Paramedic

ADENOSINE *(ADENOCARD)*

Description

Adenosine transiently blocks conduction through the AV node thereby terminating reentrant tachycardias involving the AV node. It is the drug of choice for AV nodal reentrant tachycardia (AVNRT, often referred to as “PSVT”). It will not terminate dysrhythmias that do not involve the AV node as a reentrant limb (e.g. atrial fibrillation).

Indications

- Narrow-complex supraventricular tachyarrhythmia after obtaining 12 Lead EKG (This may be the only documented copy of the AVRNT rhythm)
- Pediatric administration requires call in for direct verbal order

Contraindications

- Any irregular tachycardia. Specifically, never administer to an irregular wide-complex tachycardia, which may be lethal
- Heart transplant

Adverse Reactions

- Chest pain
- Shortness of breath
- Diaphoresis
- Palpitations
- Lightheadedness

Dosage and Administration

Adult:

- 12 mg IV bolus, rapidly, followed by a normal saline flush.
- Additional dose of 12 mg IV bolus, rapidly, followed by a normal saline flush.
- Contact medical control for further considerations

Pediatric: (Requires **CALL IN** and **DIRECT VERBAL ORDER**)

- 0.1 mg/kg IV bolus (max 6 mg), rapidly followed by normal saline flush.
- Additional dose of 0.2 mg/kg (max 12 mg) rapid IV bolus, followed by normal saline flush
- Contact medical control for further considerations.
- Children who are stable with AVNRT generally remain so and transport is preferred over intervention.

Onset & Duration

- Onset: almost immediate
- Duration: 10 sec

Drug Interactions

- Methylxanthines (e.g. caffeine) antagonize adenosine, a higher dose may be required
- Dipyridamole (persantine) potentiates the effect of adenosine; reduction of adenosine dose may be required
- Carbamazepine may potentiate the AV-nodal blocking effect of adenosine

Special Considerations

- Reliably causes short lived but very unpleasant chest discomfort. Always warn your patient of this before giving medication and explain that it will be a very brief sensation
- May produce bronchospasm in patients with asthma
- Transient asystole and AV blocks are common at the time of cardioversion • Adenosine is not effective in atrial flutter or fibrillation
- Adenosine is safe in patients with a history of Wolff-Parkinson-White syndrome if the rhythm is regular and QRS complex is narrow
- A 12-lead EKG should be performed and documented, when available
- Adenosine requires continuous EKG monitoring throughout administration