ADENOSINE

1.0 Classification
   • Class V antiarrhythmic; naturally occurring nucleoside

2.0 Mechanism of Action
   • Slows AV node conduction

3.0 Indications
   • Stable narrow-complex SVT
   • Unstable narrow-complex re-entry tachycardia while preparing for cardioversion
   • Regular and monomorphic wide-complex tachycardia, thought to be, or previously defined as, re-entry SVT
   • As a diagnostic manoeuvre for stable narrow-complex SVT

4.0 Contraindications
   • Irregular, polymorphic wide-complex tachycardia
   • Known hypersensitivity
   • Drug-induced tachycardia
   • 2nd or 3rd degree heart block
   • Wolff-Parkinson-White [seen as short PR interval, wide QRS, and slurred upstroke to QRS (delta wave)]

5.0 Precautions
   • Patients with unstable angina may be at greater risk for major side effects

6.0 Route
   • May be given IV

7.0 Dosage
   Adult
   • 6 mg IV rapid bolus followed by 20 mL normal saline flush; may be repeated in 1-2 minutes (if symptoms persist) as a second dose of 12 mg IV rapid bolus with 20 mL normal saline flush

   Pediatric
   • 0.1 mg/kg (maximum of 6 mg) IV rapid bolus followed by 5 mL normal saline flush; may be repeated in 1-2 minutes (if symptoms persist) as a second dose of 0.2 mg/kg (maximum of 12 mg) IV rapid bolus with 5 mL normal saline flush.

8.0 Supplied
   • 6 mg preloaded syringe

9.0 May Be Given By
   • ACP/CCP

10.0 Adverse effects
• Chest pressure
• Dizziness
• Dyspnea
• Nausea
• Feeling of impending doom
• Transient bradycardia

11.0 Special notes
• Adenosine often causes arrhythmias, lasting only a few seconds, at the time of cardioversion including PVCs, PACs, bradycardia, AV blocks, or asystole. If arrhythmia persists, initiate appropriate treatment.
• Due to the very short half-life of adenosine, it should only be administered through a lock or IV port close to the patient with the flush administered through a proximal port (one port upstream from where adenosine was administered).
• Pregnancy category C [if the patient will benefit from a Category C drug, it is generally used]

12.0 References
• Adult Cardiac Arrhythmia Clinical Practice Guideline
• Compendium of Pharmaceuticals and Specialties (CPS)

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