Comparison between bolus intracoronary versus bolus intravenous injection regimens of eptifibatide during primary PCI in patients with anterior STEMI

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Background: Eptifibatide achieves high local concentration via direct intracoronary injection as it promotes clot disaggregation, but it remains unclear if it is of superior benefit than the routine intravenous administration.

Aim: The current study aimed to examine the safety and efficacy of intracoronary versus intravenous bolus regimen dose of eptifibatide during primary PCI.

Patients and methods: Prospective, controlled, randomized study enrolled 100 patients with acute anterior STEMI eligible for primary PCI equally divided into two groups (group A received bolus intracoronary eptifibatide and group B received it intravenous) followed by 12 h continuous IV infusion. Predictors of myocardial salvage in the form of TIMI flow grade III, myocardial blush grade 3, ST segment resolution and left ventricular systolic function were evaluated with short term follow up for 1 month.

Results: Mean age of the study population was 50.95 ± 8.45 years, there was statistically insignificant difference between both groups regarding baseline characteristics regarding age (p = 0.062), gender (p = 0.488) and coronary artery disease risk factors (p > 0.05), time from onset of pain to admission (p = 0.86) or door to balloon (p = 0.12). Group A achieved statistically significant better myocardial blush grade 3 (42% versus 10%, p = 0.005), ejection fraction 30 days after PPCI (46.11 ± 7.81, versus 40.88 ± 6.26, p = 0.005) but statistically insignificant TIMI flow grade III (p = 0.29) and ST resolution (p = 0.34). Incidence of in hospital complications and 30 days after discharge was statistically insignificant (p > 0.05).

Conclusion: Regimen of intracoronary bolus eptifibatide achieved better myocardial salvage predictors and was as safe as intravenous bolus during PPCI and at short term follow-up.

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Comparison of the effect of warm versus cold cardioplegia during and after surgery on patients with rheumatic left sided lesions associated with preoperative impaired right ventricular function

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Background: Due to the lack of awareness of the pivotal role of the right ventricle in cardiac and pulmonary vascular disease, it is neglected to be assessed in clinical practice. In spite of the improvement in myocardial protection accomplished in past years, there is a room for further improvement, in particular in high risk patients, in the hope of preventing postoperative ventricular dysfunction and improving overall outcome. The use of normothermia myocardial protection has increased and routinely achieved with excellent results by retrograde continuous warm blood cardioplegia (Lichtenstein et al., 1990) or by intermittent cardioplegia with antegrade warm blood.

Material and methods: Within the recent study, the Ethical Board of Kasr Al-Ainy medical school and the National Heart Institute approved prospectively enrolling 44 patients within the study. All patients were consented about the study and were informed that it carries no additional risk on them. All patients had preoperative right ventricular dysfunction as defined by echocardiographic evidence of right ventricular systolic function impairment with TAPSE less than 1.6 with other echocardiographic measures according to American Society of Echocardiography. They either underwent moderate hypothermia (28 °C) and IACC (IACC group, n = 22) or normothermia and IAWBC (IAWBC group, n = 22). All patients were assessed intraoperatively regarding: Total cardiopulmonary bypass time and cross clamp time, the resumption to normal rhythm after declamping (spontaneous or with DC shock.), Recirculation time, the need for inotropic support, ECG changes in the form of ischemia or arrhythmia. All patients postoperatively were assessed regarding Low cardiac output (LCO), Duration of mechanical ventilation, Bleeding and blood transfusion, Duration of ICU stay, Duration of hospital stay. Pre discharge within