to validate and modify the predicting system by BNP, hs-cTnT and eGFR of prognosis for Japanese patients with ATTRwt-CM.
Method: We evaluated in 158 consecutive patients with wild-type ATTR-CM. Univariate analysis revealed that increased hs-cTnT and B-type natriuretic peptide (BNP) levels and impaired renal function at diagnosis were associated with poor prognosis. We defined best cutoff value as follows by ROC curve analysis; hs-cTnT >0.0565 ng/mL, BNP >285 pg/mL and eGFR <45 mL/min. We scored the index by adding 1 point for each factor and divide into low score group (0–1 point) and high score group (2–3 points).
Result: As shown figure, high score was associated with increased all-cause mortality and heart failure rehospitalization (log rank; P<0.001, respectively).
Conclusion: This simple scoring system by hs-cTnT, BNP and eGFR, was useful for predicting prognosis in patients with wild-type ATTR-CM.