

***Anesthesiology Rounds***  
**Volume 6, Issue 3, 2007**

**Managing the Pain of Sickle Cell Anemia**

By Margaret Haig, MD

**Objectives:**

This issue will help the reader to:

- be familiar with the genetics and the epidemiology of sickle cell disease (SCD)
- understand the mechanisms leading to a vaso-occlusive crisis (VOC)
- list the possible treatments for prevention of these crises
- be aware of the factors that constitute a barrier to adequate treatment of pain during crises
- formulate a treatment strategy for pain due to a VOC.

**Questions:** *(Only one response is correct.)*

1. Concerning the use of narcotics for sickle cell pain, all of the following are FALSE except:
  - a. Meperidine is the drug of choice for VOC pain.
  - b. Mixed agonist-antagonists are the drugs of choice for VOC pain.
  - c. Sickle cell disease (SCD) patients may have more rapid morphine clearance.
  - d. SCD patients do not develop tolerance to narcotic drugs.
  
2. Hydroxyurea decreases the frequency of VOC episodes by which mechanism?
  - a. Increasing neutrophil counts
  - b. Decreasing nitric oxide (NO) metabolism
  - c. Increasing production of fetal hemoglobin (HbF)
  - d. Decreasing intracellular potassium (K<sup>+</sup>) and increasing red blood cell (RBC) hydration

3. During an acute episode of VOC, which statement is true?
- a. Physicians and nurses should ignore the patient's suggestions as to what has worked in the past.
  - b. Ketorolac may reduce the need for narcotics to treat the pain of a VOC.
  - c. Methylprednisolone shortens the duration of the VOC and is not associated with an increased incidence of relapse.
  - d. Most patients with SCD present early in the evolution of the VOC when the pain is easier to treat.
4. Which of the following statements is true about acute chest syndrome (ACS)?
- a. To prevent ACS, all patients with a VOC should be admitted to hospital.
  - b. To prevent ACS, all patients with VOC should receive aggressive intravenous (IV) hydration.
  - c. To prevent ACS, all patients with VOC and rib or thoracic spine pain should have incentive spirometry q2h while awake.
  - d. To prevent ACS, all patients with VOC and rib or thoracic spine pain should receive oxygen (O<sub>2</sub>) by mask.

Please send the completed test by fax to the attention of the Committee for Continuing Education, Université de Montréal at 514-343-6913. We will fax your corrected test back to you.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal code: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_