ADENOSINE
(ADENOCARD)

McHenry Western Lake County Emergency Medical Services
During this session we will discuss:

- Class
- Actions
- Indications
- Contraindications
- Dosing/Routes
- Pharmacokinetics
- How supplied
- Precautions
- Side effects/adverse reactions
Class

- Antidysrhythmic
Actions

- Temporarily blocks conduction thru AV node
- Interrupts reentry pathways through AV node
- Negative chronotropic / dromotropic
Slows the conduction through AV node, can interrupt reentry pathways through the AV node, and can restore normal sinus rhythm in patients with paroxysmal Supraventricular tachycardia. (PSVT).
Symptomatic narrow complex tachycardia (PSVT) (including WPW) unresponsive to vagal maneuvers

Stable, regular, monomorphic wide QRS complex tachycardia unresponsive to amiodarone (OLMC orders only)
OLMC may order Adenosine 6mg rapid IVP for a stable wide complex tachycardia of questionable origin.

It should only be given in this context with OLMC approval.
Adults: 6 mg rapid IVP followed by 20 mL NS
Repeat: 12 mg rapid IVP

Peds: 0.1 mg/kg rapid IVP (max 1st dose 6 mg) followed by 5-10 mL NS rapid IVP.
Repeat dose: 0.2 mg/kg
Max single dose: 12 mg
Cleared from the plasma in <30 seconds. Half life is 10 seconds. This is why it is imperative that the flush is given immediately behind the medication through the IV port.
Use the proximal IV or the one closest to your patient.

Larger doses may be needed in patients with significant levels of theophylline, caffeine, or theobromide.

Reduce the dose to 3 mg in patients taking dipyrimadole (Aggrenox) or carbamazepine (Abilify) or with transplanted hearts.
How supplied

- 6mg in 2ml vials
Contraindications

- Hypersensitivity
  - Asthma - may cause bronchospasm
  - Bradycardia
  - 2° or 3° AVB (unless functioning pacemaker)
  - SA node disease
  - Will not terminate known AF/A-flutter, but will slow AV conduction to identify waves
Precautions

- WPW: may ↑ vent rate
- Heart transplant (prolonged asystole reported)
Warn pt about flushing (face), SOB, & chest pressure or pain BEFORE administration. Explain that S&S will last < 10 sec.

Transient dysrhythmias at time of conversion: sinus arrest w/ vent., junctional, & atrial escape beats; AF, SB, ST, AVB – last seconds, resolve w/o intervention

VF & asystole have occurred, usually in pts on digoxin or verapamil

Bronchospasm, dyspnea

↓ BP

Headache, dizziness

N/V
Administration
You have been called to the scene of a woman complaining of palpitations. You feel her pulse as you do get her history and find it to be very rapid at @220. You have hooked her up to your monitor and she shows a PSVT at 224
You have tried all of the Vagal maneuvers and have no success in converting the rhythm. Your first dose of Adenosine should be:
Answer

- 6mg rapid IVP followed by a 20ml bolus immediately into the proximal IV site.
This has not converted your patient and you need to give a second dose. What would the repeat dose of Adenosine be:
2nd dose of Adenosine would be 12mg rapid IVP followed immediately with a 20 ml bolus of NS.