

Evaluation of viral myocarditis in children by radionuclide method

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Evaluation of viral myocarditis is essential for the clinician to assess the prognosis. In this study, Tl-201 myocardial scintigraphy and Tc-99m gated cardiac blood pool scan were performed in 16 patients with myocarditis diagnosed by clinical symptoms and laboratory findings and these nuclear medicine techniques were followed up for 5 years.

Exercise Tl-201 scintigraphy using a bicycle ergometer was performed in 8 patients by SPECT imaging. There were mild to severe persistent defects found in all cases (100%), but pressure rate products showed normal response. The Tl-201 defect ratio improved gradually, but did not change significantly. In the resting Tl-201 image one of 16 patients showed severe multifocal defects.

LVEF increased significantly from 1 year to 5 years after onset, while RVEF measured by gated blood pool scans showed slight increases 3 years to 5 years after diagnosis. It was concluded that myocardial perfusion improved only incompletely. Cardiac function (LVEF and RVEF) improved gradually, and pressure rate products were normal. Myocarditis should therefore be followed up in order to assess the prognosis; moreover, the relationship of myocarditis to dilated cardiomyopathy needs to be further studied.

Key words: viral myocarditis, Tl-201 myocardial scintigraphy, Tc-99m gated blood pool scan