Reply to 'Assessment of diastolic function using 16-frame ^{201}Tl -gated myocardial perfusion SPECT'

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Thank you very much for your instructive letter regarding my article. As you indicated, the value of the time to peak filling (TTPF) in patients with normal perfusion at rest ^{201}Tl SPECT showed a wider standard deviation (195.8 ± 97.6 ms) as compared to that of the normal value (166 ± 22 ms or 167 ± 38 ms) obtained by $^{99\text{m}}\text{Tc}$ radio-pharmaceuticals [1–3].

In our study, 10 of 35 cases in the no-defects (ND) group were normal and 25 had angina pectoris (AP) [1]. It is known that diastolic dysfunction precedes systolic dysfunction during the course of ischemic heart disease. Therefore, some cases with abnormal diastolic function may have been included in the ND group.

Another possible influential factor is aging. In our data, mean age was 67.3 ± 13.1 years. According to the Japanese normal database, the value of TTPF in patients older than 60 years is higher than that in younger ones (176 ± 48 vs. 159 ± 26) [3].

Finally, we used a myocardial collimator, with higher sensitivity and with moderately deteriorated spatial resolution, for the purpose of shortening the time course. The influence of the collimator used might be one possible cause. Thus, there were several factors that might have

accounted for the discrepancy in the value of diastolic function indices between the two tracers.

However, as you indicated, ^{201}Tl SPECT images are more blurred than $^{99\text{m}}\text{Tc}$ SPECT images due to physical characteristics of the tracers. In Japan, many physicians still use ^{201}Tl in clinical practice. It would be necessary to establish normal values for ^{201}Tl SPECT and ventricular diastolic function in the Japanese population.

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