

**ECG-gated thallium-201 myocardial SPECT in patients
with old myocardial infarction compared
with ECG-gated blood pool SPECT**

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We evaluated one of the merits of ECG-gated thallium-201 single photon emission computed tomography (g-Tl SPECT), i.e., the ability to appreciate left ventricular (LV) wall motion. LV wall motion assessed by g-Tl SPECT and by ECG-gated Blood Pool SPECT (g-BP SPECT) was classified into three grades and compared segment by segment. Tl-201 uptake by g-Tl SPECT was also classified into three grades and compared with those of wall motion in g-BP SPECT.

Fifty patients with prior myocardial infarction were injected intravenously at rest with 111 to 185 MBq (3 to 5 mCi) of Tl-201. The left ventricular regions were divided into anterior, septal, inferior and lateral segments (50 patients \times 4 segments = 200 segments in total). The grades of wall motion and Tl-201 uptake detected by g-Tl SPECT correlated well with those of wall motion in g-BP SPECT (94.5% and 85%, respectively).

With g-Tl SPECT it was possible to evaluate left ventricular wall motion, providing clear perfusion images.

Key words: thallium-201, technetium-99m red blood cells, ECG-gated, SPECT, myocardial infarction