

## **Circulating myosin light chain I levels after coronary reperfusion: a comparison with myocardial necrosis evaluated from single photon emission computed tomography with pyrophosphate**

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This study was performed to assess the influence of coronary reperfusion on the serial serum myosin light chain (LC)I levels and to evaluate the relationship between the peak LCI level and the infarct size calculated from single photon emission computed tomography (SPECT) with technetium-99m pyrophosphate (Tc-99m PYP) in 11 patients who underwent coronary reperfusion. Blood was drawn before reperfusion, immediately after reperfusion, and once a day for 14 days, to estimate the time course of serum LCI release. The infarct size estimated by Tc-99m PYP ranged from 7.3 to 62.4 ml. The LCI levels obtained before reperfusion were less than 2.5 ng/ml but those obtained immediately after reperfusion were much higher. The value ranged from 2.7 to 9.7 ng/ml and that expressed as a percentage of peak LCI (% peak LCI) ranged from 19 to 83%. Collateral circulation, reperfusion arrhythmia and the degree of residual stenosis had no influence upon the % peak LCI. The correlation between peak LCI levels and SPECT-determined infarct size was good, with a correlation of 0.76 ( $p < 0.01$ , regression line by least squares method  $y = -3.31 + 1.53x$ ). Early serum LCI might be influenced by coronary reperfusion but the peak LCI value reflected acute myocardial necrosis in patients who underwent coronary reperfusion.

**Key words:** myosin light chain I, coronary reperfusion, myocardial necrosis,  $^{99m}\text{Tc}$ -PYP/ $^{201}\text{Tl}$  dual SPECT