How low can we go?

Editor—In his editorial, Prof. Sneyd stresses the need for large prospective studies addressing the effect of bispectral index (BIS) monitoring on the risk of awareness. What may have escaped him is that preliminary results from just such a study are already available.

In the B-Aware trial, 2465 patients at high risk of intraoperative awareness, 50 of them from my Trust, were randomized to receive standard or BIS-guided anaesthesia. The only stipulation regarding anaesthetic technique was that patients should be undergoing general anaesthesia with neuromuscular block. The study was powered to detect a 10-fold reduction in the incidence of awareness, assuming an overall incidence of 1%. Patients were questioned about awareness on three occasions postoperatively. Patients, surgeons, interviewers, and those assessing awareness reports were blinded to group allocation. Eleven of 1238 patients in the standard group and 2/1227 in the BIS-guided group reported awareness. This constitutes an 82% reduction in incidence in the BIS-guided group (95% CI 17–98%).

Should Prof. Sneyd require a less anodyne and even more seductive phrase than those he quotes to convince him of the merits of BIS monitoring, the statement below is now supported by published data. I suspect that Aspect Medical Systems will amend their marketing material accordingly when the full results of the B-Aware trial are published shortly.

BIS monitoring reduces the incidence of awareness in susceptible patients undergoing general anaesthesia with neuromuscular block.

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Editor—Preliminary results from the B-Aware Trial were indeed announced at the ASA meeting in San Francisco during October 2003, at which time my Editorial was already ‘in press’. Certainly, the preliminary results from the study are interesting and do indeed suggest that for patients similar to the ‘high risk’ group recruited for the study, BIS monitoring is associated with a reduction in perioperative awareness. We should nevertheless await publication of the full results in peer-reviewed form. In addition, it is always hazardous to extrapolate data beyond its context. Only time will tell quite how useful BIS monitoring is for a more general group of patients (i.e. not ‘high risk’ who are anaesthetized as part of routine practice and outside the context of a clinical trial).

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1 Sneyd JR. How low can we go? Br J Anaesth 2003; 91: 771–2

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