

Summary

Serial Change of TL/BMIPP Dual SPECT Myocardial Scintigram in Patients with Acute Myocardial Infarction; Meaning of Chronic Mismatch Phenomenon

Hirohito IWASAWA, Masahiro ABE, Toshihiro ABE,
Yoshikazu NAGAI and Chiharu IBUKIYAMA

Second Department of Internal Medicine, Tokyo Medical University

This study was aimed to elucidate the serial changes and clinical significance of accumulation mismatch with TL and BMIPP dual SPECT myocardial scintigraphy during 6 months in patients with acute myocardial infarction (AMI).

The dual SPECT scintigraphy was performed at one, three and six months after onset of AMI in 46 patients who underwent reperfusion therapy. Long axis fractional shortening in infarct-related area and left ventricular end-diastolic volume index (LVEDVI) were measured by left ventriculography performed immediately after reperfusion and at one, six months after onset of AMI. The patients were divided into two groups: those with mismatch (Group (+)) and those without (Group (-)) at one month after reperfusion. Group (+) was subdivided into three groups according to duration of persistence of mismatch; one month

persistence (1M), three months (3M) and six months (6M).

Improvement of wall motion abnormality (WMA) in infarct-related area was seen at one month after reperfusion in group 1M and group 3M, while group 6M showed no apparent change in WMA throughout the study period. LVEDVI did not change at six months after reperfusion in group 1M and 3M, while significant increase was seen in group 6M.

It is concluded that the case with disappearance of mismatch between TL and BMIPP until three months after reperfusion indicates myocardial stunning while in the case with long-standing mismatch left ventricular remodeling is suggested.

Key words: ^{201}Tl chloride, ^{123}I -BMIPP, Dual isotope SPECT, Accumulation mismatch, Acute myocardial infarction.