**INCIDENCE AND RISK FACTORS FOR AKI PRE-CARDIAC CATHERIZATION IN PATIENTS PRESENTING WITH STEMI**

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*Background*: The incidence of Acute Kidney injury (AKI) in patients with ST-Elevation Myocardial Infarction (STEMI) is between 10-30% post-PCI. It’s a marker of both significant inpatient and long term morbidity and mortality compared to non-AKI STEMI patients. They have a higher risk of future MI, strokes, heart failure, heart failure re-admissions, risk for long term CKD and Dialysis. All the current studies have looked at incidence and risk factors of AKI post-PCI. We aim to evaluate the incidence and risk factors for AKI pre- PCI in patients with STEMI.

*Methods:* We retrospectively evaluated 636 patients who presented with STEMI between 2007 and 2013 in Jackson Memorial Hospital. Baseline characteristics, risk factors, echocardiographic and cardiac catheterization data were collected. AKI was defined based on AKIN network classification. I.e Cr > 0.3mg/dl from baseline - Stage 1, rise in Cr> 2x but < 3x from baseline – stage 2 and rise in Cr > 3x – stage 3.

*Results*: PCI was conducted in 636 patients. The incidence of AKI is 9.3%. 91.6% (55/60) with AKI stage 1, 0.03% with AKI stage 2, 0.05% with AKI stage 3. Mean age 64.3yrs vs 59.9yrs (p=0.093), Insulin dependent DM (IDDM) 21.15% vs 11.19% (p=0.035), history of CKD 8.3% vs 2.3% (p=0.016), mean EF 40.38% and 45.63% (p=0.0065) and cardiogenic shock 30% vs 14.41% (P=0.002) in the AKI and non-AKI group respectively were risk factors for development of AKI pre-PCI. Age, previous CKD and EF were independent risk factors. Gender, smoking, HTN, BMI, Hemoglobin, culprit lesion, degree of CAD in non-culprit vessel, race, were not risk factors.

*Conclusion*: Contrast volume and CKD though important, are not the only factors for development of AKI. Factors Pre-PCI; Age, EF, IDDM, CVD, and degree of neurohormonal activation play key roles in predisposing patients to higher risk of AKI pre and post-PCI.