Hypertension and perioperative risk

Editor—I read the review1 and associated editorial2 about hypertension with considerable interest and was informed and educated by both. However, my concerns regarding preoperative hypertension do not only extend to the patient, but also to me!

Thus, for a risk-averse anaesthetist, the presence on the list of a patient whose blood pressure is elevated may lead to increased anxiety and push the anaesthetist towards, or over the top of, their Yerkes–Dodson curve.3

I may not always be so risk averse; but I do feel that anaesthesia for elective procedures should be as risk free as possible. Surely the preemptive correction of minor degrees of hypertension is more appropriate than the use of invasive monitoring and high dependency care in these cases?

In the light of increasing public awareness of the problems of obesity and alcohol abuse, should advice on weight loss and reduction of alcohol consumption (and their effects on blood pressure4) not only be part of every hypertensive patient’s preoperative assessment; but also be issued to them in surgical outpatient clinics?

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Editor—We are most grateful for the opportunity to reply to Dr Palmer’s letter. He raises two points. The first is to suggest that the correction of minor degrees of hypertension before surgery is more appropriate than the use of invasive monitoring and high dependency care in these cases. For admission blood pressures between 120/80 mm Hg and 180/110 mm Hg we were unable to find any evidence of increased perioperative risk. We accept that it is biologically plausible that such blood pressures may confer a small increase in risk. However, this effect is beyond the resolving power of currently available studies, and major cardiovascular risk factors such as heart failure and known ischaemic heart disease are more important indicators of perioperative risk. We have tried to produce guidelines that are pragmatic and clinically useful and, on this basis, we felt unable to recommend deferring surgery to control a risk whose existence we cannot demonstrate.

For admission blood pressures persistently above 180/110 mm Hg, the position is less clear. While there are no data to support an increased incidence of adverse events in this group of patients, the work of Prys-Roberts and colleagues does suggest that patients with very high blood pressures display a greater fall in blood pressure at induction of anaesthesia and are more prone to intraoperative myocardial ischaemia.5 It is for patients with blood pressure elevated to this level that we suggest that anaesthesia and surgery should be deferred where possible to allow the blood pressure to be controlled and, where this is not possible, the use of invasive monitoring and high dependency care may be appropriate.

We would emphasize that we seek to offer guidelines to aid the clinician, not edicts to ordain patient care. There will certainly be circumstances in which persistently elevated admission blood pressure may, of itself, be a cause for concern. Refractory hypertension in a young patient, suggestive of secondary hypertension, is one such circumstance.

Dr Palmer’s second point, on the role of the anaesthetist and surgeon in the primary and secondary prevention of cardiovascular disease, is very well taken. Smoking, obesity and alcohol abuse are difficult problems to tackle but, as physicians concerned with the well being of the whole patient, they certainly fall within our remit.

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Remifentanil is too potent to be given by bolus

Editor—We read with interest the study evaluating bolus injection of remifentanil in spontaneously breathing human volunteers by Egan and colleagues.1 Using a randomized, double-blind, placebo-controlled, dose-escalation, crossover study design, a total of 64 healthy subjects received remifentanil or placebo by bolus injection (1–3 s) in a fixed unit dose separated by a 1 h washout period. Groups of six subjects were studied at the initial dose of 25 µg and at subsequent doses of 25 µg increments until a total of four out of the six subjects in any one group had experienced respiratory depression, or the maximum dose of 200 µg had been reached. From their extensive investigation, the authors were able to conclude that bolus injection of remifentanil would be potentially safe and effective in clinical situations, despite the fact that a number of the volunteers in

3 Yerkes RM, Dodson JD. The relation of strength of stimulus to rapidity of habit-formation. J Comparative Neural Psychol 1908; 18: 459–82

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