

Non-stenting strategy using Excimer Laser Coronary Angioplasty in patients with ST elevated myocardial infarction.

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Aims:The basic strategy of the primary percutaneous coronary intervention (primary PCI) in patients with ST elevation myocardial infarction (STEMI) has been established with deployment stent to fix the culprit lesion. However, late stent thrombosis or delayed anti-platelet agent discontinuation were still concerns even in the second-generation DES era. The aim of this study was to evaluate the feasibility and safety of primary PCI using Excimer Laser Coronary Angioplasty (ELCA) without stent-implantation in patients with STEMI.

Methods and results:We studied consecutive 19 STEMI patients who underwent primary PCI using ECLA without stent implantation at our hospital from May 2012 and June 2014. Average age was 60.7 years old and 80% were male. Forty-seven% of culprit vessel was right coronary artery. The adjunctive usage of aspiration thrombectomy catheter, distal protection device, or intracoronary imaging device were 35%, 35%, and 70%, respectively. TIMI flow grade post procedure were 0.67 and 2.58 respectively. Procedural success rate (achieving greater than TIMI2 grade flow) without stent-implantation was 89.5%. All patients could discharge from the hospital after the cardiac rehabilitation uneventfully during their in-hospital stay.

Conclusions:Primary PCI using ELCA without stent implantation in patients with STEMI were feasible and safe, which could be one of the promising treatment options.