LETTERS TO THE EDITOR

Neonatal respiratory distress syndrome

EDITOR,—The report of the working group on the management of neonatal respiratory distress syndrome states that ‘normal’ limits for blood gas variables cannot be stated, and appropriate levels of arterial oxygen saturation are not given. Although they discuss hyperoxaemia, they do not recommend that baseline Sao2 is kept between 94 and 96% in preterm infants receiving additional oxygen, and monitored using the Nellcor pulse oximeter. In addition, and as the working group stresses, the monitoring of arterial line P02 values will remain essential to assess the effect of respiratory support and to be certain of avoiding hyperoxaemia.

Lower levels of Sao2 may be detrimental: firstly, preterm infants with a low baseline Sao2 desaturate further with apnoeic pauses that those who are adequately oxygenated. Secondly, hyperoxaemia as a result of lung hypoaxia increases both pulmonary vascular and bronchiolar smooth muscle tone. Such changes may prolong ventilatory and oxygen dependence, increase the risk for severe hyperoxaemic episodes, and result in infants being treated with diuretics and bronchodilators. Inspired oxygen is a potent pulmonary vasodilator and may also prevent bronchospasm.

We agree with the recommendation in appendix A that one of the most important steps forward here would be a randomised controlled trial looking at the levels of oxygenation required for term and preterm neonates with respiratory distress syndrome. Such a study should include information concerning retinopathy as well as major outcome variables, such as death, chronic lung disease, the duration of inspired oxygen, and levels of required ventilation.

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