Vasopressin

Classification

Antidiuretic hormone analog

Indications

CCP: Vasodilatory shock

Contraindications

Hypersensitivity to vasopressin or any component

Adult dosages

CCP: Vasodilatory shock

- ≤ 0.03 units/minute IV. Titrate up by 0.005 units/minute at 10- to 15-minute intervals, to a maximum dose of 0.1 unit/minute, if target blood pressure is not reached.

Pediatric Considerations And Dosing

Not recommended.

Mechanism Of Action

Vasopressin stimulates a family of arginine vasopressin (AVP) receptors, oxytocin receptors, and purinergic receptors (Russell 2011). Vasopressin, at therapeutic doses used for vasodilatory shock, stimulates the AVPR1a (or V1) receptor and increases systemic vascular resistance and mean arterial blood pressure; in response to these effects, a decrease in heart rate and cardiac output may be seen.

Pharmocokinetics

- Onset: within 15 minutes
- Duration: for duration of infusion and ~20 minutes after discontinuation
- Half-life: 10-20 minutes
- Excretion: urine

Adverse Effects

Cardiovascular: Atrial fibrillation, bradycardia, ischemic heart disease, limb ischemia (distal), low cardiac output, right heart failure, shock (hemorrhagic)

Dermatologic: Skin lesion (ischemic)

Endocrine & metabolic: Hyponatremia

Gastrointestinal: Mesenteric ischemia

Hematologic & oncologic: Decreased platelet count, hemorrhage (intractable)

Hepatic: Increased serum bilirubin

Renal: Renal insufficiency

Warning And Precautions

Vasopressin is a vesicant. Ensure patency of infusion line and device to prevent extravasation.

Use with caution in cardiovascular disease -- may worsen cardiac output.