ATROPINE SULFATE

ACTION: Anticholinergic (Vagolytic)

- Blocks acetylcholine receptors resulting in reduction of parasympathathetic tone and increased conduction through the AV node.
- Increases sinus node automaticity and AV conduction when suppressed by abnormal parasympathetic or vagal discharges.
- Antagonizes action of organophosphate agents.

INDICATIONS:

- Symptomatic bradycardia.
- Organophosphate or carbamate insecticide or nerve agent exposure.

CONTRAINDICATIONS:

- Atrial fibrillation or atrial flutter
- Glaucoma

POTENTIAL SIDE EFFECTS:

- Increased Heart Rate causing tachycardias
- Post-atropine tachycardias can precipitate V-FIB or V-TACH
- Can worsen patient's ischemia or extend the size of infarct
- Dry mouth/decreased salivation
- Doses lower than 0.5mg can produce slowing of the heart
- Dilated pupils
- Flushed, hot skin

ADULT DOSE/ROUTE:

⇨ **Symptomatic Bradycardia**: 1mg IVP or IO. May repeat every 5 min up to 3 mg if no resolution of bradycardia.

⇨ **Organophosphate Poisoning/Nerve agent Exposure**: 2 – 5mg IVP or IO. May repeat in 5 minutes until symptoms improve (i.e. bronchorrhea resolves). No max dose.

PEDIATRIC DOSE/ROUTE:

⇨ **Symptomatic Bradycardia:** 0.02 mg/kg IVP or IO (min dose 0.1mg, max single dose 0.5mg)

⇨ **Organophosphate Poisoning**: 0.02 mg/kg IVP or IO (min dose 0.1mg, no max dose). May repeat every 5 minutes until symptoms improve (i.e. bronchorrhea resolves).

NOTES:

- External pacing is the treatment of choice for symptomatic bradycardia if there is suspected myocardial ischemia, or 2nd or 3rd degree AV blocks are present.

- Can be given IM in thigh for suspected organophosphate poisoning /nerve agent exposure.
- Note: the primary cause of bradycardia in pediatric patients is hypoxia.

Atropine is no longer recommended for adult or pediatric asystole.