SAFETY AND EFFICACY OF EARLY VERSUS ELECTIVE PERCUTANEOUS CORONARY INTERVENTION ON PATIENTS WITH NON-ST SEGMENT ELEVATION INFARCTION

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Objectives To investigate the safety and efficacy of early percutaneous coronary intervention (early PCI) in patients with non-ST Segment elevation infarction (NSTEMI) undergoing elective PCI.

Methods Ninety-one patients (79 males) who suffered from first NSTEMI within 24 h from symptom onset during October 2009 and July 2010 were enrolled in this study. All the cases were randomly divided into early PCI group (n=44) and elective PCI group (n=47). PCI was performed immediately after admission in early PCI group. Patients in elective PCI group received the same medical therapies with those in early PCI group, and PCI was performed 7–10 days after admission. TIMI flow of IRA before and after PCI, as well as TIMI Myocardial perfusion grading (TMP) after PCI were compared between the two groups. The differences of left ventricular function and MACE during hospitalisation and 6-month follow-up were analysed.

Results Baseline characteristics were similar between the two groups. There were no differences in the rates of IRA total occlusion, TIMI flow grade 1, and TIMI flow grade 2 before PCI between the two groups (all p>0.05), while the rate of TIMI flow grade 3 in early PCI group was lower than that in elective group (22.73% vs 42.55%, p<0.05). After PCI treatment, no significant differences in TIMI flow were found between the two groups, and the rate of TMP grade 2 or greater in early PCI group was higher (79.55% vs 59.57%, p<0.05). There were no significant differences in LVEDV, LVESV, and LVEF between the two groups in hospital (all p>0.05). After 6-month follow-up, both LVEDV and LVESV decreased significantly, and LVEF increased. The incidence of cardiac rehospitalisation was lower in early PCI group, while the cardiac death, severe heart failure, reinfarction, malignant arrhythmias, revascularisation of IRA, and bleeding complications were similar.

Conclusions Both early and elective PCI can improve the heart function in NSTEMI patients at 6 months, and the effects of early PCI on improving heart function is better without increase of bleeding complications.