REGIONAL PEDIATRIC PARENTERAL DRUG MONOGRAPH

GENERIC NAME
adenosine

Effective Date: May 2013 **Revised Date:** Jan 2024	CLASSIFICATION **Antidysrhythmic**	OTHER NAMES **Adenocard®**	PAGE 1 of 2

ADMINISTRATION POLICY:

IV Injection: Restricted to nurses in ED/ICU. Physician must be present

RECONSTITUTION/DILUTION/ADMINISTRATION:

Available as: 3 mg/mL – 6 mg/2 mL Pre-Filled Syringe

RAPID DIRECT: Administer undiluted or diluted in normal saline (only)

Diluting medication prior to administration preferred. Facilitates administration of all of does (no loss of IV connectors). Refer to standard dilutions (preferred below).

Infuse medication rapidly over 1 to 2 seconds directly into a vein or via an injection site adjacent to the catheter. Flush catheter immediately and rapidly with normal saline. Do NOT administer slowly (medication inactivated in blood stream).

Preferred:

Final Concentration	Adenosine 3 mg/mL	Normal Saline	Final Volume
0.1 mg/mL	1 mL (3 mg)	29 mL	30 mL
0.5 mg/mL	1 mL (3 mg)	5 mL	6 mL

CENTRAL: Large peripheral veins (e.g. median, cubital, and cephalic) or central veins preferred site of administration to maximize efficacy. Decrease dose if catheter tip in heart (refer to CAUTION). Refer to RAPID DIRECT

Maximum Concentration: 3 mg/mL

DOSAGE:

Superaventricular Tachycardia:

IV **Infant, Child**

Initial: 0.05 mg/kg/dose RAPID DIRECT IV (maximum: 6 mg/dose)

Repeat: 0.1 to 0.15 mg/kg/dose as needed. Repeat every 1 to 2 minutes with dosage increments of 0.05 mg/kg/dose until desired response is achieved.

Maximum single dose: 0.35 mg/kg/dose (maximum: 12 mg/dose)
Maximum total dose: 0.75 mg/kg/dose

Note:
1. Dilute medication prior to administration to improve efficacy (refer to Reconstitution/Dilution/Administration)
2. Decrease dosage in patients with ventricular dysfunction
3. Decrease initial dosage by at least 50% in patients with right to left cardiac shunts.

Renal Impairment: No dosage adjustment require
Hepatic Impairment: No dosage adjustment required
Obesity: No information. Use lean body weight since adenosine distributes to central compartment.

REGIONAL PEDIATRIC PARENTERAL DRUG MONOGRAPH

GENERIC NAME
adenosine

Effective Date: May 2013 **Revised Date:** Jan 2024	CLASSIFICATION **Antidysrhythmic**	OTHER NAMES **Adenocard®**	PAGE 2 of 2

STABILITY/COMPATIBILITY:

Stability of Reconstitution Solution: 24 hours at room temperature

Stability of Final Admixture: Use diluted solutions immediately

Compatibility: Compatible with normal saline
Incompatible with dextrose containing solutions

PRECAUTIONS, POTENTIAL ADVERSE REACTIONS:
Adverse reactions are frequent but transient (less than1 minute) and usually do not require intervention.

CV: facial flushing, sweating
proarrhythmic – may produce transient arrhythmias such as sinus bradycardia, sinus node arrest, atrial fibrillation, AV block, PVC or ventricular tachycardia
infants – occasionally transient sinus bradycardia with systemic hypotension followed by reflux tachycardia. **NOTE:** more common if adenosine injected slowly (vasodilatory actions predominate)

GI: nausea, metallic tastes

NEURO: lightheadedness, headache, dizziness

RESP: dyspnea, respiration-associated chest discomfort, bronchospasm (especially in patients with asthma)

CAUTION:
- decrease dosage with concurrent use of carbamazepine (increased risk of heart block)
- methylxanthines (e.g. theophylline, caffeine) antagonize the action of adenosine; large dose of adenosine required.
- May precipitate bronchoconstriction in patients with history of hyperactive airways disease or asthma
- Patients with ventricular dysfunction or right to left cardiac shunts have a potentially greater response due to poor cardiac function or central administration with decreased opportunity for drug metabolism; do NOT slow rate of drug administration or excess vasodilation may result.

CONTRAINDICATIONS:
- Patients with second or third degree heart block or sick sinus syndrome without a functioning pacemaker
- Patients with atrial flutter, atrial fibrillation or ventricular tachycardia
- Concurrent use of dipyridamole – potentiates action of adenosine and may produce sinus arrest or complete AV block.

REQUIRED MONITORING:
- Cardiac monitoring required during administration of all doses and for 10 minutes following last dose of adenosine.
- Other monitoring (e.g. blood pressure, temperature, serum electrolytes) as appropriate for age and patient situation.