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MYOCARDIAL PERFUSION IMAGING FINAL REPORT

Patient Name: DOE, JOHN A **Gender:** M **Date of Study:** 9/8/2017
Date of birth: 1/1/1950 **Age:** 67 **Medical Record #:** 123456789
Ordering Physician: JOE INTERNIST, MD **Height:** 5' 11" **Weight:** 225lbs **BMI:** 14.3
History: Chest Pain, DOE, CAD, Old MI, High Cholesterol, Sleep Apnea
Indications: Assessment of chest pain, Ischemic Equivalent (DOE), Known CAD

NUCLEAR IMAGING PROTOCOL: Same Day Rest Stress

6.1 mCi of Tc-99m sestamibi was administered via IV injection at rest. Approximately 45 minutes afterwards, anterior cardiac planar & cardiac SPECT imaging was performed. A stress test was then performed and at peak exercise, 18.7 mCi of Tc-99m sestamibi was injected IV; approximately 30 minutes post injection, anterior cardiac planar & cardiac gated SPECT imaging was performed. Prone images were also acquired to mitigate any diaphragmatic attenuation artifact.

STRESS PROTOCOL: Exercise Stress Test

The patient exercised on a treadmill utilizing the Bruce protocol; they completed 10 minutes & 36 seconds, achieving approximately 12.9 METS. Baseline heart rate was measured at 68 bpm, and increased to 144 bpm at peak exercise; which is 94% of the maximum predicted heart rate. The heart rate response was normal. Baseline blood pressure was 120/80 mmHg and changed to 172/74 mmHg at peak exercise, which is a physiologic response to exercise. Resting ECG demonstrated normal sinus rhythm with LAHB, late r-wave progression. During exercise, the ECG showed PVCs. At peak stress, the ECG revealed flat to upsloping ST segment depression of 2 - 2.5 mm. During exercise, the patient developed chest pain level 2 of 10, fatigue. The reason for exercise termination was fatigue, patient's request. Symptomatology resolved during standard recovery period.

EXERCISE TEST SUMMARY: | 10.6 min on Bruce protocol | Chest pain level 2 of 10 | No dyspnea | Exercise ST-T changes noted | Stopped for fatigue, patient's request. **EXERCISE TEST IMPRESSION:** Positive by ECG criteria

IMAGING FINDINGS

Study quality: suboptimal due to artifact **Left Ventricle:** Normal
Artifacts: diaphragmatic attenuation

SPECT imaging demonstrated a medium size, mostly reversible perfusion abnormality of moderate to severe intensity located in the apical anterior, mid anterior segment(s) of the left ventricle, and a medium to large size, fixed perfusion abnormality of moderate severity located in the inferior segment(s) of the left ventricle. The 17-segment summed stress score was 13, the summed rest score was 7, and the summed difference score was 6.
Gated SPECT imaging of the left ventricle was abnormal, demonstrating moderate hypokinesis of the inferior segment(s) of the left ventricle. Overall left ventricular systolic function was mildly reduced. The calculated post-stress ejection fraction was 42%. Normal range for ejection fraction is approximately 50% - 70%.

IMPRESSION: Infarct and Reversible Ischemia, Abnormal LV Function

- Medium size area of (moderate to severe) stress-induced ischemia located in the apical anterior, mid anterior segment(s) of the left ventricle, and a medium to large size area of (moderately severe) myocardial infarction located in the inferior segment(s) of the left ventricle.
- SSS= 13; SRS= 7; SDS= 6
- Abnormal left ventricular systolic function: Moderate hypokinesis of the inferior segment(s) of the left ventricle. Ejection fraction = 42%.
- Compared to previous study on 1/1/2009, perfusion shows new ischemia. LV function is essentially unchanged. Recommend cardiac catheterization, PCI if indicated.

Electronically Recorded Signature at 01:46 PM on 9/8/2017
John Hancock, MD FACC
Nuclear Interpreting MD

Date of Final Report: 9/8/2017