

In view of the bronchographic picture a left lower lobectomy with removal of the larger diverticulum was performed. The anatomical findings confirmed the presence of the diverticulum and of numerous little valves in the left lower lobe bronchus and in its segmental bronchi, which we had observed at previous endoscopies. Histologically the valves consisted of connective and muscular tissue.

Bronchial diverticulosis is very rare and the cause is unknown. In our patient it was not associated with malformations in other major organs, and it presented as recurrent episodes of bronchopneumonia, always distal to the larger diverticulum. The other anomaly seen at fiberoptic bronchoscopy was numerous endobronchial valves in the lower lobe bronchi bilaterally. They were translucent in appearance and reduced the segmental bronchial lumen to about 10% of normal. The anatomical and histological examination of the resected lobe confirmed the presence of valves along the lobar and segmental bronchi. The association of bronchial diverticulosis and bronchial valves has not been previously described in a child.

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## LTOT in COPD

The recent article by Dr M I Walters *et al* (November 1993;48:1170-7) provided a useful review of the use of long term oxygen therapy (LTOT) in chronic obstructive pulmonary disease (COPD), but it is disappointing that recommendations as to the appropriate use of LTOT remain indistinct. The UK Department of Health absolute indication (suitably hypoxic patients with COPD and a history of oedema) is unambiguous and will be based on the findings of the MRC study.<sup>1</sup> The "relative" indication of LTOT in the much larger group of hypoxic patients with COPD but no history of oedema is less clear, because the NOTT study<sup>2</sup> included a heterogeneous group of patients with and without a history of oedema. This study did find that continuous oxygen therapy conferred a survival benefit to, particularly, hypercapnic patients ( $\text{PaCO}_2 > 45 \text{ mm Hg}$ ). It is, however, not clear from the NOTT study what proportion of these patients had a history of oedema, although one might speculate that this subgroup (hypoxic and hypercapnic patients) would have the highest incidence of oedema and thus be the patients most comparable to those included in the MRC study. Whether or not the findings from the NOTT study can be extrapolated to the whole population of patients with hypoxic COPD, with or without hypercapnia, is arguable.

Clinical experience suggests that only a few patients with hypoxic COPD develop cor pulmonale. The  $\text{FEV}_1$  remains a powerful predictor of survival which continues to decline irrespective of whether the patient receives LTOT. It is thus possible that LTOT may be unable to prolong survival in patients in whom oedema has not occurred. In their review Walters *et al* quote a number of smaller studies which have examined physiological variables such as pulmonary artery pressure in such patients - often with conflicting conclusions. Indeed they state "even if reversal of pulmonary hypertension

is confirmed, its relevance in terms of survival is not yet clear."

There are, of course, issues other than survival which need to be considered - and many might argue that LTOT could improve quality of life rather than survival, and should for this reason be given to hypoxic patients without oedema. This is an important issue. The prevalence of non-oedema hypoxic COPD is such<sup>3</sup> that many thousands of patients fulfil the vague "relative" criteria for the provision of LTOT. Surely there is still a need for a further study to examine specifically the role of LTOT in hypoxic patients with COPD but no history of oedema. The principal end point should be survival although "quality of life" issues could be addressed. It might even be possible to increase our limited understanding of the significance of nocturnal desaturation in these patients. This should not be beyond our means or enthusiasm; after all, the much quoted MRC report<sup>1</sup> only studied 87 patients.

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- 1 Report of the Medical Research Council Oxygen Working Party. Long-term domiciliary oxygen therapy in chronic hypoxic cor pulmonale complicating chronic bronchitis and emphysema. *Lancet* 1981;ii:681-5.
- 2 Nocturnal Oxygen Therapy Trial Group. Continuous or nocturnal oxygen therapy in hypoxic chronic obstructive lung disease. *Ann Intern Med* 1990;93:391-8.
- 3 Williams BT, Nichol JP. Prevalence of hypoxic COPD with reference to LTOT. *Lancet* 1985;ii:369-72.

We read with interest the review on long term oxygen therapy (LTOT) by Dr M I Walters *et al* (November 1993;48:1170-7). We would, however, like to make several additional points about current usage of LTOT in the UK.

While we agree that overall there is under-prescription of LTOT, it is no longer true that LTOT is prescribed inappropriately and for inadequate durations in the majority of patients. In our study of 176 patients using LTOT in East London in 1991<sup>1</sup> the prescription for LTOT was recommended by a respiratory physician in 80% of patients and simplified criteria for the prescription of LTOT were fulfilled by 76% of patients. Furthermore, not only were 83% of patients prescribed 15 hours of LTOT or more daily, but 74% of patients used LTOT for more than 12 hours daily.

Hence, use of the guidelines for the prescription of LTOT has improved compared with earlier studies of the prescription of LTOT<sup>2,3</sup> which assessed adherence to the guidelines within the first two years of their introduction in December 1985. Nonetheless, use of LTOT could be further optimised. Firstly, communication about patients' respiratory status between hospital physicians and general practitioners needs to be improved. In our study<sup>1</sup> the general practitioner was only aware of the results of respiratory assessment in about 30% of patients. Secondly, we agree with Walters *et al* that regular reassessments are essential for the effective prescription of LTOT. We found that some patients were still being assessed for LTOT during an exacerbation and oxygen saturation was uncorrected by the concentrator in 17% of patients<sup>1</sup>. Re-assessments would maximise the benefit of

LTOT by ensuring optimal correction of hypoxaemia and that prescription is appropriate in all patients.

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- 1 Restrick LJ, Paul EA, Braid GM, Cullinan P, Moore-Gillon J, Wedzicha JA. Assessment and follow up of patients prescribed long term oxygen treatment. *Thorax* 1993;48:708-13.
- 2 Walshaw MJ, Lim R, Evans CC, Hind CRK. Prescription of oxygen concentrators for long term oxygen treatment: reassessment in one district. *BMJ* 1988;297:1030-2.
- 3 Dilworth JP, Higgs CMB, Jones PA, White RJ. Prescription of oxygen concentrators: adherence to published guidelines. *Thorax* 1989;44:576-8.

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**Sleep Apnea and Rhonchopathy.** K Togawa, S Katayama, Y Hishikawa, Y Ohta, T Horie. (Pp 178; SFr 246, US\$197.) Basel, Switzerland: Karger, 1993. 3 8055 5611 X.

This book reports the proceedings of the 3rd World Congress on Sleep Apnea and Rhonchopathy held in Tokyo, Japan on 21-23 September 1991. All five editors are Japanese and 23 of the 32 articles have Japanese authors. The 32 articles span 174 pages, so the average article is six pages in length. They amount therefore to little more than extended abstracts and occasionally one finds this frustrating. There are undoubtedly some interesting contributions including articles on the upper airways resistance syndrome from Stanford, driving in patients with sleep apnoea from Stockholm, changes in blood gas tensions during apnoeas from Tokyo, and the value of dynamic cephalometry from Sagami-hara and Michigan. However, there are several articles which add little to the world knowledge of sleep apnoea.

I have to confess to a major bias against the publication of books of proceedings. Books of extended abstracts published two years after a meeting are out of date because any article containing good original science will already have been published in full in reputable journals. Indeed, this is the case for several of the articles in this book. Such volumes merely serve to make profits for publishers and pad curriculum vitae of contributors, and I personally would not advocate purchase of many of them. I certainly would not advocate purchase of this one, unless you have a burning desire to know what is going on in terms of sleep apnoea in Japan. - ND