30. Prognostic Significance of High-Sensitivity Cardiac Troponin T in Hypertrophic Cardiomyopathy

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[Background] Although serum cardiac troponins as sensitive and specific markers of myocardial injury have become well-established diagnostic and prognostic markers in acute coronary syndrome, the usefulness of serum high-sensitivity cardiac troponin T (hs-cTnT) for prediction of cardiovascular events in patients with HCM is unclear.

[Methods and Results] We performed clinical evaluation including measurements of hs-cTnT in 183 consecutive patients with HCM. Of 183 HCM patients, 99 (54%) showed abnormal hs-cTnT values (> 0.014 ng/ml). During a mean follow-up period of 4.1 ± 2.0 years, 32 (32%) of the 99 patients in the abnormal hs-cTnT group but only 6 (7%) of 84 patients with normal hs-cTnT values suffered from cardiovascular events (Figure): cardiovascular deaths (All of the 9 HCM-related deaths were in the abnormal hs-cTnT group.), unplanned heart failure admissions, sustained ventricular tachycardia, embolic events, and progression to New York Heart Association functional class III or IV status (hazard ratio (HR): 5.05, $p < 0.001$). Abnormal hs-cTnT value remained an independent predictor of these cardiovascular events after multivariate analysis (HR: 3.23, $p = 0.012$). Furthermore, in the abnormal hs-cTnT group, overall risk increased with increase in hs-cTnT value (HR: 1.24/0.015 ng/ml increase, $p = 0.002$).

[Conclusions] In patients with HCM, an abnormal serum concentration of hs-cTnT is an independent predictor of adverse outcome, and a higher degree of abnormality in hs-cTnT value is associated with a greater risk of cardiovascular events.

Figure