Measurement of distal airspace size

Airspace size in human lungs obviously depends on the degree to which the lung is inflated and on tissue shrinkage in preparation for histological examination. Dr D Lamb et al (October 1993;48:1012–7) minimise the latter by embedding tissue in methacrylate but appear to ignore the former. They inflated the resected lungs used in their study with 10% buffered formalin at a transpulmonary pressure of 25 cm H₂O for a minimum of 24 hours. What technique did they use and how well were the lungs inflated? Satisfactory inflation via the bronchus of surgically resected lobes has been found unsatisfactory in two Vancouver hospitals. In one, expansion had to be achieved by inflation with fixative through the pleura using a large bore needle. In another, using a technique similar to that of Lamb et al, the mean ratio of predicted lobar volume to fixed lobar volume was 0.95. More to the point, the standard deviation of this ratio was 0.03 indicating huge potential errors. How did Lamb et al correct for these when measuring airspace size (AWU)?

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Emotional aspects of asthma

With reference to the article by Drs G M Garden and J G Ayres (May 1993;48:501–5), we agree that emotional factors may contribute to the severity of asthma. In 1982 we studied the psychosocial aspects of bronchial asthma in 37 patients. Parameters including birth order, personality traits, time and place of exacerbations, and parental attitudes were found to have a crucial role in determining the course of the patient's symptoms. Fifteen of our patients had a reported emotional precipitating factors; 12 of the 37 had a premorbid hysterical personality, and seven were depressed. The mechanisms by which emotional factors affect asthma are not understood. The cholinergic response may be important, and neural mechanisms may affect blood flow to airways, affecting the inflammatory response and smooth muscle reactivity. Although psychosocial factors play a significant part in the severity of asthma, their place may be underestimated in practice.

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Mediastinal paraganglioma presenting as an intracardiac mass with SVC obstruction

In the article on mediastinal paraganglioma by Dr S K Sharma et al (November 1993;48:1181–2) there seems to be insufficient pathological evidence for this being a mediastinal paraganglioma. The illustration which is of poor quality, shows a picture that is indistinguishable from a carcinoid tumour which can also arise from the anterior mediastinum in the thymic region as we have shown in a recent article. The authors only used neuron specific enolase as their marker of neural crest origin, but this is positive also in carcinoids. Other neuroendocrine markers such as chromogranin are also positive in both tumour types. Neural markers cannot therefore be used to distinguish between these tumours. Neurofilament proteins are more likely to be positive in paragangliomas than in carcinoids. The authors should have done an S-100 immunostain to show S-100 positive sustentacular cells surrounding the nests of tumour cells which are present in paragangliomas, but these have been reported also in carcinoid tumours. The most useful distinguishing marker is keratin or desmin, but since paragangliomas are always negative with these markers while carcinoid tumours are positive. Electron microscopy does show neurosecretory granules in the cytoplasm of tumour cells in both carcinoids and paragangliomas and therefore, while being useful, will not distinguish the tumours. It is essential to perform a panel of immunocytochemical markers to distinguish paragangliomas from carcinoid tumours since both can be indistinguishable with light and electron microscopy and can occur in similar locations in the lung and mediastinum.

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This book brings together 24 short chapters covering many aspects of sleep disorders, some of which are unfamiliar territory for the patients.
Emotional aspects of asthma.

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