

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.<sup>1</sup>

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<sup>2,3</sup> whereas others avoid it because of dantrolene's side-effects.<sup>4,5</sup> 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

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## 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<sub>2</sub> 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 anaesthetists 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

out on 200 children aged from six weeks to 17 yr, and weighing from 2.63 kg to 67 kg.

After induction of anaesthesia (either intravenous or inhalational), 89% of the LMAs were inserted at the first attempt, with 11% requiring two or three attempts. Of the 22 initial failures, half were due to inadequate depth of anaesthesia (often causing laryngeal spasm or coughing). Other problems included inserting the wrong size LMA, or physical difficulty in inserting the mask. After insertion of the LMA, the resulting airway was recorded as clear (silent) in 97% of cases throughout the operation. Two per cent had noisy airways, but with no other signs of obstruction were recorded. Two patients in these groups required continuous neck extension to maintain a clear airway. Laryngeal spasm developed in 1% perioperatively and necessitated tracheal intubation.

In 99.5% of cases, IPPV (assessed by gentle squeezing of the reservoir bag) was found to be satisfactory, with little or no air leak, and no distension of the stomach. The only failure was in an infant of seven weeks.

The LMA is useful in managing a difficult airway. Before this series the LMA had been used successfully to manage a case of supraglottic obstruction, but it had failed to do so in a patient with micrognathia. Mason and Bingham reported on their experiences of the LMA in children older than six months.<sup>1</sup> We used the LMA in nine children *younger* than this, but are cautious about recommending the use of the LMA in this age group. Airway patency was clear in only six cases (67%), and noisy in two others (22%). In one case the LMA was removed intraoperatively because of laryngeal spasm, and the patient required tracheal intubation. Two LMAs dislodged in children of this age group. The only failure of IPPV was in a seven-week infant, which was associated with dislodgement of the LMA.

Generally, we found the LMA to be safe, effective and reliable in children but urge caution in its use in infants of less than six months.

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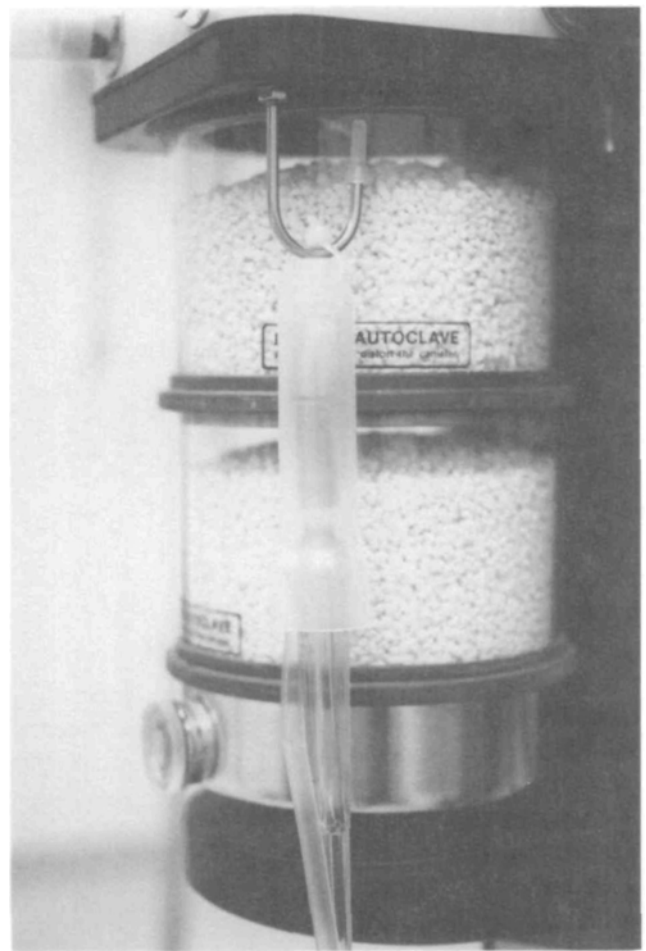
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#### REFERENCE

- 1 Mason DG, Bingham RM. The laryngeal mask airway in children. *Anaesthesia* 1990; 45: 760-3.



FIGURE

### *Suction at the ready*

To the Editor:

Every anaesthetist must have suction apparatus readily at hand. For those with an anaesthesia machine with the Ohmeda® GMS absorber, we have devised a particularly useful addition that makes suction readily available, but keeps it out of the way (Figure). Two holes are cut in the end of the plastic case from a Monoject® 10- or 20-ml syringe. A cable tie is placed through the holes, connected, and placed on the U-shaped circuit hook on the GMS absorber head. The cable tie is then pulled tight and trimmed. Suction tubing can now be doubled up and inserted into the plastic case.

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