respectively), day (11.1±2.9 mmHg vs. 9.0±1.8 mmHg, p = 0.003 and 12%±3 vs. 10%±2, p = 0.006, respectively), and night (10.0±3.6 mmHg vs. 7.2±2.0 mmHg, p = 0.001 and 11%±5 vs. 9%±3, p = 0.059, respectively) values were significantly higher in restenosis group compared to no restenosis group except for VC night. All systolic and diastolic BPV indices except diastolic VC night were found to be independent predictors of risk of restenosis in multivariate analysis. In addition, the cut-off values of 11.4 mmHg and 13% for 24-h systolic SD and VC, respectively, were found to be highly sensitive (93% for both) and specific (94% and 91%, respectively) for predicting binary restenosis at 6-month after PCI.
Conclusions: BP variability indices are significantly and independently associated with binary restenosis and higher values can predict restenosis after PCI sensitively and specifically.

OP-213
BACK TO THE FUTURE IN TREATMENT OF REFRACTORY NO-REFLOW AFTER PRIMARY PERCUTANEOUS CORONARY INTERVENTION: INTRACORONARY EPINEPHRINE

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Objective: No-reflow is a serious observation during primary percutaneous coronary intervention (PCI) for acute myocardial infarction (AMI) and associated with a poor clinical outcome. The goal of this study was to evaluate the safety and efficacy of intracoronary epinephrine in reversing refractory no-reflow during percutaneous coronary intervention (PCI). Although epinephrine has an attractive pharmacological profile and has been used clinically to treat cardiopulmonary arrest, there is a paucity of published data regarding its effectiveness in coronary no-reflow.
Methods: We retrospectively evaluated 12 consecutive patients who received intracoronary epinephrine to reverse refractory no-reflow during primary PCI. The effects of intracoronary epinephrine on qualitative TIMI flow grade and quantitative TIMI frame count, cardiac rhythm, and systolic blood pressure were assessed.
Results: A mean of 333±123 mcg of intracoronary epinephrine was used. No-reflow was successfully reversed with complete restoration of TIMI 3 flow in 9 of 12 patients (75%). TIMI flow grade improved from 1.33±0.49 prior to epinephrine to 2.66±0.65 after treatment (p < 0.001). There was improvement in coronary flow of at least one TIMI flow grade in 11 (93%) patients, two flow grades in 5 (42%) cases. TIMI frame count decreased from 56±10 at the time of no-reflow to 19±11 (p < 0.001).
Epinephrine therapy was well tolerated without serious adverse hemodynamic or chronotropic effects. Intracoronary epinephrine resulted in significant but tolerable increase in heart rate (68±13 to 95±16 beats/min; p < 0.001) and systolic blood pressure (94±18 to 140±20; p < 0.001). Hypotension associated with no-reflow developed in 5 (42%) patients. However, following administration of intracoronary epinephrine, all were normotensive at the end of the procedure.
During the procedure, intra-aortic balloon pump counterpulsation was required in two (17%) patients, transvenous pacing in 2 (17%) cases, and both intra-aortic balloon counterpulsation and transvenous pacing in one (8%) patients. One patients (7%) required cardiopulmonary resuscitation during their episodes of no-reflow and the patient (3.4%) died despite therapeutic measures.
Conclusions: Intracoronary epinephrine may become an effective alternative in patients suffering refractory no-reflow following primary PCI.

OP-214
THE ASSOCIATION OF SERUM URIC ACID LEVELS WITH CORONARY FLOW IN PATIENTS WITH STEMI UNDERGOING PRIMARY PCI

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Objective: Uric acid has been shown as a predictor and an independent risk factor for coronary heart disease, but little is known regarding the association of uric acid levels with coronary blood flow in STEMI. We hypothesized that elevated uric acid levels would be associated with impaired flow and perfusion in the setting of STEMI treated with primary PCI.
Methods: Two hundred and eighty nine patients with STEMI who treated primary PCI were enrolled to study. Patients were divided into two groups based upon the TIMI flow grade. No-reflow was defined as TIMI Grade 0, 1 and 2 flows (Group 1). Angiographic success was defined as TIMI 3 flow (Group 2). Uric acid and high sensitive CRP were measured. Major adverse cardiac events (MACE) were defined as in stent thrombosis, non-fatal myocardial infarction and in-hospital mortality.
Results: There were 126 patients (mean age 63±11 and 71% male) in group 1 and 163 patients (mean age 58±12 and 80% male) in group 2. Uric acid, MPV, and CRP levels on admission were higher in group 1 (p = 0.0001 for each). A uric acid level >5.3 mg/dl measured on admission had a 77% sensitivity and 70% specificity in predicting no reflow at ROC curves analysis. In-hospital MACE was significantly higher in group 1 (29% vs. 7%, p = 0.0001). At multivariate analysis, high plasma uric asid levels were independent predictors of MACE [odds ratio (OR) 3.675, 95% CI 1.556–8.678; p = 0.003].
Conclusions: Plasma uric acid level on admission is a strong and independent predictor of poor coronary blood flow following primary PCI and in hospital MACE among patients with STEMI. Except for predictive value, uric acid levels may be a useful biomarker for stratification of risk in patients with STEMI and may also lead to carry further therapeutic implications.

Saturday, 26 March 2011 08:30–10:00

Congenital Heart Defects: Update in Surgical Approaches

OP-216
ACE INHIBITORS FOR LARGE LEFT-TO-RIGHT SHUNTS IN INFANTS: A SYSTEMATIC REVIEW

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Objective: To evaluate whether angiotensin converting enzyme (ACE) inhibitors are effective for the treatment of heart failure due to large left-to-right shunts in infants.
Methods: We systematically searched The MEDLINE, OLDMEDLINE, Cochrane Central Register of Controlled Trials and reference lists of identified studies. No language restriction is applied. Randomised trials or quasi-randomised trials comparing captopril with placebo, no treatment, or standard treatment were eligible. Non-randomised trial will be included if the baseline characteristics of the subjects were clinically comparable. Two reviewers independently extracted data and assessed trial quality.
Results: We found 13 studies evaluating the use of ACE inhibitors in left-to-right shunt lesions in infants/children, however 11 were uncontrolled studies. The remaining 2 studies were too methodologically flawed to draw meaningful conclusions. One is a randomized controlled trial comparing captoril and placebo in very small number of subjects (n = 6 in each group) and assessed only