

## Primary versus rescue PCI: why is primary better?

Amir momenizadeh<sup>1\*</sup>, asghar mohamadi<sup>1</sup>

Cardiovascular research center; shahid rahimi hospital, lorestan university of medical sciences, khorramabad, iran.

### EDITORIAL

Myocardial infarction is the most important cause of morbidity and mortality in developing country. The two therapeutic strategies for treating myocardial infarction are thrombolytic therapy and primary Percutaneous coronary intervention (PCI) [1]. Some studies demonstrated that primary PCI had significant clinical benefit compared to thrombolytic therapy [2] but owing to primary PCI is not available in some hospitals some patients inevitably are treated by thrombolytic therapy and sometimes thrombolytic therapy failed to provide complete re occlusion and TIMI grade 3 is not achieved and the patients must refer to performed rescue PCI [3]. Some studies compared the outcome of primary PCI and rescue PCI and showed that there are no significant difference between clinical outcome of rescue PCI and primary PCI [4]. In contrast some studies demonstrated that primary PCI had lower intrahospital death rates compared to rescue PCI [5]. There are three reasons for this findings first the total ischemic time in rescue PCI is longer than primary PCI. Clinical studies showed that longer ischemic time is associated with larger infarct size and with higher major adverse cardiac events [6]. Second the procoagulant activity of thrombolytic agents might be related to this findings. Because animal study showed that thrombolytic agent lead to activation of the kallikrein-factor XII pathway [7]. Third during rescue PCI owing to partial occlusion, the reperfusion phase happens for the second time and the double reperfusion may be aggravate the myocardial reperfusion injury [8]. Of course the authors believe that beside the reasons mentioned other mechanism may be involved in this regard.

**Key words:** Primary, rescue, PCI.

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\*Corresponding author: Amir momenizadeh, cardiovascular research center shahid rahimi hospital, lorestan university of medical sciences khorramabad, iran, Tel: + 989106042707; E-mail: Asgharheart@gmail.com

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