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PROGNOSTIC VALUE OF STRESS-ONLY GATED SPECT MYOCARDIAL PERFUSION IMAGING

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It is known that a normal stress-only protocol of myocardial perfusion imaging will save time, cost and most importantly avoid significant radiation exposure that can be seen from the routine stress/Rest protocol. The aim of this study was to determine the safety of practicing stress only protocol compared to the stress - rest MPIs that will definitely expose patient to unnecessary radiation if ordering was not justified. **PATIENTS AND METHODS:** This is a retrospective study conducted at Nuclear Medicine section, Department of Medical Imaging, King Abdulaziz Hospital for National Guards, Al Ahsa, KSA from April 1st 2019 till October 29th 2019. In a retrospective way all stress part of the MPI studies were displayed blindly by a resident and a consultant of nuclear medicine who is board certified in nuclear cardiology reported the study as normal that did not need a rest part or positive or questionable study that need the rest study for confirmation. **RESULTS:** A total number of 145 patients were reviewed with mean age of 51+/- 16 female were 70 patients representing 48.2%. A rest-stress (same day) protocol was used in all patients. Those patients who have completely normal stress were identified and final results were correlated with available results of stress and rest combined study. 73 (50.34 %) patients were identified as normal and no need for rest study from these patients 2 patients (1.3%) only were mismatched with the stress/Rest results, one of them was sent for angiography and invasive intervention (PTCA) while the other was treated medically with intensive therapy of the risk factors. A dual head dedicated (FORTE 40, Philips) camera was used to acquire data. **CONCLUSION:** It has been concluded that a normal MPI with stress-only protocol has comparable result to a normal stress - rest study (98.7% matching rate). We recommend using this protocol as routine in low risk patients to save time, reduce cost and avoid significant radiation exposure.

Key Words: Stress-Only protocol, MPI, stress - rest, 99mTc MIBI