Hamid Amer et al., J Clin Exp Cardiolog 2017, 8:1 (Suppl)
http://dx.doi.org/10.4172/2155-9880.C1.065



# The significance of ECG changes during adenosine infusion as a stress agent for myocardial perfusion imaging (MPI) in predicting coronary artery disease (CAD)

**Hamid Amer, Khalid Niaz, Imran Ali, Anwar Jelani** and **Mohammed Y Sheikh**
King Abdulaziz Hospital for National Guards, Saudi Arabia

**Purpose**: The significance of electrocardiographic ECG changes during adenosine stress test is debatable. This study will further elaborate the significance of these changes in predicting the possibility of CAD.

**Methods**: This was a retrospective observational registry performed in a single center at the Kingdom of Saudi Arabia. The data were collected from the nuclear medicine database identifying all the reported Gated myocardial perfusion SPECT with adenosine stress tests between January 2013 and January 2014. The adenosine dose were fixed with all patients based on body weight and was given as a continuous infusion of 140 mcg/kg/min over a 6-minute period.

**Results**: There were 346 patients identified with cardiac nuclear scans in the pre-specified time frame who were subjected to adenosine stress scan. 152 of these patients were male accounting for 44% of the total population. Average age at the time of examination was 60.82±11.29 years. Patients were presented with one or more risk factors. Patients with base line abnormalities, past history of CAD with or without PCI or CABG and previous MI were excluded from the study. Ninety-eight patients (28%) were reported as positive for CAD, 40 patients were reported with ischemic ECG changes (12%) during adenosine infusion, 23 patients who have ischemic changes were positive on MPI, while 17 patients who have positive ECG had a negative MPI. Odd Ratio (OR) was 4.16, 95% C.I. was (2.11-8.18). Fisher Exact test was applied and showed a P value of <0.01. No reported case of asystole, myocardial infarction or complete heart block in this study period.

**Conclusions**: Our study showed that the probability of a positive MPI is 4 times higher with positive ECG ischemic changes during adenosine stress test and consequently these ECG ischemic changes should be taken in consideration in the final report.

## Biography

Hamid Amer is Nuclear Cardiology Board Certified and is an Associate Consultant in Nuclear Medicine at King Abdulaziz Hospital for National Guards, Saudi Arabia. He is involved in researches related to the Department of Nuclear Cardiology.

drhamidamer@yahoo.com

**Notes:**