

Clinical application of Indium-111 antimyosin antibody and Thallium-201 dual nuclide single photon emission computed tomography in acute myocardial infarction

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The significance of indium-111 antimyosin antibody and thallium-201 dual nuclide single photon emission computed tomography (SPECT) was evaluated in 7 patients with acute myocardial infarction (AMI) who underwent emergency coronary angiography with successful revascularization by intracoronary thrombolysis. Indium-111 antimyosin antibody and thallium-201 dual nuclide SPECT was performed 11 to 36 days after the onset of AMI. Antimyosin SPECT images delineated areas of myocardial necrosis in all 7 patients (100%), but planar images detected necrotic areas in only 4 of 7 patients (57%). Peak CPK-MBs of the 3 patients in which no necrotic area was detected by indium-111 planar image showed a tendency to be smaller. Indium-111 antimyosin antibody/thallium-201 overlap was observed in all patients. The area of overlap was at the center of necrosis in 4 patients (2 anterior infarction, 1 inferior infarction, 1 inferolateral infarction) and at the peripheral portion in 3 patients (all 3 had inferior infarction). Indium-111 antimyosin antibody and thallium-201 dual nuclide SPECT is useful in identifying the localization of myocardial infarction and the overlap of these tracers might reflect the presence of salvaged myocardium adjacent to the necrotic myocardium.

Key words: ¹¹¹Indium-AMA, ²⁰¹Thallium, overlap, acute myocardial infarction