**OTHER NAMES**
Pressyn®, Antidiuretic hormone, ADH

**CLASSIFICATION**
Antidiuretic hormone

**INDICATIONS FOR IV USE**
NON HEALTH CANADA APPROVED INDICATIONS BUT SUBSTANTIATED IN THE LITERATURE:
- Acute post-traumatic or post-operative diabetes insipidus in haemodynamically unstable patients
- Hypotension due to septic shock or vasodilatory shock.
- Cardiac arrest (ventricular fibrillation/ pulseless ventricular tachycardia) as an adrenergic agent equivalent to epinephrine.

**CONTRAINDICATIONS**
- Hypersensitivity to vasopressin.
- Cardiorenal disease with hypertension.
- Advanced arteriosclerosis, coronary thrombosis or angina pectoris.
- Chronic nephritis with nitrogen retention.

**CAUTIONS**
- Patients with vascular disease, especially disease of the coronary arteries.
- Patients with a diagnosis of, suspected of having, or at risk of bowel ischemia.
- Diseases, which might be aggravated by water intoxication e.g. epilepsy, migraine, asthma, heart failure, hyponatremia.

**DRUG INTERACTIONS**
- Drugs which increase antidiuretic effect e.g., carbamazepine, chlorpropamide, indomethacin and oxcarbazine.

**PREGNANCY/BREAST FEEDING:** Contact pharmacy for most recent information.

**ADMINISTRATION**

<table>
<thead>
<tr>
<th>MODE</th>
<th>DIRECT INTO IV TUBING</th>
<th>INTERMITTENT INFUSION</th>
<th>CONTINUOUS INFUSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHO MAY GIVE</td>
<td>Cardiac arrest: Registered nurses with specialized skills – see required monitoring</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>ADULT</td>
<td>Cardiac arrest: Undiluted into a running IV or dilute to at least 10 mL D5W/NS. Give rapidly.</td>
<td>For low rates: Dilate in appropriate vol. NS, (e.g. 10 units in 100 mL NS for 0.1 unit/mL). For high rates: Dilute 100 units (5 mL) in 100 mL NS for 1 unit/mL. Dose rate chart available.</td>
<td>Low rates (less than 1 unit/hour or 0.01 unit/kg/hour) All Registered Nurses High rates (1 unit/hour or 10 mUnit/kg/hour and greater): Registered nurses with specialized skills – see required monitoring</td>
</tr>
<tr>
<td>PAEDIATRIC</td>
<td>No information</td>
<td>Dilute 1 unit/kg in 50 mL NS. 1 mL/hr = 0.33 mUnit/kg/min</td>
<td>NO</td>
</tr>
<tr>
<td>NEONATE</td>
<td>No information</td>
<td>No information</td>
<td>NO</td>
</tr>
</tbody>
</table>

**REQUIREMENTS**
IV infusion device for continuous infusion

**MONITORING**

**REQUIRED**
- Cardiac arrest: ECG monitoring as per cardiac arrest team leader

**Continuous infusions of rates less than 1 unit/hour (10 mUnit/kg/hour - whichever is less):**
- Start of infusion & with each dose increase: Baseline BP and heart rate, then q 5 minutes x 2 and until stable.
- Urine output hourly.

**Continuous infusions of rates of 1 unit/hour (10 mUnit/kg/hour) or greater:**
- Continuous ECG monitoring and continuous BP or BP q 3-5 minutes
- Urine output hourly

**RECOMMENDED**
- Baseline serum electrolytes, then every 2 – 4 hours.
- Urine osmolality every 12 – 16 hours
- Fluid balance
- If given peripherally assess IV site for signs of extravasation. Central line is recommended for 1 unit/mL concentration.

**RECONSTITUTION**
- None required. Available as vasopressin 20 unit/mL aqueous solution – 1 mL vial and 2 mL ampoule.
COMPATIBILITY/STABILITY
- Normal saline preferred diluent as may decrease potential for water intoxication.\(^7\)
- Limited stability information available at this time. Stability in NS for 24 hours at room temperature is assumed.
- Compatible with dextrose and normal saline solutions.\(^7\)
- For drug-drug compatibility contact Drug Information.

ADVERSE EFFECTS\(^7\)
- Infrequent and mild with low doses, but increase in frequency and severity with higher doses, i.e. 6 unit/hour or greater (adults)

HYPERSENSITIVITY
- Urticaria, angioedema, bronchoconstriction and anaphylaxis.

CARDIOVASCULAR
- Increased blood pressure
- Angina in patients with coronary artery disease
- Peripheral vasoconstriction, such as coronary or mesenteric vessels.

MISCELLANEOUS
- Tremor, sweating
- Water retention with hyponatremia, drowsiness, listlessness or headaches may signal onset of water intoxication.

DOSE
ADULT
Cardiac arrest:
- 40 units, single dose, 1 time only. There is no evidence about the value of repeat vasopressin doses. If there is no response 5 to 10 minutes after a single dose, it is acceptable to resume epinephrine 1 mg every 3 to 5 minutes.\(^5\)

Diabetes insipidus:
Haemodynamically unstable patients
- Doses of 0.0005 – 0.01 unit/kg/hour have been used. Begin at low dose and increase at 30 – 60 minute intervals until desired urine output is achieved.\(^1,3\)
- Doses of 1 - 2 unit/hour, are used in brain-dead organ donors. Titrate dose to urine volume less than 300 mL/hour.\(^8-10\)

Hypotension due to septic shock or vasodilatory shock:
- Optimum dose has not been established. Suggest rates up to 0.04 unit/minute. Higher rates have been used (0.02 – 0.1 unit/minute; 1.2 – 6 unit/hour) have been used.\(^4\)

ELDERLY
- Consider age related organ dysfunction. No specific dosing recommendations available at this time.

PAEDIATRIC
Diabetes insipidus:
- 0.5 mUnit/kg/hour. Double rate every 30 minutes until desired urine output is achieved. Recommended max dose – 10 mUnit/kg/hour.\(^3\)
- Doses of 1 - 8 unit/hour, have been used in brain-dead organ donors. Titrate dose to desired urine output.\(^11, 12\)

Hypotension due to vasodilatory shock:
- Doses of 0.3 - 5 mUnit/kg/minute have been used.\(^13, 14\)

NEONATE
- Limited information available at this time.\(^14\)

RENAL IMPAIRMENT ADJUSTMENTS
- No information available at this time.

HEPATIC IMPAIRMENT ADJUSTMENTS
- None required.\(^15\)

HEMO/PERITONEAL DIALYSIS
- No information available at this time.

MISCELLANEOUS
- Can be given SC or IM.\(^6\)
- 1 Unit = 1000 mUnit.
VASOPRESSIN - REFERENCES


References available on the VIHA (South Island) Pharmacy Web site (http://intranet.viha.ca/clinical_support/pharmacy/si/)