CARDIAC I-123 METAIODOBENZYLGUANIDINE IMAGING PREDICTS THE RISK OF CARDIAC DEATH IN PATIENTS WITH CHRONIC HEART FAILURE, IRRESPECTIVE OF THE METABOLIC SYNDROME.: A LONG TERM FOLLOW UP STUDY

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Background: Cardiac I-123 Metaiodobenzylguanidine (MIBG) imaging, which reflects cardiac sympathetic activity, provides prognostic information in patients with chronic heart failure (CHF). On the other hand, metabolic syndrome (MetS) characterized by a marked sympathetic overactivity was also reported to be associated with poor outcome in CHF patients. Thus, we tried to prospectively investigate whether MetS would influence the prognostic value of cardiac MIBG imaging in CHF patients.

Methods: In 109 consecutive CHF outpatients with LVEF<40%, the cardiac MIBG washout rate (WR) was calculated from the chest anterior view images obtained at 20 and 200 min after isotope injection. Abnormal WR was defined as WR >27%. MetS was defined according to National Cholesterol Education Program expert panel criteria.

Results: Twenty-seven of 109 patients had MetS. During a mean follow up period of 6.6±0.3 years, cardiac death was observed in 33 of 109 patients. At multivariate Cox analysis, WR was a significant predictor of cardiac death in patients both with (p=0.049) and without (p=0.0009) MetS. Kaplan-Meier analysis revealed that patients with abnormal WR had a significantly higher risk of cardiac death than those with normal WR, in patients both with (60% vs 9%, p=0.02, HR:8.0, 95% CI 1.0 to 63.5) and without MetS (43% vs 14%, p=0.0009, HR:5.4, 95% CI 2.0 to 14.7).

Conclusions: Cardiac MIBG imaging would be useful to predict the risk of cardiac death in CHF patients, irrespective of the presence or absence of MetS.