**ACUTE AND CHRONIC ELEVATION OF CARDIAC TROPONIN PREDICT THE SEVERITY OF CORONARY ARTERY DISEASE IN PATIENTS WITH END-STAGE RENAL DISEASE**

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**Introduction:**Coronary artery disease (CAD) is the major cause of death in patients with end-stage renal disease (ESRD). Although cardiac Troponin I (cTnI) has a high sensitivity and specificity in diagnosing acute coronary syndrome (ACS), up to 30% of patients with ESRD have elevated cTnI levels without evidence of myocardial injury.

**Objective:** This study aims to evaluate the utility of the chronically elevated cTnI and the acute rise in cTnI levels at time of ACS in predicting the severity of CAD in patients with ESRD.

**Method:** A retrospective analysis of 450 patients with ESRD admitted with a diagnosis of Non-ST-elevation myocardial infarction (NSTEMI). All patients underwent left heart catheterization (LHC) during the same hospital admission. ESRD patients were divided according to the severity of CAD stenosis into minimal, mild, moderate, and severe.

**Results:** Severe CAD was found in 58% and moderate CAD was present in 18% of patients with ESRD patients presenting with NSTEMI. Chronic baseline cTnI level and cTnI levels at time of NSTEMI presentation were analyzed in CAD sub-groups. There was a statistically significant difference between minimal CAD (stenosis < 25%) and severe CAD (stenosis > 70%) in both chronic baseline cTnI levels (p=0.01) and the maximum level of cTnI measured at time of NSTEMI presentation (p=0.001).

**Conclusions:** Majority of ESRD patients presented with NSTEMI had advanced CAD (stenosis > 50%). Chronic elevation of cTnI was associated with more advanced coronary artery stenosis. Elevated cTnI levels can provide predictive information and permit early identification of patients with advanced CAD. This might further advance risk stratification and quality of cardiovascular care in this high-risk patient population. These findings shed light on the association between the chronic cTnI levels, acutely elevate cTnI levels, and the severity of CAD in ESRD patients.