PHARMACOLOGIC STRESS TESTING

PURPOSE:
To outline the nursing management of a patient who undergoes pharmacologic stress testing with either vasodilators or the adrenergic agents.

LEVEL:
Interdependent

SUPPORTIVE DATA:
Any patient undergoing a pharmacologic stress test will be in a monitored situation with a consent signed.

CONTENT:

Assessment:
Nursing assessment prior to the procedure to include:
2. Obtain patient's current medication list to determine which scheduled medications need to be given and/or held before the stress test. (See Stress Test Instructional Sheet)
3. Determine hydration status - to be NPO 4 hours prior to test. Exception: sip of water with prescribed AM medications.
4. Perform assessment to include:
   a. obtain patients weight
   b. note allergies
   c. obtain baseline ECG, heart rate, blood pressure, and SaO₂ (if indicated)

Interventions:
1. *Establish an IV with heparlock in place.
2. *Administer medications according to physician order and/or refer to appropriate medication procedure
3. Monitor, during and following procedure
   a. ECG
   b. B/P, heart rate
   c. O₂ saturation level
   d. patient's condition/symptoms
Refer to appropriate procedure for specific guidelines in frequency of clinical observation
4. The cardiotracer must be injected at the appropriate time during the test (refer to appropriate med. procedure for details)
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Emergency Interventions:
Determine availability of emergency equipment and medications
1. Know exact location and availability of crash cart and medications to prevent or treat adverse effects (refer to procedure)
2. Appropriate medications to treat adverse effects will be at the patient's bedside at all times during the procedure.

Physician Notification:
1. May check with physician the day before the test is scheduled to determine whether any routine medications need to be held, if in question.
2. Notify the attending physician when the patient is prepared to begin the pharmacologic stress test. Baseline EKG must be reviewed by the physician before starting test.

Safety:
1. Accompany patient on transport from one area to another.
2. Use infusion pump when administering medication for stress test.
3. Remain at patient's bedside during medication administration (There are no rails on the scan table)

Patient Teaching:
1. The patient will receive an instructional telephone call or visit by the radiology nurse prior to the day of testing.
2. The patient will be instructed to arrive in Radiology Dept. 30-60 min prior to the scheduled exam.
3. If patient's needs to return to radiology for redistribution images
   a. Insure that the patient is informed of time to return
   b. Instruct the patient that they need to remain NPO until x-rays are complete.
   c. Review with patients that they may resume normal medication after initial imaging.

DOCUMENTATION:
Record assessment, medication administration, monitoring of patient, physician notification, safety measures, and patient teaching on Radiology nurses notes and rhythm analysis.

REFERENCES:
Udelson, James E., M.D. Ass't Professor, Medicine and Radiology, Tufts University School of Medicine
Stress Testing Protocol, Radiology Dept., Mary Greeley Medical Center, Ames IA
Stress Testing Protocol, Radiology Dept., Iowa Heart Center, Mercy Hospitals, Des Moines IA
STRESS TEST INSTRUCTIONAL SHEET

1. Cardiolite - fast 4 hours - light breakfast only (i.e. toast & juice)
2. Thallium & Dual - fast from after midnight, except a little bit of water.
3. Please do not use nicotine or caffeine prior to test.
4. Treadmill - you will be walking on the treadmill, are you able to do that okay?
   Pharmacologic - you will not be walking the treadmill, you will be given the medicine (adenosine, dobutamine) through your IV site.
5. Dual & Cardiolite - your test will take 2 ½ to 3 hours.
   Thallium - the first portion of your test will take 1 hour, you will need to return in three hours for
   the second portion of your test which will take about 15 minutes.
6. Are you a diabetic? (See med sheet below)
7. What medications are you on? (See med sheet below)
8. Have you had any recent hospitalizations?
9. What is your weight? How tall are you?
   If weight exceeds 290 pounds, let nuclear technologist know ASAP. Inform patient of table weight limit and
   the possibility of another test needing to be performed.
10. Adenosine - do you have asthma or a history of lung disease:
    Dobutamine - do you have any history of VT or arrhythmia?
11. Do you have any questions regarding this test?
12. Who is your family doctor?
13. How well can you bring your arms up over your head?

MEDICATION SHEET – Diabetic

<table>
<thead>
<tr>
<th></th>
<th>Treadmill</th>
<th>Adenosine</th>
<th>Dobutamine</th>
<th>Persantine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
</tr>
<tr>
<td>Regular</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
</tr>
<tr>
<td>Humulin</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
</tr>
<tr>
<td>Humulin BP</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
</tr>
<tr>
<td>Any other insulin</td>
<td>Take ½</td>
<td>Take ½</td>
<td>Take ½</td>
<td>Take ½</td>
</tr>
<tr>
<td>Beta Blocker (See below)</td>
<td>Hold</td>
<td>Take</td>
<td>Hold</td>
<td>Take</td>
</tr>
<tr>
<td>Nicotine Patch</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
<td>Hold</td>
</tr>
<tr>
<td>Persantine/Dipyridamole</td>
<td>Take</td>
<td>Hold pm &amp; am</td>
<td>Take</td>
<td>Take</td>
</tr>
<tr>
<td>Theodur</td>
<td>Take</td>
<td>Hold 48 hours</td>
<td>Take</td>
<td>Hold 48 hours</td>
</tr>
</tbody>
</table>

Beta Blockers:
Lopressor (metoprolol), Tenormin (atenolol), Sectral (acebutolol), Inderal (propanolol), Corgard (nadolol),
Blocedren (timolol), Visken (pendolol), Normodyne (labetalol), Trandate (labetalol), Kerlone, Toprol, Levatol
(penbutolol), Corzide, Tenoretic, Inderide.

**Dr. Boyd prefers his patients to take all meds prior to Dobutamine testing, even beta blockers.

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