

Clinical significance of reverse redistribution on resting thallium-201 imaging in patients with vasospastic angina

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To evaluate the clinical significance of reverse redistribution (RR) of resting ^{201}Tl single photon emission computed tomography (SPECT) in patients with vasospastic angina (VSA), we performed left ventriculography, coronary angiography and resting ^{201}Tl -SPECT in 22 patients with VSA. Left ventriculography showed abnormal wall motion in 17 of 22 patients (77%) and 37 of 154 segments. Thirty-one of these 37 segments (84%) were within the area perfused by coronary arteries showing acetylcholine-induced vasospasm. On ^{201}Tl images, abnormal findings were observed in 11 of 22 patients (50%), and among them, 7 patients (32%) had RR. Seven of 37 segments (19%) having abnormal regional wall motion had RR of ^{201}Tl , and in 6 of these 7 segments (86%), accumulation of ^{123}I -BMIPP was found to be reduced.

We conclude that repetitive brief myocardial ischemia may cause myocardial injuries in patients with VSA, and that the presence of RR of ^{201}Tl indicates the presence of myocardial injury in these patients.

Key words: thallium-201, reverse redistribution, vasospastic angina