CONSIDERATION  

arterial pressure [5, 6], and changes in cardiovascular dynamics could result in changes in V/Q state in the lung and hence in \( (P_{co2} - P_{co}) \).

Second, in the absence of capnographic recordings, the authors could have estimated the components of physiological deadspace using traditional formulae [4, 7] instead of speculating that anatomical deadspace may have decreased during laparoscopy.

Finally, negative values of \( (P_{co2} - P_{co}) \) have been observed during anaesthesia in pregnant subjects (50%), in infants (50%) and in patients after cardiac bypass surgery (8.1%) [8]. The increased cardiac output and increased carbon dioxide production, reduced FRC and low compliance are factors that have been implicated in the production of negative values. Therefore, one would be interested to know the incidence of negative values, particularly during stage II of Puri and Singh’s study where, after insufflation of carbon dioxide into the peritoneum, the subjects may resemble the pregnant in some features, namely reduced FRC, low compliance and increased carbon dioxide production.

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Sir,—Although in individual patients changed at different stages of laparoscopy, there were no overall mean changes in \( (P_{co2} - P_{co}) \) at various stages of laparoscopy studied (indicated in table 1 of our paper [1]). Some of these individual changes in this difference may have resulted from the changes in haemodynamic state produced by increased \( P_{co2} \) and increase in intrathoracic pressure, but we did not study cardiac output and pulmonary artery pressure measurements as it was not ethically justified to insert a pulmonary artery catheter in a patient for diagnostic laparoscopy.

Regarding the incidence of negative values of \( (P_{co2} - P_{co}) \) there were three of 14 patients (21%) with negative values of \( (P_{co2} - P_{co}) \) at stage I (before insufflation of carbon dioxide) and the number increased to five of 14 (35%) after insufflation (stage II) during laparoscopy, but the trend was not similar in all patients: it decreased in some, while increasing in others.

Finding various fractions of physiological deadspace by the conventional formulae would have been a futile statistical exercise, as the derived values would not represent the actual anatomical and alveolar deadspaces [2].

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EUROPEAN STANDARDIZATION COMMITTEE ON ANAESTHETIC EQUIPMENT

Sir,—Our publication [1] on fresh gas utilization of eight circle systems was one of the first testing the new European CEN standard. Dr Greenbaum’s statement [2] that our reference to the draft document of the CEN/TC215 proposal was not authorized, is incorrect. As stated in the introduction of the proposal, the standard may be quoted with the approval of the Convener of the working group or the Chairman. Approval for our publication was obtained from both before submitting the manuscript (the Chairmanship of the Technical Committee has changed in the meantime).

As already mentioned, our publication describes a testing procedure under well defined circumstances and nothing else. It does not set performance limits. I have no knowledge of any other type testing standard which reliably evaluates the efficiency of anaesthesia systems. It is left to the member states of CEN to accept, alter or omit it completely from the final document.

We consider it as essential that standards are discussed and evaluated by an international readership of various journals before they become accepted standards. In the past, too many standards have been designed in theory only and therefore tend to lack data for their applicability in clinical practice. By testing the standards we would hope, therefore to make a contribution towards avoiding such problems in the future.

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RADIOIMMUNOASSAY TESTS AND ANAPHYLAXIS

Sir,—Dr Fisher’s letter [1] has raised doubts about the ability of the commercial paper radioallergosorbent tests (RAST) to categorize correctly patients who have suffered anaphylactic reactions when the commercial test is compared with prospectively obtained laboratory methods. The documentation of false negatives with the commercial RAST is an important finding and suggests that diagnostic skin testing [2] also should be performed for appropriate drugs, particularly if sera from known RAST-positive patients are not available to validate the commercial tests.

Another area of concern is the use of these RAST for screening before anaesthesia [3]. Here, because larger numbers of patients would be tested, the false positive rate, in addition to the false negative rate, would be important [4]. After a fatality in Aberdeen from presumed suxamethonium-induced anaphylaxis, a prospective pilot study was undertaken to ascertain the rate of false negative reactions. Serum from 206 patients presenting for elective surgery were analysed using commercial RAST (Pharmacia) to detect antibodies to thiopentone, suxamethonium and alcuronium. Eight (3.9%), seven (3.4%) and 20 (9.7%) patients tested positive for these agents, respectively, in this patient sample. None of these patients was reported to have had adverse reactions. Moreover, one patient documented as having increased antibody titre to suxamethonium has undergone several uneventful anaesthetics which included that agent. This finding is at variance with Assem’s assertion that “high RAST was always associated with a severe reaction” [5].

If these results are representative, the concerns of Fisher regarding the use of RAST for screening [3] and the conclusions of the Association of Anaesthetist’s Working Party that “there is no support for routine screening of patients for specific drug antibodies at present” [6], are upheld.

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