

Session/Poster#

Presenter

A45

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Management of Malignant Hyperthermia in a Five Day Old Girl: A Case Report

Background: Malignant hyperthermia (MH) is a rare genetic disorder of skeletal muscle characterized by muscle rigidity, hyperthermia, tachycardia, hypertension, and muscle breakdown after exposure to inhaled, volatile anesthetics. Left untreated, MH can progress to cardiac arrest and death. Previous literature has sparsely demonstrated cases of MH in infants as young as 8 days to 13 months. The following is the case of the youngest reported patient diagnosed with MH at 5 days old. The authors aim to discuss the safety profile for inhaled anesthetics and non-depolarizing muscle relaxants in this age group and add to existing literature describing sevoflurane as a trigger of MH in neonates.

Presentation: We present the case of a 5-day-old female, who underwent surgical repair of a type C tracheoesophageal fistula (TEF) with no family history of adverse reactions to anesthesia. She was administered sevoflurane, rocuronium, and fentanyl in the OR for pain control and sedation. The surgery was performed without complications. 1.5 hours postoperatively, she developed ventricular tachycardia to 200 beats per minute, fever to 39C, and low tidal volumes on ventilator with diffusely increased muscle rigidity. The NICU team recognized signs of MH and administered one dose of dantrolene 2.5mg/kg to successfully reverse the symptoms.

Discussion: This is the youngest documented case of symptomatic MH. Providers should be cognizant of the potential for adverse reactions, such as MH, to anesthesia even in absence of family history and irrespective of age. There are at least 6 genetic loci documented to cause some variation of MH symptoms with RYR1 being the most common mutation, suggesting that genetic workup and counseling are important parts of MH management. The threshold for clinical suspicion of MH should be low and treatment should be promptly provided, especially in young patients. In so doing, providers may be better prepared to provide emergent, life-saving treatment.