

## Safety and Efficacy of Third Generation Thrombolytic- Tenecteplase in Acute Myocardial Infarction

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### Abstract

**Background:** Coronary heart disease is the major cause of mortality and morbidity across the world. The developed countries are seeing a decrease in cases however, the developing countries are incidence is occurring in the younger population. We in the current study aimed to study the efficacy and safety of third-generation single bolus thrombolytic Tenecteplase (TNK) in our setup in patients with acute STEMI. **Methods:** This cross-sectional study was conducted in the Department of General Medicine/ Cardiology, Prathima Institute of Medical Sciences, Naganoor, Karimnagar. Patients were reporting to PIMS hospital with chief complaints of chest pain or shortness of breath, diagnosed as STEMI by standard 12 lead ECG criteria. All patients were diagnosed with STEMI. **Results:** Clinically significant thrombolysis was seen in 98% of patients. Ventricular tachyarrhythmias were developed in 3(3%) patients. 2 patients survived after electrical cardioversion and 1 patient died due to recurrent ventricular tachycardia and ventricular fibrillation despite cardioversion after 2 hours of Tenecteplase injection. One patient who was admitted in Killip class IV died within one hour of Tenecteplase bolus injection due to refractory hypotension and cardiogenic shock. **Conclusion:** Tenecteplase is the safest drug in our setup with the least rate of complications. The efficacy of the drug is still maintained even if it is given after a 6-hours time window. This makes Tenecteplase a choice for pre-hospital thrombolysis. The higher patency rates and least rates of re-infarction are due to the efficacy of the drug in achieving successful thrombolysis and continuous infusion of heparin till taken up for angiography.