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EARLY ROUTINE POST-FIBRINOLYSIS ANGIOPLASTY COMPARED TO PRIMARY ANGIOPLASTY IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND ST-SEGMENT ELEVATION

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[1]He Xian-Zhi, [2]Wan Xin-Hong. *[1]Department of Cardiology, Longgang District Central Hospital of Shenzhen, Guangdong, China; [2]Department of Cardiology Long-Gang District People's Hospital of Shenzhen Guandong 518116, Shenzhen, China*

Objectives Patients with acute myocardial infarction and ST-segment elevation (STEMI), primary angioplasty is frequently not available or performed beyond the recommended time limit. We designed a randomised, controlled study to evaluate whether lytic-based early routine angioplasty represents a reasonable reperfusion option for victims of STEMI irrespective of geographic or logistical barriers.

Methods A total of 234 STEMI patients were randomised to full tenecteplase followed by stenting within 3–12 h of randomisation (early routine post- fibrinolysis angioplasty;118 patients), or to undergo primary stenting within 3 h of randomisation (primary angioplasty; 116 patients). The primary endpoints were epicardial reperfusion and no-reflow, the extent of myocardial damage, determined by means of the infarct size and the extent of left ventricular myocardial damage, determined by means of the left ventricular function. The secondary endpoints were the acute incidence of bleeding and the 6-month composite incidence of death, reinfarction, stroke, or revascularisation.

Results Early routine post-fibrinolysis angioplasty resulted in higher frequency ($p<0.01$) of complete epicardial reperfusion (TIMI 3 epicardial flow) following angioplasty. The primary angioplasty group resulted in higher frequency ($p<0.01$) of no-reflow. Both groups were similar regarding infarct size (the level of TroponinT (cTnT), $p>0.05$); 6-week left ventricular function (ejection fraction, $p>0.05$); major bleeding ($p>0.05$) and 6-month cumulative incidence of the clinical endpoint ($p>0.05$).

Conclusions Early routine post-fibrinolysis angioplasty safely results in better epicardial perfusion and lower no-reflow than primary angioplasty. Despite its later application, this approach seems to be equivalent to primary angioplasty in limiting infarct size and preserving left ventricular function.