

## Comparison of Emory and Cedars-Sinai methods for assessment of left ventricular function from gated myocardial perfusion SPECT in patients with a small heart

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To evaluate the effect of left ventricular (LV) size on the calculation of LV function from gated myocardial SPECT with Emory and Cedars-Sinai programs, we performed  $^{99m}\text{Tc}$ -tetrofosmin gated SPECT on 49 patients with ischemic heart disease. End-diastolic volume (EDV), end-systolic volume (ESV), and ejection fraction (EF) were semi-automatically calculated by each program. All patients underwent left ventriculography (LVG) within 3 months before and after the SPECT study. We grouped the patients into 22 with a calculated ESV obtained from LVG of over 50 ml (group A) and 27 with an ESV value of 50 ml or below (group B). We then compared the ESV values from gated SPECT with those from LVG in each group. In group A, the ESV from both Emory and Cedars-Sinai programs similarly correlated well with those from LVG ( $r = 0.92$  and  $r = 0.93$ , respectively), but in group B, the ESV calculated from the Cedars-Sinai program correlated less with those from LVG ( $r = 0.53$ ) than those from the Emory program did ( $r = 0.70$ ). The calculated LV volumes had more errors in the Cedars-Sinai program than in the Emory program, when a patient had a small heart.

**Key words:** gated SPECT,  $^{99m}\text{Tc}$ -tetrofosmin, LV function