

Subject: Scope of Practice/Procedure – ALS
Adenosine

Associated Policies:

- I. Class
 - A. Endogenous nucleotide.
- II. Indications
 - A. Supraventricular Tachycardias.
- III. Therapeutic Effect
 - A. Adenosine slows conduction time through the A-V node, can interrupt the re-entry pathways through the A-V node and can restore normal sinus rhythm in patients with paroxysmal supraventricular tachycardia (PSVT), including PSVT associated with Wolfe-Parkinson-White (WPW) Syndrome.
- IV. Contraindications
 - A. Absolute:
 - 1. Second or third-degree heart block.
 - 2. Sick sinus syndrome (except in patients with a functioning artificial pacemaker).
 - 3. Hypersensitivity.
- V. Adverse Effects
 - A. Transient dysrhythmias.
 - B. Facial flushing.
 - C. Shortness of breath/dyspnea.
 - D. Chest pressure.
 - E. Hypotension.
 - F. Lightheadedness.
 - G. Nausea/vomiting.
 - H. May produce bronchoconstriction in patients with history of asthma or pulmonary disease.
- VI. Administration and Dosage
 - Adult: Initial dose of 6 mg bolus, administered as a rapid (1-2 seconds) IVP/IO, followed by a saline flush. If no response or conversion not sustained, repeat with 12 mg rapid IVP/IO.
 - Pediatric: Initial dose of 0.1mg/kg IVP/IO followed by saline flush. If no response or conversion not sustained, may repeat 0.2 mg/kg (maximum 12 mg single dose).

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VII. Special Instructions

- A. Adenosine is not effective in converting atrial flutter or atrial fibrillation.
- B. May be effective in converting regular monomorphic wide complex tachycardic rhythms.
- C. Dipyridamole (Persantine) and Carbamazepine (Tegratal) potentiate the effects of Adenosine. Smaller doses may be effective.
- D. Methylxanthines (theophylline, caffeine, etc.) antagonize the effect of Adenosine. Larger doses may be required.
- E. Severely symptomatic/unstable PSVT patients should be electrically cardioverted.
- F. Adenosine must be given as a rapid (1-2 seconds) IVP/IO followed by a rapid saline flush.

Approved: 

Approved as to Form: 