

## Usefulness of $^{123}\text{I}$ -metaiodobenzylguanidine myocardial scintigraphy in the prediction of cardiac events in patients with cardiomyopathy showing stabilization of symptoms or preserved cardiac function

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**Objective:** It is not rare for patients with cardiomyopathy to be asymptomatic for long periods or to show improved cardiac function following various medical interventions. Conversely, cardiac events sometimes occur in those patients, requiring close observation. We assessed the usefulness of  $^{123}\text{I}$ -metaiodobenzylguanidine myocardial scintigraphy (MIBG) to predict the occurrence of cardiac events in patients with stable cardiomyopathy. **Methods:** The subjects comprised 74 outpatients with stable cardiomyopathy. MIBG was performed calculate the extent score, severity score, washout rate (WR), and heart-to-mediastinum ratio. At about the same time, the left ventricular ejection fraction (LVEF) by echocardiography and the plasma brain natriuretic peptide were measured. The mean observation period extended for  $741 \pm 437$  days with an end point of cardiac events (cardiac death, heart failure requiring hospitalization, and arrhythmias requiring hospitalization). **Results:** During the mean follow-up period, 15 cardiac events occurred. Results of multivariate analysis revealed that LVEF was the most powerful predictor of cardiac events (0.006,  $p < 0.01$ ). However, WR was the only significant predictor of hard events such as cardiac death (1.171,  $p < 0.001$ ) and cardiac events in the group of patients who preserved cardiac function with LVEF 0.4 or higher (1.079,  $p < 0.05$ ). **Conclusion:** Combined use of LVEF and WR is useful to predict the occurrence of cardiac events in patients with stable cardiomyopathy.

**Key words:**  $^{123}\text{I}$ -metaiodobenzylguanidine myocardial scintigraphy, stable cardiomyopathy, prognosis, left ventricular ejection fraction