Inhaled nitric oxide in acute respiratory failure

Sir,—I found the recent paper by Young and colleagues [1] interesting, although most of their findings are in agreement with previously published human studies. However, I believe there was a significant error in their calculation of venous admixture (Qva/Qt). The values at first inspection appeared very low, particularly in the latter part of table 1. My own estimations of Qva/Qt (assuming haemoglobin = 130 g litre\(^{-1}\), P\(_{50}\) = 3.6 kPa and P\(_{av} = 5.0\) kPa) from the appropriate equations produced values of 0.46, 0.57, 0.73, 0.51, 0.52, 0.35, 0.33, 0.47, 0.38, 0.42, 0.30, 0.23, 0.21 and 0.28 vs quoted values of 0.39, 0.29, 0.35, 0.36, 0.25, 0.05, 0.10, 0.26, 0.18, 0.17, 0.07, 0.11, 0.03 and 0.04, respectively, for the 14 patients. In the calculation of oxygen content, if physically dissolved oxygen is inadvertently calculated as 0.0003 ml/100 ml/mm Hg, instead of 0.003 ml/100 ml/mm Hg, then one obtains shunt figures similar to those obtained in the article.

Alteration of haemoglobin concentration and P\(_{50}\) values within clinically feasible limits does not markedly alter the values obtained. Calculated shunt is sensitive to Sv\(_{O_2}\) and therefore P\(_{50}\), but manipulation of this within clinically likely limits did not account for the discrepancy.

As improvement of Qva/Qt derangement is a major putative clinical use of nitric oxide, it is important to get the sums correct. It would be useful to know how the results in table 2 change with correct calculation of Qva/Qt.

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Postoperative extradural analgesia

Sir,—We read with interest the recent article by Leith and colleagues [1] on the results of a 4-yr audit of 770 patients receiving postoperative extradural analgesia at York Hospital using a mixture of 0.15% bupivacaine with 0.005% diamorphine. Over the past 8 yr we have used different opioids at various strengths mixed with 0.125% bupivacaine in order to determine the most effective analgesia with the lowest incidence of major or minor complications. We have found that the best opioid to add to bupivacaine is fentanyl at a concentration of 8.3 \(\mu\)g ml\(^{-1}\) (i.e. fentanyl 10 ml in a 60-ml syringe).