

**Objectives** To investigate the effect of different reperfusion strategy on brain natriuretic peptide (BNP) levels and prognosis of patients with acute myocardial infarction (AMI).

**Methods** 102 patients with AMI were divided into four groups: primary percutaneous coronary intervention (PCI) group (n=40); thrombolysis group (n=21); delayed PCI group (n=23) and control group (n=18). Plasma BNP levels were determined with Triage rapid assay at admission, at 24 h and 7, 14, 28 days after admission for four groups. Left ventricular ejection fraction (LVEF) was assessed by echocardiography with the modified Simpson's equation on 7 days and 28 days after admission. The main end point of the trial was a 1-year incidence of major adverse cardiac events (heart failure, angina, malignant arrhythmia and death).

**Results** Plasma BNP levels in primary PCI, thrombolysis and delayed PCI groups were significantly lower than those of control group at 24 h and 7, 14, 28 days after admission ( $p<0.01$ ). Plasma BNP levels in primary PCI group were significantly lower than those of thrombolysis and delayed PCI groups after admission ( $p<0.01$ ). There was significant difference in BNP levels between thrombolysis and delayed PCI groups at 14, 28 days after admission ( $p<0.05$ ). LVEF levels in primary PCI group were significantly higher than those of thrombolysis, delayed PCI and control groups at corresponding time points ( $p<0.01$ ). LVEF levels in delayed PCI was higher than those of thrombolysis group at 28 days after admission ( $p<0.05$ ). Followed up for 1 year, lower incidence of major adverse cardiac events was observed in primary PCI ( $p<0.01$ ), thrombolysis ( $p<0.05$ ) and delayed PCI ( $p<0.05$ ) groups than that of control group. There was significant difference in mortality between primary PCI and control group ( $p<0.05$ ).

**Conclusions** All of three reperfusion strategy can decrease BNP levels and improve LVEF levels and prognosis in patients with AMI. Primary PCI is the most effective and preferred reperfusion method.

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# EFFECT OF DIFFERENT REPERFUSION STRATEGY ON BRAIN NATRIURETIC PEPTIDE LEVELS AND PROGNOSIS OF PATIENTS WITH ACUTE MYOCARDIAL INFARCTION

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