Alveolar partial pressures of carbon dioxide and oxygen measured by a helium washout technique

The estimation of arterial carbon dioxide pressure (PaCO₂) by Professor J Jordanoglu and colleagues (August 1990;45:637-8) assumes the equivalence of Bohr-Enghoff deadspace1 with the hel[...]

We also showed that the two compartment phenomenon, when there is doubt, can easily be recognised with a partial volume lung function manoeuvre.4

3 Jordanoglu J, Tatis G, Bissiouli Z. Calculation of the V₀/V₁ ratio by the hel[...]

AUTHOR'S REPLY The calculation of the alveolar carbon dioxide and oxygen concentration during quiet breathing presup[...]

The biphasic spirogram: a clue to unilateral narrowing of a mainstem bronchus

Dr A D Gascoigne and his colleagues (August 1990;45:637-8) confirm our findings of the two compartment phenomenon, caused by unilateral airflow obstruction and manifested as end inspiratory (and end expiratory) slowing of the maximum inspiratory to flow-volume curve. The phenomenon was first described by Williams et al5 in a patient with severe stenosis of the left main bronchus. We described two patients: one with almost complete obstruction of the left main bronchus caused by bronchial carcinoma and the other with unilateral lung emphysema (Macleod's syndrome), as suggested by Dr Gascoigne and colleagues.

We greatly enjoyed the article by Dr A D Gascoigne and others (August 1990;45: 637-8) on the biphasic spirogram, which the authors thought had not been described previously. They will find an earlier example in a book edited by Tim Clark.1

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AUTHORS' REPLY We thank Drs Braat and Roos and Professor Denison for drawing our attention to further examples of maximum flow-volume curves in individuals with stenosis of a mainstem bronchus; we acknowledged in our report that such appearances had been described previously. In most lung function laboratories, however, flow-volume curves are not obtained routinely from all patients and the main aim of our paper was to draw attention to the shape of the forced expiratory spirogram—that is, the volume-time curve in unilateral bronchial narrowing. Although this shape can be predicted on theoretical grounds, we are not aware that examples have been published previously and we hope that our report will alert the observer to the possible implication of such a pattern. We speculated that a similar appearance might be seen in unilateral emphysema and it is helpful to note that the flow-volume curve from one such patient support this contention.

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Jet and ultrasonic nebuliser output: use of a new method for direct measurement of aerosol output

We thank Dr JH Dennis and colleagues (October 1990;45:728-32) for highlighting the considerable limitations in using the weight loss of a nebuliser as an index of the amount of solute (for example a drug) released in an aerosol. We agree that it is necessary to measure the amount of aerosol which is leaving the nebuliser directly and have used such a technique where the sampling filters were weighed after drying to determine the weight of solute nebulised.1