

ADENOSINE (Adenocard®)

Classification: Antidysrhythmic Agent

Actions:

1. Depresses automaticity in the sinus node
2. Suppresses AV conduction
3. Interrupts re-entry pathways through the AV node

Indications: Patient in moderate distress due to narrow complex SVT refractory to valsalva maneuver.

Contraindications:

1. **Second or third degree AV heart block**
2. **Poison or drug-induced tachycardia**
3. **Sick sinus syndrome**
4. **Known hypersensitivity to Adenosine**

Adverse Effects:

Cardiovascular

Chest pain/pressure
Transient PAC's, PVC's
Asystole (transient)
Hypotension
Bradycardia

Respiratory

Dyspnea
Bronchoconstriction in
Patients with asthma/COPD

Metabolic

Flushed skin

Neurological

Headache/blurred vision
Tingling/numbness
Lightheadedness/dizziness
Seizures

Gastrointestinal

Nausea
Metallic taste
Throat tightness

Administration:

ADULT DOSE

1. Place patient in mild reverse Trendelenburg position, if possible
2. First dose: 6mg rapid IV followed immediately by a 20 cc NS bolus
3. If no conversion: 12 mg rapid IV followed immediately by a 20 cc NS bolus, may repeat once
4. Record rhythm strip during administration

PEDIATRIC DOSE

1. Place patient in mild reverse Trendelenburg position, if possible
2. First dose: 0.1 mg/kg rapid IV, followed immediately with a 20 cc NS bolus
3. Second dose: 0.2 mg/kg rapid IV, followed immediately with a 20 cc NS bolus
Do not repeat again

ADENOSINE (Adenocard®)—continued

Onset: Immediate

Duration: Less than 10 seconds

Notes:

- Theophylline may require larger doses or may actually render Adenosine ineffective.
- Adverse effects usually resolve spontaneously within 1-2 minutes.
- Adenosine will not be effective on A-fib or A-flutter because it only operates on the AV node, not on the internodal pathways. If given for WPW with wide complex (irregular) atrial fibrillation, it may result in VF. Though not recommended for ventricular tachycardia, it is generally safe. However, Adenosine may cause 2nd and 3rd blocks.
- Adenosine may produce transient blocks for diagnosis of rapid tachydysrhythmias that are not easily distinguishable as A-fib or A-flutter.
- Adenosine is naturally occurring and is found in all body cells as adenosine triphosphate (ATP). □
- In infants and children sinus tachycardia is usually associated with a HR < 200, SVT will usually manifest with a HR > 230.
- Persantine® (dipyridamole) inhibits the transport and potentiates the effects of Adenosine. Tegretol® (carbamazepine) may potentiate the degree of AV block caused by Adenosine.