CORRESPONDENCE


Sir,—We did not study the Belscope with the prism attached. The instructions with the Belscope state that the prism is only needed three times per 1000 intubations and is not recommended for routine use, as the medium restricts the field of view. The instructions state, and this is borne out by our experience, that where the difficulty of laryngoscopy requires the prism to be used, the tracheal tube will almost always need further curvature, using a J-shaped introducing wire; alternatively, a bougie may be inserted and the tracheal tube "railroaded" over it. This was inappropriate for our study with medical students.

Overall it is difficult to comment further on the letter by Gajraj, Chason and Shearer, as there are no details of the patients, grade of laryngoscopy or experience of the intubator(s). They state that time to intubation was longer with the Belscope. Bellhouse [1] has already said that the "Macintosh blade has been found to be marginally quicker to use" than the Belscope and our study showed that although intubation with the Belscope was slower, it still met the criteria for time to intubation laid down by the American Advanced Cardiac Life Support Examination [2]. We cannot comment on cervical spine movement in our study as that was not its purpose: we were using a manakin not patients.

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Detection of perioperative myocardial ischaemia

Sir,—Despite the variety of methods available for intraoperative detection of myocardial ischaemia discussed by Edwards and Reilly [1], the only one that is used frequently in routine clinical practice is the ECG. They referred to work showing that ST segment changes are detected more reliably using a combination of leads [2]; however, most ECG monitors in British operating theatres are of the three-lead type which makes such monitoring difficult. It is possible to monitor both lead II and also a modified V<sub>4</sub> lead by using the CS<sub>5</sub> electrode placement, which in my opinion is under used in anaesthetic practice. Most anaesthetists seem to monitor either lead II, using the standard three-lead electrode placement of electrodes or use a modified placement of electrodes in order to monitor lead CM<sub>5</sub>. Unfortunately, both methods have disadvantages. Lead II is not a particularly good lead for detection of ischaemia compared with leads which use a V<sub>4</sub> electrode, and lead CM<sub>5</sub> precludes monitoring of lead II, which is a superior lead for the diagnosis of arrhythmias. This problem is overcome when using the CS<sub>5</sub> electrode placement, in which the negative (i.e. right arm) electrode is placed on the right shoulder and the positive (i.e. left arm) electrode is placed at the V<sub>4</sub> position (lead I is selected on the monitor). In this way the ground electrode can be placed in its normal position on the left hip or leg, allowing alternative monitoring of lead II. In patients at risk of ischaemia, one can then use continual monitoring of CS<sub>5</sub>, which has been shown to be an effective lead for the diagnosis of ischaemia [3,4] and switch over to lead II at periodic intervals or at the suggestion of an arrhythmia. Although this approach does not allow simultaneous observation of the two leads and is, of course, subject to the other problems described by Edwards and Reilly of using the ECG for intraoperative monitoring of ischaemia, it nevertheless appears to offer the best compromise when using a three-lead system and as such deserves greater recognition.

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Sir,—As we described in our article, the bipolar C<sub>5</sub>S<sub>5</sub> lead has indeed been shown to be effective for diagnosing myocardial ischaemia, although not in the study of Froelicher and colleagues quoted by Dr Cohen, which assessed lead CM<sub>5</sub> and C<sub>S</sub>S<sub>5</sub>. Dr Cohen correctly states that using the C<sub>S</sub>S<sub>5</sub> bipolar lead configuration with the ground electrode on the left hip allows alternative monitoring of a modified V<sub>4</sub> lead and lead II. However, this still requires the anaesthetist to switch between leads. A more appropriate solution could be to monitor a lead which allows both easy p wave recognition and reliable detection of ischaemia (i.e. lead V<sub>4</sub>). Although we would expect the C<sub>S</sub>S<sub>5</sub> lead to allow reasonably good p wave recognition, we are not aware of any studies assessing its value. However, the C<sub>B</sub>S<sub>5</sub> lead (positive lead, precordial V<sub>4</sub>; negative lead, middle of the right scapula on the back) has been shown to allow easy recognition of the p wave [1] and to compare well with both the V<sub>4</sub> and C<sub>S</sub>S<sub>5</sub> leads for the detection of myocardial ischaemia [2], thus preventing the anaesthetist from the need to switch between leads when using a three-lead ECG system. However, we would emphasize the findings of London and colleagues [3] that the rate of observation of intraoperative ischaemia by clinicians using standard ECG monitoring is poor. The use of optimal ECG monitoring is only of value if used by a vigilant anaesthetist.

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Intrathchal position of microcatheters

Sir,—We read with interest the article of Standl and Back on the intrathchal position of 28-gauge spinal catheters [1]. However, the authors do not provide an answer to the main question in their introduction: is the clinical outcome of continuous spinal anaesthesia affected by the intrathchal position of the catheter? Adequate analgesia was produced in all their patients but the correlation between the position of the catheter tip and the total dose of 0.5% bupivacaine necessary to reach T10 was not described. Moreover, following additional doses of bupivacaine, the patients were in a supine position.

In a spinal canal model, Riger and Drasner [2] have shown that administration of local anaesthetic through a sacral directed catheter results in restricted distribution of local anaesthetic. With an isobaric solution, the distribution was more uniform than when a hyperbaric solution was used. In our study [3], using 19-gauge spinal catheters, we examined 65 elderly patients and five cases of maldistribution were observed. In these (one in the isobaric group and two in the hyperbaric group) examination of the catheter...