

Comparison of QT dispersion in ST elevation myocardial infarction patients: Primary PCI versus streptokinase therapy outcomes

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Introduction: This study was conducted to compare QT dispersion (QTd) in patients with ST elevation acute myocardial infarction (STEMI) before and after treatment with streptokinase versus primary percutaneous coronary intervention (PCI).

Method: We reviewed the medical records of all 185 STEMI patients, between February 2013 and June 2015; who received streptokinase (SK) (115 cases) or underwent primary PCI (70 cases) in Valiasr hospital, Fasa, Iran. We analyzed patients' information including, age, sex, duration of hospital stay, QTd and QTd corrected before and 24 hours after treatment, fatal arrhythmias (VT, VF) during the first 24 hours after since admission, ejection fraction (EF) 24 hours after treatment. Statistical analysis was done using SPSS software, version 20.0 and a p-value of less than 0.05 was considered statistically significant.

Results: Age and sex were almost equally distributed in both groups. QTd were decreased in primary PCI group, but no significant difference was seen between groups ($P > 0.05$). A significant increase was detected in EF mean in primary PCI group ($P = 0.022$). There was a significant reduction in QTd of patients with fatal arrhythmias in primary PCI group ($P = 0.022$).

Conclusion: Overall reduction of QTd in primary PCI group and significant reduction in QTd of patients with fatal arrhythmias in primary PCI group shows better efficacy of this treatment strategy in comparison to thrombolytic therapy. EF as an important indicator of proper myocardial function, can also be considered as an independent predictor of improved myocardial function in primary PCI group.

Key words: Myocardial infarction, streptokinase, primary PCI, QT dispersion.