CORRESPONDENCE

access to a computer, practiced editing a paper (using a word processing program) and finally, used a computer statistical package to determine the significance of research data.

Other departments who wish to expand their clinical research programs may find this type of program useful.

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Phaeochromocytoma presenting as MH

To the Editor:

We would like to make a few remarks concerning diagnostic and therapeutic approaches in the recently published case report by Allen and Rosenberg.¹

First, in the Discussion, there should be some mention of the possibility that the massive sympathetic discharge which occurred immediately after induction might be the result of carbon dioxide retention in a patient receiving deep anaesthesia and breathing spontaneously with a mask. Furthermore, the respiratory acidosis and hypoxaemia were treated with intravenous sodium bicarbonate instead of hyperventilation. Sodium bicarbonate dissociates in plasma and increases plasma carbon dioxide concentration and worsens respiratory acidosis.

The patient did not receive prophylactic dantrolene before adrenalectomy which conflicts with the authors' suspicion of malignant hyperpyrexia, reflected by avoidance of known MH triggers and by performing specific MH testing six months later.

The use of prophylactic dantrolene in susceptible patients is controversial. Some authors advise using prophylactic *iv* dantrolene shortly before surgery, in susceptible or highly susceptible patients^{2,3} whereas others avoid it because of dantrolene's side-effects.^{4,5} We believe that it is easier to ventilate the lungs of a patient with dantrolene-induced muscle weakness than to treat malignant hyperthermia.

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REFERENCES

- Allen GC, Rosenberg H. Phaeochromocytoma presenting as acute malignant hyperthermia – a diagnostic challenge. Can J Anaesth 1990; 37: 593-5.
- 2 Flewellen EH, Nelson TE, Jones WP, Arens JF, Wagner DL. Dantrolene dose response in awake man: implications for management of malignant hyperthermia. Anesthesiology 1983; 59: 275-80.
- 3 Rosenberg H, Seitman D. Pharmacogenetics. In: Barash PG, Cullen BF, Stoelting RK. Clinical Anesthesia. J.B. Lippincott Co. Philadelphia, 1989.
- 4 Gronert GA, Shulman SR, Mott J. Malignant hyperthermia. In: Miller RD (Ed.). Anesthesia, 3rd ed., Churchill Livingstone Inc., 1990; 950-1.
- 5 Hackle W, Mauritz W, Winkler M, Sporn P, Steinbreithner K. Anaesthesia in malignant hyperthermia – susceptible patients without dantrolene prophylaxis: a report of 30 cases. Acta Anaesthesiol Scand 1990; 7: 535–8.

REPLY

We should state at the outset that the patient described in our case report was referred to us from another hospital. Caffeine halothane contracture testing was performed at our institution six months after the acute episode. Therefore, it would be inappropriate for us to try to second-guess those involved in the management of the patient.

We cannot comment on the possibility of CO_2 retention triggering the hypermetabolic episode. There is no evidence to suggest this in the records from the other hospital. We agree that respiratory acidosis is most effectively treated with hyperventilation. However, it is also important to remember that these anesthetists were faced with an unusual, but life-threatening hyperadrenergic crisis, which carries a high mortality. Because of their management, the child survived.

Finally, we acknowledge that the use of prophylactic dantrolene is controversial. Like any intervention, the benefit must be weighed against the risk of side-effects and the additional cost incurred. Although dantrolene may reduce the risk of an MH episode, the degree of risk reduction is not known.

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The laryngeal mask airway in children

To the Editor:

The laryngeal mask airway (LMA) has a useful place in anaesthetic practice in adults. We report a study carried