### Nuclear Medicine Stress Test Protocol

**Pharmacy Mnemonic:** NMSTRESS

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1. **Treadmill:**

   For asymptomatic ambulatory patients, perform treadmill test as ordered.

2. **Myocardial Perfusion Test with Lexiscan (regadenoson):**

   - For a history of asthma, COPD, or emphysema with active wheezing, may administer 2 puffs albuterol (Ventolin) inhaler or 2 puffs ipratropium-albuterol (Combivent) inhaler pre- and post-testing as needed.

   Obtain resting EKG and resting blood pressure reading.

   Administer Lexiscan (regadenoson) 0.4mg/5mL IV over a period one minute. Follow with 5mL 0.9% sodium chloride IV flush.

   EKG and blood pressure readings are taken at baseline (resting), at the one minute interval after administration of Lexiscan and the 3 minute interval.

   In the recovery phase, the patient is monitored for a minimum of 3 minutes and until symptoms, blood pressure, and/or ischemic EKG changes are resolved.

   - For severe side effects (headache, nausea, or chest pain), wait at least 2 ½ minutes after Lexiscan has been administered, give aminophylline 125mg (5mL) slow IV push over 2 minutes. May repeat dose once if needed. Do not exceed total dose of 250mg.

3. **Myocardial Perfusion Test with Dobutrex (dobutamine) infusion:**

   Obtain resting EKG and resting blood pressure reading. Additional EKG and blood pressure readings are obtained every two to three minutes and as needed during each infusion stage and every one to two minutes and as needed during the phase.

   Begin IV dobutamine 500mg/250mL infusion at 10 micrograms/kg/min. At two minute stages, may increase rate by 10 micrograms/kg/min to a maximum infusion rate of 50 micrograms/kg/min until target heart rate is achieved (85% of maximum heart rate is the goal) or ischemic EKG changes are present. If target heart rate cannot be achieved with dobutamine infusion alone, may administer atropine 0.5mg to 1mg IV.

   Early endpoints: maximum heart rate is achieved; marked ischemic changes are present (> 3mm ST segment depression); ischemic ST segment elevation (> 1mm in leads without pathological Q waves; systolic blood pressure exceeds systolic of 230 or diastolic 130; decrease in systolic blood pressure > than 20 mmHg from the resting blood pressure reading; presence of ventricular tachycardia, or SVT.

   In the recovery phase, the patient is monitored for a minimum of 6 minutes and until symptoms, blood pressure, and/or ischemic EKG changes are resolved.

   **Additional orders which may be administered as needed during or post stress testing:**

   - For minor chest pain or shortness of breath, give oxygen 2 L/min per nasal cannula.
   - For persistent shortness of breath post-test, give 2 puffs albuterol inhaler.
   - For unresolved chest pain, give nitroglycerin 0.4mg sublingual every 5 minutes for a maximum dose of 3 tablets. Contact physician for unrelieved chest pain.
   - For unresolved hypertension, give nitroglycerin 0.4mg sublingual every 5 minutes for a maximum dose of 3 tablets, or may give metoprolol 5mg IV.
   - For unresolved symptomatic hypotension, place patient in trendelenburg position and/or infuse 0.9% sodium chloride 250mL IV bolus.
   - For onset of sustained arrhythmia, have patient cough or perform Valsalva maneuver. For SVT, may give metoprolol 5mg IV, or may give adenosine 6mg as rapid IV bolus over 1 to 2 seconds. If the first dose does not resolve the SVT within 1 to 2 minutes, give adenosine 12mg IV. Contact physician for further orders if SVT not resolved.
   - Call a PERT if any symptoms persist. For ST elevation or ST depression that does not return to baseline, apply oxygen 2 L/min per nasal cannula and call a PERT.

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 Date                        Time                        Physician Signature