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PROTECTIVE EFFECT OF TRIMETAZIDINE ON MYOCARDIAL INJURY AND RECURRENT ANGINA AFTER PERCUTANEOUS CORONARY INTERVENTION

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Objectives To explore the effect of trimetazidine (TMZ) on the myocardial injury related to percutaneous coronary intervention (PCI) and left heart function after PCI.

Methods 132 patients with unstable angina pectoris admitted for elective PCI were randomly assigned to two groups to receive or not an acute load dose of 60 mg of TMZ prior to the intervention and routine dose of 20 mg tid after it. The frequency and the increase in the level of cTnI after successful PCI were measured before and 16–18 h after PCI. Heart function evaluated by echocardiography and major adverse cardiac events (MACE, including death, re-infarction and target vessel revascularisation) at 12 months after the procedure were also compared.

Results 106 patients who successfully undergoing elective PCI were finally enrolled, 51 in TMA group and 55 in control group. Post-procedural cTnI levels were significantly reduced in the TMZ group at 16–18 h ($p<0.05$). The frequency of patients with an increase in cTnI of two times the upper limit of the control range (0.05 ng/ml) was significantly decreased in the TMZ group ($p<0.05$). At 12 months follow-up, left ventricular ejection fraction after PCI was significantly improved in the TMZ group ($p<0.05$).

Conclusions Trimetazidine can limit the post-PCI cTnI release and improve left heart function after PCI.