Adenosine (Adenocard)

McHenry Western Lake County
EMS
Objectives

• During this session we will discuss:
• Class
• Actions
• Indications
• Contraindications
• Dosing/Routes
• Pharmacokinetics
• How supplied
• Precautions
• Side effects/adverse reactions
Class:

- Antidysrhythmic
Actions:

• 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).
Indications:

- PSVT including WPW. Unresponsive to Vagal maneuvers.
Dosing/Routes:

- Adults: 6 mg rapid IVP followed by 10 ml NS rapid flush. Repeat: 12mg rapid IVP followed by 10 ml NS rapid flush.

- Peds: 0.1 mg/kg rapid IVP (max 1st dose 6mg) followed by 5 ml NS rapid flush. Repeat dose 0.2 mg/kg followed by 5 ml NS rapid flush.
• 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.
Pharmacokinetics:

- 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.
How supplied:

• 6mg in 2ml vial.
Contraindications:

- Asthma, 2nd and 3rd –degree block, AV block, sick sinus syndrome. Will not terminate known AF/A-flutter, but will slow conduction to identify.
Precautions:

• Use with caution in patients with reactive airway disease (may cause bronchospasm) and heart transplant due to prolonged asystole has been reported.
Side effects/adverse reactions:

- **GI:** Nausea, metallic taste, throat tightness, groin pressure.
- **Resp:** Dyspnea, chest pressure, hyperventilation, bronchospasm
- **CNS:** Lightheadedness, dizziness, arm tingling, numbness, apprehension, blurred vision, headache, facial flushing, N/V.
- **CV:** Chest pain, atrial tachydysrhythmias, sweating, palpitations, hypotention, facial flushing. PVC’s, PAC’s, SB, ST, falling B/P.

Adenosine administration
Case Study

• 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.
Case study continued

• 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 10ml bolus immediately into the proximal IV site.
Case Study

• This has not converted your patient and you need to give a second dose. What would the repeat dose of Adenosine be:
Answer

- 2\textsuperscript{nd} dose of Adenosine would be 12mg rapid IVP followed immediately with a 10 ml bolus of NS.
REMEMBER!!!

- 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.