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1. Read the article by Burkman *et al.* entitled "Analysis of the clinical variables associated with recrudescence after malignant hyperthermia reactions" on page 901 and the accompanying editorial by Hopkins entitled "Recrudescence of malignant hyperthermia" on page 893 of this issue.
2. Review the questions and other required information for CME program completion (published in both the print and online journal).
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Purpose: The focus of the journal-based CME program, and the articles chosen for the program, is to

educate readers on current developments in the science and clinical practice of the specialty of Anesthesiology.

Target Audience: Physicians and other medical professionals whose medical specialty is the practice of anesthesia.

Learning Objectives: After reading this article, participants should have a better understanding of the pathophysiology of malignant hyperthermia.

Disclosure Information:

Authors - James M. Burkman, M.D., Karen L. Posner, Ph.D., and Karen B. Domino, M.D., M.P.H.

Grants or research support: None

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Authors - Philip M. Hopkins, M.B., B.S., M.D., F.R.C.A.

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CME Article Questions

Based on the article by Burkman *et al.* entitled "Analysis of the clinical variables associated with recrudescence after malignant hyperthermia reactions" and its accompanying editorial by Hopkins entitled "Recrudescence of malignant hyperthermia" in the May issue of ANESTHESIOLOGY, choose the one correct answer for each question:

1. Which of the following statements about the cause of malignant hyperthermia (MH) is *most* likely true?
 - A. MH occurs as the result of decreased release of Ca^{++} from the sarcoplasmic reticulum.
 - B. All patients susceptible to MH have an identified ryanodine receptor abnormality.
 - C. All patients susceptible to MH have an identified dihydropyridine receptor abnormality.
 - D. The genetic mutation pattern found for MH varies among countries.

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2. Which of the following statements about identifying and classifying cases of malignant hyperthermia (MH) is *most* likely true?
 - A. The National Institutes of Health maintains a database of reported MH cases.
 - B. The Adverse Metabolic Reaction to Anesthesia report uses a clinical grading system to assess the likelihood of MH in a given patient.
 - C. Contracture testing of a muscle biopsy specimen has no role in the classification of MH cases.
 - D. Mandatory reporting to the Food and Drug Administration is required for any suspected MH case.
3. Which of the following statements about recrudescence of malignant hyperthermia (MH) is *most* likely true?
 - A. Recrudescence occurs in approximately 20% of patients initially treated for MH.
 - B. Recrudescence is more likely to occur after a sevoflurane anesthetic.
 - C. Recrudescence usually occurs more than 18 h after the initial event.
 - D. Recrudescence is more likely in older patients.
4. Which factor is *most* likely associated with the recrudescence of malignant hyperthermia (MH)?
 - A. Muscular body habitus
 - B. Previous general anesthetic
 - C. Male sex
 - D. Shorter time between induction of anesthesia and MH reaction
5. When comparing the postoperative outcomes of patients with recrudescence to patients without recrudescence, which statement is *most* likely true?
 - A. Hepatic dysfunction was more likely in patients with recrudescence.
 - B. There were more pulmonary complications in patients without recrudescence.
 - C. Cognitive dysfunction occurred more frequently in patients with recrudescence.
 - D. Disseminated intravascular coagulation occurred in more than 50% of patients in both groups.
6. Which of the following clinical signs was *most* likely to be associated with recrudescence?
 - A. Clinical grading score below 20
 - B. Total dantrolene dose less than 2.5 mg/kg
 - C. Unexplained postoperative temperature increase above 38.8°C
 - D. Use of succinylcholine

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