Objectives To evaluate the effect of intracoronary injection of tirofiban in treatment of acute myocardial infarction with recurring slow flow or no-reflow in the culprit vessel during delayed PCI.

Methods When the residual stenosis of the culprit artery was ballooned and (or) stents were implanted during delayed PCI 8–14 days after acute myocardial infarction, Coronary angiography showed that the slow flow or no-reflow in culprit artery recurred in 76 patients with culprit vessel recanalisation, which randomly divided into control group (37 cases): intracoronary injection of 200 μg of nitroglycerine; tirofiban group (39 cases): intracoronary bolus of tirofiban (10 μg/kg, more than 3 min) on the basis of injection of nitroglycerine. Flow grade (TIMI) of culprit artery immediately after PCI and incidence of cardiovascular adverse events in 1 week and 30 days after PCI were compared between two groups.

Results Compared with control group, there was better flow grade (TIMI) of culprit artery immediately after PCI (p=0.006), lower incidence of cardiovascular adverse events in 1 week after PCI (p=0.01), but similar incidence of it in 30 days after PCI in tirofiban group (p=0.08). There were no difference about the rate of bleeding complications and thrombocytopenia between two groups in a week after surgery.

Conclusions Intracoronary injection of tirofiban has better advantage in terms of improving coronary blood flow and short-term clinical efficacy on acute myocardial infarction with recurring slow flow or no-reflow during delayed PCI.