

**General anaesthetics/suxamethonium chloride****S****Suspected malignant hyperthermia: 19 case reports**

A retrospective study identified 11 male and eight female patients aged 3–62 years with suspected malignant hyperthermia (MH) during general anaesthesia [*dosages and times to reactions onset not stated; not all routes stated*].

Fifteen patients received suxamethonium chloride [succinylcholine] alone (6 patients) or in combination with an inhalation anaesthetic (9), while four patients received inhalation anaesthesia alone. Inhalation anaesthetics included isoflurane (5 patients), sevoflurane (3), desflurane (3), halothane (1) and enflurane (1). All patients underwent a muscle biopsy followed by in vitro contracture testing due to a suspected MH event during general anaesthesia. They presented with symptoms including increased CK levels >10,000 U/L (9 patients), cardiac arrhythmias (8), increased end-tidal carbon dioxide >45 mm Hg during anaesthesia (8) and body temperature increases  $\geq 38.5^{\circ}\text{C}$  (2). Muscle biopsy and IVCT detected MH susceptibility in 7 patients, while 8 patients were rated MH non-susceptible.

Administration of volatile anaesthetics or suxamethonium chloride was stopped in all patients, and anaesthesia was continued intravenously. Seven patients were treated with dantrolene. Genetic screening detected mutations in the ryanodine receptor gene in three patients with MH susceptibility. No patients developed persistent or temporary complications during recovery after the suspected MH episode.

**Author comment:** *"Malignant hyperthermia (MH), a metabolic myopathy triggered by volatile anesthetics and depolarizing muscle relaxants, is a potentially lethal complication of general anesthesia in susceptible patients."*

Schuster F, et al. Evaluation of suspected malignant hyperthermia events during anesthesia. BMC Anesthesiology 13: No. 24, 23 Sep 2013. Available from: URL: <http://dx.doi.org/10.1186/1471-2253-13-24> - Germany 803095377