

7. ATROPINE SULFATE

a) Pharmacology

- (1) Parasympatholytic (vagolytic action)
- (2) Anticholinergic (accelerates the heart rate)

b) Pharmacokinetics

- (1) Accelerated heart rate within minutes of IV injection.
- (2) Peak effect is seen within the first 15 minutes.
- (3) Atropine disappears rapidly from the blood.
- (4) Excreted in the urine within the first 12 hours.

c) Indications

- (1) Symptomatic bradycardia
- (2) Organophosphate poisoning
- (3) Nerve agents

d) Contraindications

- (1) Known hypersensitivity
- (2) Dysrhythmias in which enhancement of conduction may accelerate the ventricular rate and cause decreased cardiac output (e.g., atrial fibrillation, atrial flutter, or PAT with block)
- (3) Relative Contraindications (weigh risk/benefits):
 - (a) AV block at His-Purkinje level (second-degree Type II AV Block and third-degree AV Block)
 - (b) Suspected acute myocardial infarction or ischemia
 - (c) Glaucoma

e) Adverse Effects

- (1) Excessive doses of atropine can cause delirium, restlessness, disorientation, tachycardia, coma, flushed and hot skin, ataxia, blurred vision, dry mucous membranes.
- (2) Ventricular fibrillation and tachycardia have occurred following IV administration of atropine.

f) Precautions

Not clinically significant



g) Dosage

(1) Adult:

Bradycardia: Administer 0.5–1 mg IVP repeated every 3–5 minutes to a total dose of 0.04 mg/kg

(2) Pediatric:

Bradycardia: Administer 0.02 mg/kg IV/IO; maximum single dose 0.5 mg; ET 0.04-0.06 mg/kg, dilute 5 mL; repeat once

(3) Organophosphate poisoning:

- (a) Adult: Administer 2-4 mg IVP or IM every 5-10 minutes.
- (b) Pediatric: Administer 0.02 mg/kg IVP/IO or IM every 5–10 minutes.
- (4) Nerve agent exposure See MARK I / DuoDote Protocol.