Propofol and chemotherapy-induced emesis

To the Editor:

We were interested to read the article by Borgeat *et al.*¹ on the use of propofol infusions to control chemotherapy-induced emesis. The study provides encouraging evidence of an effective treatment for this distressing and unpleasant problem. However, we feel that this practice is not without its potential hazards and monitoring of the patients for evidence of sedation should have been more intense considering the dose of propofol used.

Propofol infused at $1 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{hr}^{-1}$ is well below that quoted by Mackenzie and Grant² in 1987 as being necessary for sedation of patients undergoing local anaesthetic procedures, ($3\text{--}4 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{hr}^{-1}$). They were, however, using rousable sleep as their end point. Since this time, experience of propofol infusions has greatly increased, the current recommendation of the manufacturers for sedation of patients on intensive care being a rate of $0.3\text{--}4 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{hr}^{-1}$ and personal experience tells us that this is so. We accept that pharmacokinetic behaviour may well be altered in the critically ill but treatment of some malignancies may necessitate administration of chemotherapy to extremely unwell patients, in whom this dose of propofol may exhibit markedly enhanced effects.

The monitoring used in this study was by a nurse using a sedation scoring system two hourly. Observer sedation scores have previously been shown not to correlate with patient subjective sedation score³ and perhaps this is borne out by the fact that no sedation was observed at all throughout the 24-hr period of the propofol infusion.

To conclude, we feel that use of this method of emesis control necessitates more intense monitoring, including at least pulse oximetry and a higher nurse:patient ratio than is found on most wards, with appropriately trained nursing staff. It would also appear that this dose of propofol could not be relied upon to have no side effects, as occurred in this study, in all patients receiving chemotherapy. Clearly, further studies are required to determine the lowest dose of propofol infusion that would achieve the desired antiemetic effect.

P. Jones MRCP FRCA
A. Ravalia FRCA
Kingston Hospital
Kingston Upon Thames, UK

REFERENCES

- 1 Borgeat A, Wilder-Smith OHG, Forni M, Suter PM. Adjuvant propofol enables better control of nausea and

emesis secondary to chemotherapy for breast cancer. *Can J Anaesth* 1994; 41: 1117–9.

- 2 Mackenzie N, Grant IS. Propofol for intravenous sedation. *Anaesthesia* 1987; 42: 3–6.

- 3 Ure RW, Dwyer SJ, Blogg CE, White AP. Patient-controlled anxiolysis with propofol. *Br J Anaesth* 1991; 67: 657–8P.

REPLY

We thank Drs. Jones and Ravalia for their interest in our preliminary results concerning the use of propofol in patients receiving chemotherapy for breast cancer.¹ The dose of propofol infused is, as noted by Jones and Ravalia, well below those quoted in the literature² for sedation of patients undergoing local anaesthetic procedures. Moreover, the context of this use of propofol is quite different from that in the operating room or in intensive care units. In particular, patients undergoing cancer chemotherapy receive no sedatives or other drugs with central nervous system (CNS) depressant properties. It is well known that sedatives possess additive or synergistic CNS effects.³ Interactions between propofol and cytotoxic drugs are, to our knowledge, unknown. In our experience, we have never observed interactions concerning the level of sedation. We agree with Drs. Jones and Ravalia that precautions should be taken when propofol is used in this setting; these precautions have been published elsewhere.⁴ We also agree that further studies are needed to determine the lowest effective dose of propofol to achieve the desired antiemetic effect.

A. Borgeat
O.H.G. Wilder-Smith
P.M. Suter
University Hospital
Geneva, Switzerland

REFERENCES

- 1 Borgeat A, Wilder-Smith OHG, Forni M, Suter PM. Adjuvant propofol enables better control of nausea and emesis secondary to chemotherapy for breast cancer. *Can J Anaesth* 1994; 41: 1117–9.
- 2 Mackenzie N, Grant IS. Propofol for intravenous sedation. *Anaesthesia* 1987; 42: 3–6.
- 3 Teh J, Short TG, Wong J, Tan P. Pharmacokinetic interactions between midazolam and propofol: an infusion study. *Br J Anaesth* 1994; 72: 62–5.
- 4 Borgeat A, Wilder-Smith OHG, Wilder-Smith CH, Forni M, Suter PM. Propofol improves patient comfort during cisplatin chemotherapy. A pilot study. *Oncology* 1993; 50: 456–9.

Nicardipine, verapamil and response to intubation

To the Editor:

I read with interest the recent publication of Wig *et al.* entitled: "Nicardipine and verapamil attenuate the pressor response to laryngoscopy and intubation."¹ The authors demonstrate that nicardipine can be added to the list of