Class

Sympathomimetic

Pharmacologic Properties

Epinephrine is a sympathomimetic which stimulates both Alpha and Beta adrenergic receptors. Its effects are to increase systemic vascular resistance, arterial blood pressure, coronary and cerebral blood flow, heart rate and contractility. The alpha-adrenergic effect increases vascular resistance and coronary blood flow, which may make the fibrillating myocardium more susceptible to counter-shock. The beta adrenergic effect increases heart rate and cardiac output, and induces bronchodilation.

Indications

- Cardiac arrest (Ventricular fibrillation (VF) or pulseless ventricular tachycardia (VT), Asystole, Pulseless electrical activity (PEA) Protocol 9.
- Anaphylactic shock Protocol 17, Protocol 17P.
- Pediatric bradycardia and cardiac arrest Protocol 9P.
- Newborn resuscitation/Neonatal asystole or bradycardia Protocol 20P.

Contraindications

- NONE in the cardiac arrest situation

Precautions

- Epinephrine is inactivated by alkaline solutions and should not be mixed with Sodium Bicarbonate

Side Effects/Adverse Reactions

- Cerebral hemorrhage, Tachycardia, Ventricular dysrhythmias, Hypertension, Angina, Nausea and vomiting

Dosage and Administration

Adult

Adult Cardiac Arrest

- 1 mg IV/IO bolus every 3-5 minutes.

Adult Anaphylaxis - Severe Allergic Reactions

- 0.1 mg (1 mL) slow IVP

Pediatric

Pediatric Cardiac Arrest/Symptomatic Bradycardia

- 0.01 mg/kg (0.1 mL/kg) IV/IO every 3-5 minutes as needed

Pediatric Anaphylaxis - Severe Allergic Reactions

- 0.05 mg (0.5 mL) slow IVP