Can Patients with a Suspected Personal or Family History of MH be Safely Anesthetized Prior to Diagnostic Testing for MH Susceptibility?

Developed in 2018

Background:

Patients with a known or suspected personal or family history of MH are often denied access to general anesthesia prior to diagnostic testing for MH susceptibility, resulting in cancellation and postponement of necessary surgical procedures. Also, MH susceptible patients may be told they cannot have surgery in ambulatory surgery centers but must have surgery at inpatient hospitals.

Discussion:

A suspected personal or family history of possible MH is not uncommon in patients requiring general anesthesia for medical or surgical procedures.[1] The details of the presumed episode may be unclear, and in many instances, it is impossible to determine these details because medical records cannot be accessed in a timely manner. However, some patients suspected of being MH susceptible may require surgical management before formal MH susceptibility testing has been performed. Additionally, for many patients, diagnostic testing for MH susceptibility is not feasible because of the geographical distance to an MH biopsy-testing center, or their lack of insurance coverage for muscle contracture or genetic testing.

Conclusions:

Care of MH susceptible patients need not be restricted by the lack of formal MH susceptibility testing, nor should care be limited to inpatient hospitals facilities.[4] MH susceptible patients can be safely cared for in most anesthetizing locations, including appropriately staffed and resourced ambulatory surgery centers, provided non-MH triggering agents are used.[4] However, the chosen anesthetizing location should meet the following criteria: 1. The facilities should be prepared to recognize and treat an MH crisis [2,3,6,8,9] according to the established guidelines by MHAUS and accrediting organizations .[4,5] 2. Dantrolene should be accessible within ten minutes of the first signs of MH, and the facility should have the capacity to administer at least 10mg/kg of dantrolene in the event of an acute MH episode requiring multiple dantrolene doses to abort the crisis.[3,4] 3. The anesthesia machine should be flushed according to its specific manufacture's recommendations and/or charcoal filters placed on both inspiratory and expiratory limbs to minimize residual volatile agent in the circuit (http://www.mhaus.org/healthcare-professionals/be-prepared/preparing-the-anesthesia-machine/).[4,5] 4. There should be a formal agreement in place between ambulatory surgery centers and hospitals for transfer of patients to higher care after a suspected MH episode.[4,5]

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