

ABSTRACT

Title of the Abstract : **“Observational study on pharmacoinvasive strategy and primary angioplasty in a tertiary care centre in acute myocardial infarction patients”**

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Aims & Objective:

To compare the efficacy of Pharmacoinvasive therapy and Primary Angioplasty in STEMI patients. The objective was to study whether the incidence of composite end points (mortality, cardiogenic shock and re-myocardial infarction) in Pharmacoinvasive strategy is non inferior to Primary Angioplasty in patients with STEMI.

Background:

In STEMI patients the treatment of choice is primary PCI. (ACC/AHA Class IA recommendation). But in real world situations, timely PCI remains a challenge especially in developing countries like India where the number of centres performing PCI are few. Timely transfer to such centres also remains a huge challenge

considering the dearth of emergency ambulance services and the state of our road infrastructure.

Pharmacoinvasive strategy refers to routine angiography with a view to revascularize the infarct related vessel 3-24 hours after fibrinolysis. ACC/AHA has given a classIIa recommendation, while European society of Cardiology has given a class I recommendation for this strategy. We will look whether pharmacoinvasive strategy is non inferior to primary PCI (as proved in various trials) in a setting like ours where streptokinase is used as a fibrinolytic agent as compared to the western countries where these trials were conducted using tenecteplase as a fibrinolytic agent.

Methods:

137 patients were included in this study. All patients admitted with a diagnosis of STEMI at our centre, within a window period of 24 hours. Over a period of 9 months, who underwent PCI or pharmacoinvasive therapy was included in this study. Primary end points (death within 30 days, re-MI within 30 days, and cardiogenic shock) and secondary endpoints (arrhythmias, bleeding manifestations, ischemic stroke, ejection fraction, mechanical complications, duration of hospital stay) were looked into.

Results:

Though the hypothesis was non-inferiority, analysis of composite of primary endpoint and mortality outcome suggested equivalence. There was no significant difference between the secondary outcomes between the two groups. Use of thrombus aspiration device and in turn the thrombus burden was significantly lower in the

pharmacoinvasive group than in primary PCI arm. Pharmacoinvasive arm had significantly greater number of patients who presented with Anterior wall MI.

Conclusion:

This is a small study, which showed that pharmacoinvasive therapy is as effective as primary PCI in the setting of STEMI. It can also be further inferred that, pharmacoinvasive strategy using streptokinase, is an effective alternative to tenecteplase, in our setting with no associated increase in adverse events.

Keywords :

- STEMI – ST Elevation Myocardial Infarction
- PCI - Percutaneous Coronary Intervention
- ACS – Acute Coronary Syndrome
- CCU – Coronary Care Unit
- CPU – Chest Pain Unit
- CAD - Coronary Artery Disease
- MR - Mitral Regurgitation
- VSR - Ventricular Septal Rupture
- CVD – Cardio Vascular Disease