



POINT-OF-CARE WITH RETEPLASE IN CARDIAC PATIENTS IN EMERGENCY MEDICINE DEPARTMENT.

Emergency Medicine

Dr. B.P. Meena

Professor Emergency Medicine, S.M.S. Medical College Hospital Jaipur.

ABSTRACT

SMS Hospital is the tertiary care hospital and prime medical institute with heavy patients load in medical emergency department and study was done on random sampling of 100 patients. Occlusion of an epicardial coronary artery. ST elevation is shown on ECG which is electrical manifestation of the pathophysiological changes and is known as ST-Elevation Myocardial infarction (STEMI). ST elevation was found in one quarter to one third of total myocardial infarction patients. Reteplase gives better outcomes with early coronary artery reperfusion and reduce mortality. Methods to improve the safety, accuracy and efficiency of assessment of patients with suspected acute coronary symptoms have occupied decades of study and have supported significant changes in clinical practice. Much of the progress is reliant in cardio version patients. Recently, point-of-care (POC) platforms were able to manage to cardiac patients in emergency department. Reteplase in the r-PA (recombinant plasminogen activator) with nonglycosylated deletion mutant of wild type tissue plasminogen activator (tPA) has less high affinity fibrin binding, longer half-life & greater thrombolytic potency than other thrombolytic drugs.

KEYWORDS

Laboratory-based Indication Of Using Thrombolytic Drugs.

Clinical studies of POC testing can be divided into those evaluating clinical diagnostic performance and those assessing the impact of these tests on patient flow and cost economics. The early POC studies, including Randomized Assessment of Treatment using Panel Assay of Cardiac markers (RATPAC) and Asia Pacific Evaluation of Chest pain Trial (ASPECT), evaluated older multimarker approaches incorporating creatine kinase, myoglobin and troponin.^{22 23} These protocols enabled safe identification of low-risk patients who could be discharged early from hospital-based care. The subsequent introduction of laboratory-based troponin assays with higher analytical sensitivity and precision, enabled more accurate detection of small infarcts as well as faster diagnosis, and saw the interest in multimarker POC platforms falter. However, contemporary POC assay results incorporated into strategies with risk scores have been shown to be safe and accurate when compared with laboratory-based hs assay strategies. For example, the Troponin-only Manchester Acute Coronary Syndromes decision aid using POC cTnT results may enable one-third of ED patients to have ACS ruled out within 3 hours.²⁴ Additionally, the early measurement and detection of significant troponin elevation to rule-in MI using POC assays, including less sensitive systems has been shown.²⁵ Overall, however, the efficiency of contemporary POC clinical strategies cannot compete with the optimised laboratory-based hs-cTn protocols.

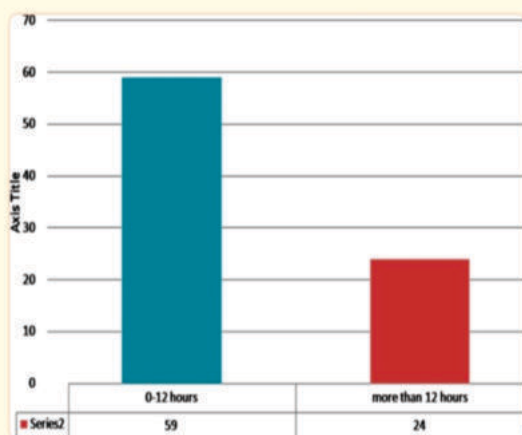


Fig.1

Showing time lapse between chest pain and thrombolytic given.

Anterior MI (V1-V6)	33	39.8
Inferior MI (I, II, III, aVF)	28	33.7
Lateral MI (I, aVL, V5, V6)	12	14.5
Inferior + Rt ventricular MI (II, III, aVF+V4R)	10	12.0
Total	83	100

[Open in a separate window](#)

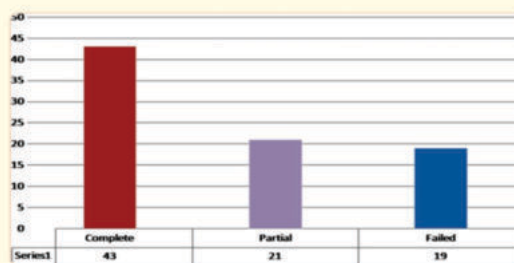


Fig.2

Showing resolution of ECG After thrombolytic.

CONCLUSION

When there is occlusion of an epicardial coronary artery. ST elevation is shown on ECG which is electrical manifestation of the pathophysiological changes and is known as ST-Elevation Myocardial infarction (STEMI). ST elevation was found in one quarter to one third of total myocardial infarction patients. Reteplase may gives better outcomes with early coronary artery reperfusion and reduce mortality and unsuccessful thrombolysis leading to adverse events and successful epicardial vessel thrombolysis is necessary for better prognosis.

REFERENCES

1. American Heart Association. Cardiovascular Disease Statistics. 2006. [Accessed December 7 2006].
2. Kloner RA, Rezkalla SH. Cardiac protection during acute myocardial infarction: where do we stand in 2004. J Am Coll Cardiol. 2004;44:276-286.]
3. Topol EJ. Acute myocardial infarction: thrombolysis. A current overview of the benefits and limitations of thrombolytic strategies and the move towards combining thrombolytic agents with glycoprotein IIb/IIIa receptor blockers. Heart. 2000;83:122-126.
4. Schröder R. Prognostic impact of early ST-segment resolution in acute STElevation myocardial infarction. Circulation. 2004;110:506-5