Literature review

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Should all children with suspected or confirmed malignant hyperthermia susceptibility be admitted after surgery? A 10-year review

Steven M Yentis, Mark F Levine, Elizabeth J Hartley

Anesth Analg 1992; 75: 45-50

Children otherwise suitable for same-day discharge may be admitted to the hospital solely because they are known or suspected to be malignant hyperthermic-susceptible (MHS). An informal telephone survey of the anaesthesia departments of six major north American children’s hospitals revealed that all six allow certain suspected MHS children to go home after minor surgery.

A retrospective review of the history, management and outcome of all suspected or proven MHS patients who presented for surgery within a 10-year period was done at the Hospital for Sick Children, Toronto, Canada, to ascertain the incidence of intra- and postoperative complications. No MH reactions occurred. None of the 25 children (33 cases) with biopsy-proven malignant hyperthermia developed intraoperative or postoperative pyrexia.

Ten children suspected to be MHS developed pyrexia > 38.5°C. These episodes were not considered to be malignant hyperthermia. On the basis of this retrospective review, the authors concluded that same-day discharge of MHS patients after uncomplicated ambulatory surgery is not likely to be associated with an MH event after discharge from hospital.

Comments
In the past, overnight hospitalization of suspected or confirmed MHS patients after surgery has been a common practice, even after minor surgery. This study indicated that intraoperative and postoperative complications are rare in patients labelled as MHS who undergo even prolonged surgery with trigger-free anaesthesia. The maximum risk of an MH reaction occurring, based on these data, is 1.6% with a 99% confidence level.

The number of confirmed MHS patients in this study is small, 25 patients undergoing 33 procedures. Therefore a prospective study is needed. The recommendation of this study is that ambulatory surgery can be performed in children who have suspected or confirmed MH susceptibility provided that they receive a trigger-free anaesthetic, the parents are well informed regarding MH and its signs, and medical care is immediately available within the local community.

Should children drink before discharge from day surgery?

Mark S Schreiner, Susan C Nicolson, Thalia Martin, Lance Whitney

Anesthesiology 1992; 76: 528-33

The ability to drink clear liquids without vomiting after anaesthesia and surgery is a commonly used criteria for discharge of paediatric day surgery patients. This study investigated whether drinking was a necessary criterion for discharge. Nine hundred and eighty-nine patients were randomized to one of two groups. The 464 ‘mandatory’ drinkers were required to demonstrate the ability to drink clear liquids without vomiting prior to discharge from the hospital; whereas, 525 ‘elective drinkers’ were allowed to be discharged but not required to drink.

In the day surgery unit, only 14% of the elective drinkers vomited compared to 23% of the mandatory drinker group (P < 0.001). The mandatory drinkers had a more prolonged stay in the day surgical unit, averaging 101 ± 58 min compared to 84 ± 40 min for elective drinkers (P < 0.001). The authors concluded that it was unnecessary to make drinking a prerequisite for discharging paediatric patients after day surgery.

Comments
Nausea and vomiting is the most common medical reason requiring unanticipated hospital admission for children after day surgery procedures. Ensuring that the children can drink oral fluids before discharge can minimize the potential for readmission secondary to dehydration. However, requiring children to drink before discharge may precipitate vomiting in the postoperative period.

This is the first prospective study to determine whether drinking is a necessary criteria for discharge. The data indicated that requiring children to drink prior to hospital discharge appears to increase the incidence of vomiting, and prolong the duration of hospital stay. Therefore, children can be safely discharged after day surgery without making drinking a prerequisite. This can potentially shorten the duration of stay and nursing hours.

Preadmission Anaesthesia Consultation Clinics

James B Conway, Jeff Goldberg, Frances Chung

Can J Anaesth 1992; 39: 1051-7

In recent years, there has been a strong shift towards increased use of ambulatory surgery facilities, and a trend towards accep-