
Patients with Kawasaki disease in the acute phase quite often have clinical manifestations which are thought to be caused by pancarditis. In order to explore new diagnostic techniques for the clinical detection of myocarditis, we carried out Ga-67 myocardial imaging in 46 consecutive infants and children (31 boys and 15 girls, with a mean age of 1 year and 9 months) with Kawasaki disease in the acute phase. All of them underwent planar imaging (group A) at 6 hours and at 48 or 72 hours after the intravenous administration of Ga-67 citrate (0.07-0.02 mCi/kg). Thirty-four patients among them underwent SPECT imaging (group B) soon after planar imaging. The color images at 48 or 72 hours were classified into 4 grades, i.e., negative to positive 3+. The frequency of positive cases was 41% in group A and 64% in group B. Among the patients with "clinically suspected myocarditis", 63% in group A and 80% in group B showed positive images. Through SPECT imaging, we could clarify the localization of the tracer in the myocardium, as differentiation from accumulation in the pericardium only, or from the tracer in the heart chambers. The serum value of lactoferrin, which was speculated to be related to the accumulation of Ga-67 into the myocardium, was significantly elevated in patients with Kawasaki disease in the acute phase, comparing to that of healthy infants. We conclude that Ga-67 citrate myocardial imaging, especially when used with SPECT imaging, is useful for the detection of myocarditis in the acute phase of Kawasaki disease.


This study was designed to investigate the "redistribution" as well as quantitatively with circumferential profile curve and washout ratio with TI-201 at rest in patients with myocardial infarction. The subjects were 35 patients with clinically apparent myocardial infarction and the study was performed at least 2 weeks after attack of infarction. SPECT image was constructed at about 10 min and 2 hrs following injection of 4mCi TI-201 at rest. As a result, visual "redistribution" was found surrounding the infarcted area in 7 cases. In these 7 cases, "redistribution" was also found with circumferential profile curve in almost the same area as that where visual "redistribution" was found. In addition, washout ratio, obtained as ((early count)-(delayed count))/((early count)x 100), was reduced in some cases and it was negative in other cases, suggesting that there occurred slight improvement of perfusion defect surrounding the infarcted area, thereby resulting in the decrease of the infarcted area. It was suggested from these results that the delayed image obtained at rest was the accurate detection of the infarcted area. As to the mechanisms of the "redistribution", two possibilities were considered, i.e., (1) delayed washout and (2) delayed uptake.