

INTRODUCTION

In patients with acute myocardial infarction early and effective restoration of antegrade flow through the infarct related vessel is of paramount importance for limitation of infarct size and preservation of left ventricular function (**Aversano *et al*, 2005**).

Both thrombolytic therapy and primary angioplasty can restore antegrade flow in most occluded coronary arteries. Thrombolytic therapy can not be given for every patient with acute myocardial infarction (due to presence of contraindications) and it can achieve (60-64.6%) reperfusion with high grade of residual stenosis (50 - 100%) of the infarct related artery. This predispose to recurrent coronary occlusion and recurrent ischemia which may worsen the ventricular function and lead to impaired quality of life (**Michel *et al*, 2003**).

Primary angioplasty can achieve (90-95.7%) reperfusion in most occluded coronary vessels with less residual stenosis (20-30%) which in turn results in less incidence of recurrent ischemia and reinfarction. Therefore primary PCI may result in better short and long term survival. On the other hand, primary angioplasty may not be widely feasible (**Dalby *et al*, 2003**).

Several studies published show the superiority of primary Percutaneous coronary intervention over thrombolysis in the treatment of acute myocardial infarction even if PCI is delayed by 2 hours due to the secondary transfer to a hospital with a cath lab. The advantage consists in a significant decrease in the number of secondary ischemia, recurrent myocardial infarction, hemorrhagic stroke & mortality. (**Laskille *et al*, 2003**).

The mortality benefite associated with primary percutenous coronary intervention in ST- segment elevation myocardial infarction may be lost if door-to-balloon time is delayed by more than 1 hour as compared with fibrinolytic therapy door-to-needle time. (**Naillamothu *et al*, 2004**).

