**HIGH-SENSITIVITY TROPONIN I (HSTNI) LEVEL IN ACUTE MYOCARDIAL INFARCTION (AMI) PATIENTS AND ITS ASSOCIATION WITH CORONARY ARTERY DISEASE (CAD) RISK FACTORS, AN INVESTIGATIVE STUDY**

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*Introduction:*CAD places a patient at risk for an acute coronary syndrome (ACS). ARCHITECT STAT hsTnI assay measures troponin I values at much lower levels and for early detection of AMI (above 15.6 pg per ml for females and 34.2 pg per ml for males). This study aims to determine the association of hsTnI level in AMI patients with CAD risk factors, the percentage increase in the level on second determination and the features of extremely high hsTnI values.

*Methods:*A retrospective, descriptive study done from July 2014 to June 2015. All patients were admitted in The Medical City as a case of ACS and underwent coronary angiogram. Demographics, clinical characteristics, diagnostics and treatment received were recorded. Independent samples t test and descriptive analysis were done.

RESULTS:In association with CAD risk factors, dyslipidemia has the highest mean hsTnI in both STE-ACS (1951) and NSTEMI (775) cases in females. In the males, higher mean value was observed in smokers (1293) and diabetics (2620) in both NSTEMI and STE-ACS. But results show that there is no significant difference in mean hsTnI level between NSTEMI and STE-ACS. Mean percentage increase in hsTnI from the baseline is higher in the earlier group (170x in 2-6 hours). Abnormally high hsTnI levels were observed in overweight patients, elderly women and younger men with increased number of hours (average of 36 hours) between the onset of symptoms to presentation and first determination.

*Conclusion:*There were no significant differences in mean hsTnI values for NSTEMI and STE-ACS related to age, diabetes, dyslipidemia, hypertension and smoking. hsTnI levels may increase up to 170x the upper limit within 6 hours. Extreme values of hsTnI is affected by the time interval from onset of symptoms to the first determination in both male and female population.