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Subject: ADENOSINE (ADENOCARD®)

Section #: 348.01 Issue Date: March 21, 2011

Revision Date:

Approved By:

Michael Lozano, Jr., M.D., HCFR Medical Director

Adenosine

1. CLASSIFICATION

a. Endogenous Nucleoside

2. ACTIONS / DESCRIPTIONS

- a. Slows tachycardia associated with the AV node via modulation of the automatic nervous system without causing negative inotropic effects.
- b. Interrupts re-entry pathways in supraventricular tachycardia.
- c. It acts directly on sinus pacemaker cells and vagal nerve terminals to decrease chronotropic and dromotropic activity.

Indications

a. Conversion of SVT to sinus rhythm

4. CONTRAINDICATIONS

- a. Second or third degree AV block
- b. Poison induced tachycardia
- c. Volume depletion tachycardia

5. PRECAUTIONS

- a. Patients taking Digoxin or/and verapamil. Monitor closely for v-fib potential.
- b. Dipyridamole may potentiate adenosine's effects.
- c. Methylxanthines may require higher doses.

6. ADVERSE REACTIONS

- a. Metallic taste
- b. Hypotension
- c. Paresthesia (tingling, prickly sensations)
- d. Shortness of Breath (especially if history of bronchospastic disease)
- e. Ectopy (transient)
- f. Lightheadedness/syncope
- g. Transient periods of sinus bradycardia or asystole
- h. Chest pressure/pain

7. DRUG ACTION TIME

- a. Onset = 20 seconds
- b. Duration = 10 seconds

8. Informational Points

- a. A brief period of asystole (up to 15 seconds) followed by NSR is common.
- b. Important points for administration:
 - i. Large bore in the antecubital
 - ii. Close port (no three-way)
 - iii. Fast
 - iv. Close to the catheter
 - v. Flush directly after drug administration

Hillsborough County Fire Rescue STANDING ORDERS AND PROTOCOL

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- c. With atrial fibrillation there is transient slowing of the rate due to increase block at the AV node. This will not result in chemical conversion.
- d. Patients on methylxanthines (theophylline) may require larger doses.
- e. Patients taking carbamazepime (Tegretol®) may be more sensitive.