**CHEST PAIN READMISSION PREDICTORS - A CLINICAL EXPERIENCE FROM INPATIENT CHEST PAIN OBSERVATIONAL STUDY**

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Background: Chest Pain (CP) accounts for nearly 6 million ED visit per year and

50% of these are hospitalized for chest pain across US hospitals.

Aim: To establish predictors of readmission in patients admitted with CP as chief complaint.

Methods: 820 patients were admitted with CP from July to November 2011. 517 patients were included in the final analysis excluding for more than one chief complaint and insufficient data. Demographic and clinical data on type of CP, medical history, and labs were collected from medical charts. Readmission (ROA) was defined as admission within 1 month related to CP. A co-morbid disease score (COMB) was calculated based on the presence of co-morbid conditions.

Results: Mean age was 59±13 years with 54 % females. Average LOS was 2.67± 2.1 days with COMB score of 4.1± 1.6.The ROA was 11.8± 2.8 %. On Bivariate analysis, ROA was associated with non-white race (p=0.013), COMB Score ≥ 5 (p<0.001), current smoking (p=0.05) and previous cardiac history (p=0.006). On logistic regression, ROA was only significantly associated with COMB score ≥5 (O.R. =7.82, 95 % CI, p=<0.001). On sub analysis of COMB score, BNP ≥400 (O.R. =2.80, 95 % CI, p=0.015) and HGB <10g/dl (O.R. = 2.43, 95 % CI, p=0.034) were the strongest predictors of ROA.

Conclusion: Higher ROA rates were associated with high COMB score. Future efforts to reduce ROA should be directed toward the recognition of patients at highest risk. If validated, COMB score can be used as an important assessment tool.