



# **The Clinical Evaluation of the Comatose Patient in the Emergency Department**

## **Learning Objectives**

- Review the optimal clinical evaluation, diagnostic testing, and treatment of Emergency Department patients with altered mental status (AMS) and coma.
- Discuss procedures and protocols that will assist the emergency physician in providing care to these critically ill and injured patients.

## **Background**

One of the critical requirements of the emergency physician is to be able to efficiently diagnose and effectively treat patients who present to the Emergency Department with altered mental status (AMS) and coma. This lecture will highlight two specific skills that are part of this overall treatment strategy: the physical exam and diagnostic evaluation of these patients, including the detection of rostral-caudal deterioration, and the use of a protocol that includes glucose, naloxone, flumazenil, thiamine, fluids infusions, steroids, anti-epileptic drugs, and therapies designed to treat specific toxins.

In this Brain Injury Course, FERNE would like to stress the use of specific procedures and protocols in managing patients with neurological illness and injury. In effect, the goal is to take a surgeon's approach to treating medical problems in the Emergency Department, including complications related to AMS and coma.

## **Key Clinical Questions**

- What are the relevant clinical signs and symptoms in patients with AMS and coma?
- What is rostral-caudal deterioration and what does it signify in coma patients?
- How should patients with AMS and coma be empirically managed?
- What are the roles for the following therapies in the setting of coma: glucose, naloxone, flumazenil, thiamine, fluids infusions, steroids, anti-epileptic drugs, and therapies designed to treat specific toxins?

## **Featured Procedures or Protocols**

- Step-wise systemic and neurological physical evaluation of the patient who presents in coma, including the identification of toxidromes associated with depressed mental status and coma.
- Evaluation of rostral-caudal deterioration in patients with suspected CNS herniation.
- Empiric treatment protocol in the management of the comatose patient, including the use of: glucose, naloxone, flumazenil, thiamine, fluids infusions, steroids, anti-epileptic drugs, and therapies designed to treat specific toxins.

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