

Efficacy of Intracoronary Epinephrine in STEMI Patients with Refractory Coronary No Reflow During Percutaneous Coronary Intervention

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Background:

The no-reflow phenomenon is a common complication during primary percutaneous coronary intervention. It may be encountered in up to 50% of primary percutaneous coronary intervention cases. No-reflow results in higher morbidity and mortality due to impaired myocardial perfusion.

Aim and objectives:

Assessment of efficacy and safety of intracoronary epinephrine in STEMI patients with refractory no-reflow during primary PCI. The efficacy is determined by the improvement of TIMI flow and myocardial blush grade.

Methods:

One hundred patients with no-reflow (TIMI 0-1, MBG 0-1) during PPCI were included. All patients received intracoronary verapamil (dose: 100–500 µg bolus (max 1 mg)). If no reflow persisted, IC epinephrine was given (dose: 80–100 µg bolus). Epinephrine was repeated if no reflow persisted up to 3 boluses.

Result:

Among 100 patients with no reflow, forty-nine patients had refractory no reflow, which did not respond to verapamil (with or without nitrates, tirofiban or both). They received epinephrine with achievement of TIMI 3 flow in 65.3 % and MBG 3 in 59.5 %.

Ejection fraction was statistically higher among patients who received epinephrine (43.19 ± 8.39) than those who did not (39.73 ± 5.62).

There was no significant difference between patients who received epinephrine or not regarding MACE during hospital stay. There was no life-threatening arrhythmia in patients who received epinephrine.

Conclusion:

Intracoronary epinephrine is an effective and safe treatment for refractory no-reflow during primary PCI.

Keywords:

Epinephrine, no reflow, STEMI