

C-70 “Too Hot to Be Innocent, This Must Be MH”

Moderator(s)/Facilitator(s): Joseph Woo, M.D.

Objective

After completion of this session, the participant will be able to:

- Develop a protocol for a suspected MH crisis.

Case Stem Question

76 year old male, past medical history significant for coronary artery disease status-post coronary stent placement 17 years prior (non-compliant with cardiac medications, on 'homeopathic' treatment), who presented with intermittent exertional chest pain for 2 weeks, worsening 3 days prior to presentation. Chest pain was associated with diaphoresis and facial flushing. Left heart catheterization revealed multi-vessel disease including critical in-stent restenosis of the prior mid-LAD stent. Patient was started on nitroglycerin and heparin drips. Cardiothoracic surgery was consulted for urgent CABG. Patient underwent an uneventful CABG x3 (CPB time 1 hour 13 minutes, fibrillating heart technique). Uneventful separation from CPB on minimal doses of Norepinephrine and Dobutamine for support. Received Propofol, Fentanyl, Midazolam, Rocuronium, and Acetaminophen as part of the anesthetic. Post-operatively noted to be increasingly hyperthermic in the CTICU. Bladder temperature was 103.7F and rising. The on-call cardiac anesthesiologist was contacted at that point to evaluate the patient.

Guiding Questions for Discussion

- What are potential causes of hyperthermia/hyperpyrexia in the perioperative setting?
- What is the pathophysiology of malignant hyperthermia (MH)?
- How does the timeline of symptom onset relate to typical MH presentations?
- What key lab values support or challenge a diagnosis of MH?
- What is the current recommendation protocol for suspected MH crises?
- What precautions should be in place for patients with a known or suspected MH susceptibility?
- What additional precautions should be taken in cases requiring Cardiopulmonary Bypass?
- How does one confirm a diagnosis of MH?