



#### **INDICATIONS**

 Suspected acute adrenal insufficiency in a patient with known chronic adrenal insufficiency or abrupt cessation of corticosteroids use

#### **WARNINGS**

None

### **NOTES**

NOTE: Patients with known adrenal insufficiency may have their own supply of a prepared dose of their preferred corticosteroid for emergencies and this can be substituted when available.

- 1. Adrenal crisis refers to acute adrenal insufficiency. It is a life-threatening emergency characterized by shock that requires immediate treatment with large volume fluid and corticosteroid replacement.
  - It may be due to a primary disorder of the adrenal glands (Addison's disease), the pituitary gland (secondary hypoadrenalism), or the hypothalamus (tertiary hypoadrenalism). It is also commonly seen in patients who abruptly discontinue chronic use of corticosteroids, such as prednisone.
- 2. In a patient with known chronic adrenal insufficiency, hypotension or hypoglycemia should be assumed to be due to adrenal crisis until proven otherwise. Other symptoms suggesting impending adrenal crisis include:
  - Nausea, vomiting, anorexia
  - Abdominal pain
  - Weakness, fatigue
  - Lethargy, confusion, coma
  - Fever
  - Dehydration
- 3. For rapid absorption, hydrocortisone should be administered by the intravascular route (IV, IO). However, if vascular access cannot be obtained, paramedics should not delay administration by intramuscular (IM) injection.
- 4. Adrenal crisis causes a distributive type pf shock. Relative fluid deficits of several liters are common.
  - Vasaopressor support is indicated in the patient who remains hypotensive despite significant fluid resuscitation or who develops pulmonary edema. Be careful when administering vasopressor before the relative fluid deficit has been corrected, as this may worsen organ perfusion.
- 5. Norepinephrine should be titrated to ensure adequate perfusion and overall improvement in the patient's condition, not just the numerical value of the blood pressure.
  - Mean arterial pressure (MAP) is more useful than the systolic blood pressure (SBP) in assessing organ blood flow and is the preferred measurement for resuscitation. Generally speaking, the MAP necessary to maintain coronary and cerebral perfusion is approximately 60 to 65 mmHg. Patients with chronic uncontrolled hypertension may require a higher target.

## **LINKS**

- A01 Standard Clinical Approach
- B01 Standard Destination & Redirection
- M13.1 Hydrocortisone
- M31 Norepinephrine

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# **VERSION CHANGES (refer to X03 for change tracking)**

Addition of advanced work scope & norepinephrine