

Deferred vs. Immediate Stenting in STEMI

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The reperfusion therapy is crucial for the treatment of ST-segment elevation myocardial infarction (STEMI) and should be carried out as soon as possible. Primary percutaneous coronary intervention (PCI) with immediate stenting (IS) is the current standard of reperfusion strategy for STEMI. However, it is thought that IS may cause additional myocardial injury by increasing distal embolization of thrombi and atheromatous plaque debris. Only about 35 % of patients without cardiogenic shock can achieve optimal myocardial tissue perfusion at the microvascular level, even after restoration of epicardial coronary artery patency. This condition with hypoperfusion of the microvascular bed is called a myocardial 'no-reflow', and is produced by microvascular obstruction (MVO). No-reflow phenomenon identified by conventional coronary angiography are an extreme aspect of myocardial 'no-reflow' by MVO. The major pathophysiology of MVO is distal embolization among various mechanisms including reperfusion injury, infarct tissue edema, in-situ thrombosis, and microvascular spasm. Therefore early reperfusion with restoration of distal flow followed by antithrombotic and anticoagulation therapy and staged 2nd procedure with stent implantation after stabilization of the local pathology could be a more beneficial therapeutic strategy for the salvage of jeopardized myocardium.