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.