

Literature review

Section Coordinators:

Frances Chung, The Toronto Hospital, Canada

Peter MNYH Go, Maastricht University Hospital, The Netherlands

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 $> 38.5^{\circ}\text{C}$. 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.

FC

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 re-admission 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.

FC

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-

tance of more medically ill patients in these centres. Thus more patients are presenting for anaesthesia and surgery in these ambulatory facilities without formal preoperative anaesthetic assessment. These factors can result in surgical delays and cancellations. These problems may be resolved if anaesthetists are able to assess higher-risk patients on an ambulatory preadmission before surgery.

In this study, the authors studied the case referral pattern and efficiency of the anaesthesia consultation clinic. Data were collected prospectively on the first 400 patients referred to the clinic. The primary reason for referral was related to the cardiovascular system in 60% of cases, endocrine system in 13% of cases, respiratory system in 8% of cases, and the neurologic system in 5% of cases.

Overall, 81% of referrals were considered appropriate, and 19% were considered inappropriate. Thirty-five per cent of all patients were sent for additional testing, and 9% required consultations. When interviewed before discharge from hospital, 92% of patients felt that their anaesthetic consultation had contributed to better perioperative care. Ninety-two per cent felt that they were better informed, and 84% felt less anxious as a result of the preoperative consultation clinic visit. The authors concluded that the preadmission anaesthesia consultation clinic represented an effective means of evaluating higher risk, elective surgical patients.

Comments

The acceptance of older and more medically compromised patients as well as more extensive operations in ambulatory facilities may lead to an increased rate of operative delays and cancellations. The preadmission anaesthesia consultation clinic can improve patient care and minimize operative delays and cancellations through more thorough preoperative evaluation, and preparation of medically compromised patients, thus improving efficiency. It can improve patient satisfaction and comfort by providing maximum information to the patients in a relaxed setting. In addition, it can optimize communication between anaesthetist and surgeon regarding individual patient care. This represents a potentially important reduction in costs and improvement in operating room efficiency.

FC

Anaesthesia for gynaecological laparoscopy — a comparison between the laryngeal mask airway and tracheal intubation

DG Swann, H Spens, SA Edwards, RJ Chestnut

Anaesthesia 1993; **48**: 431–4

In a single-blind, randomized, controlled study, we compared two anaesthetic techniques in 60 patients undergoing gynaecological laparoscopy. In the first group, ventilation was controlled, after paralysis and tracheal intubation. In the second group, a laryngeal mask airway was inserted and spontaneous or assisted ventilation allowed. There were no clinically significant differences in the intra-operative conditions of the two groups, although the procedure was quicker in the second group. The only significant difference in morbidity was a greater incidence of nausea and vomiting in the second group in the first 4 h after operation. We conclude that use of the laryngeal mask airway is an acceptable technique for elective gynaecological laparoscopy, in patients who are at low risk of regurgitation.

Comments

Anaesthesia of only limited duration is necessary in ambulatory surgery. One might assume that a laryngeal mask airway is less traumatizing to the patient than tracheal intubation. This randomized comparison study does not show a significant difference for postoperative sore throat or hoarseness in either group. However, nausea and vomiting was seen significantly more after laryngeal mask airway anaesthesia. As the authors suggest in their discussion this might be due to gastric insufflation in the non-intubated group, and the administration of atropine at reversal of neuromuscular blockade in the intubated group to reverse neuromuscular blockade. The incidence of nausea and vomiting might reduce if nitrous oxide anaesthesia was not given.

From this study one might conclude that both anaesthesia techniques are comparable and have no preference in ambulatory surgery.

PG

The British Association of Day Surgery Annual Conference

Cambridge, United Kingdom 2-3 July 1993

For further information please contact the Association's secretary, Mrs A Penn, c/o Day Surgical Unit, Addenbrooke's Hospital, Hills Road, Cambridge, CB2 2QQ, UK.