

Impact of delayed right coronary artery stenting on recovery of right ventricle function in patients with acute rightventricular myocardial infarction

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Background: Right ventricle myocardial infarction (RVMI) is an important subset of Acute Coronary Syndrome. Right Ventricle dysfunction (RVD) and its recovery are major determinants of the outcome. In centres which lack primary Percutaneous Coronary Intervention (PCI) facilities, thrombolysis is the main mode of treatment and these patients receive PCI at a later time.

Aim: To analyse the impact of late PCI on Right ventricle (RV) function recovery in acute RVMI patients.

Methods: This is a prospective analytical study done in Department of Cardiology at single-centre tertiary care hospital setting from January 2014 to July 2014. 43 Consecutive patients with Acute Inferior and RVMI with RVD presenting within 48 hours in the age group 18-65 yrs were enrolled. All eligible patients received Streptokinase infusion. All underwent detailed echocardiography for assessment of RV and LV function. RVD was defined with Tricuspid Annular Peak Systolic Excursion (TAPSE) <16mm, RV dimensions and RV systolic pressure. Patients without RVD, age more than 65years, presentation more than 48 hours, patients with cardiogenic shock, renal dysfunction, previous MI, LV dysfunction were excluded. All patient underwent coronary angiogram at the earliest and those with significant Right coronary artery (RCA) lesion had undergone PCI with Stenting.

Results: Of the 43 patients, 24 were males and 19 were females. 18 patients had significant lesion in RCA and underwent PCI with Stenting. 25 patients did not have significant lesion. All the patients were followed up daily with echo until discharge. RV function in patients who had undergone PCI improved (TAPSE 11 to 17) before discharge. Out of 25 patients who had insignificant lesion, in 11 patient, RV function did not improve. Factors associated with poor recovery were TIMI 1-2 flow, Diabetes mellitus and Female gender. **Conclusion:** RV function significantly improves in patients with RVMI even after late PCI.

Readmission in the 30 days after percutaneous coronary intervention

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Background: Around one-tenth of post PCI patients are readmitted within 30 days of hospitalization. Identifying the causes of readmission may help identify strategies to prevent readmission.

Methods: All patients undergoing PCI (elective, urgent, and emergent) at our center between 1st January, 2014 and June 30, 2014, were prospectively followed. Patients readmitted to any hospital within 30 days of the index procedure were identified using telephonic follow-up.

Results: During the study period, 550 PCI were performed, and 33 patients (6.0%) were readmitted within 30 days. Of these, 31 (94%) had medical records available for review. Reasons for readmission included: complications related to the PCI (n = 4, 12.9%); non-PCI

cardiac causes related to index admission (n = 12, 38.7%); non cardiac causes related to index admission (n = 3, 9.6%); causes unrelated to the index admission (n = 12, 38.7%). Female sex, advanced age, peripheral arterial disease, and PCI complications during the index procedure were associated with 30-day readmission.

Conclusions: Readmissions within 30 days due to complications related to PCI performed on index admission are rare (0.7% of all PCI) and are an infrequent cause of readmission (<13% of readmissions). Thirty-day readmission after PCI should not be used as a quality metric of PCI performance.

Analysis of myocardial blush and ST segment recovery after revascularization for prediction of recovery of LV function

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Background: ST Segment elevation recovery and the angiographic myocardial blush grade are useful markers of microvascular reperfusion after recanalization of the infarct related artery. The purpose of this study is to investigate the ability of a combined analysis of MB Grade and ST elevation (STe) recovery to identify different patterns of myocardial reperfusion shortly after thrombolysis or primary angioplasty and to predict 7 day and 6 month LV functional Recovery.

Methods: MB grade and STe recovery were evaluated in patients who underwent thrombolysis or primary PTCA (restoration of TIMI grade 3 flow) in 114 consecutive patients with STe acute myocardial infarction.

LV function was assessed by 2D echocardiograms before PTCA and at 7 days and 6 months thereafter.

Results: By combining MB and _STe changes, 3 main groups of patients were identified.

Group 1 patients (n=60) had both significant MB (grade 2 to 3) and STe recovery ($\geq 50\%$ versus basal _STe) and a high rate of 7-day (65%) and 6-month (95%) LV functional recovery.

Group 2 patients (n=21), who showed MB but persistent _STe, the prevalence of early LV functional recovery was low (24%) but increased up to 86% in the late phase

Group 3 patients (n=28), who had neither significant MB nor ST resolution, had poor early (18%) and late (32%) LV functional recovery.

Conclusion: After successful PTCA, integrated analysis of MB and STe recovery allows a real-time grading of microvascular reperfusion of the infarct area and predicts the time-course and magnitude of LV functional recovery.

Clinical and angiographic outcomes of percutaneous intervention in chronic total coronary occlusion

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Background: Percutaneous coronary intervention has become common in the management strategy of patients with chronic