LETTERS TO THE EDITOR

Bronchography in the assessment of patients with lung collapse for endoscopic laser therapy

We would like to make the following comments on the bronchographic technique described in the study by Dr PJM George and colleagues (July 1990;45:303-8). Firstly, the iodine content and the osmolarity of the contrast medium Omnipaque used in the study was non-ionic, nor was it clear whether the same method was used to perform the bronchography after laser therapy. Secondly, the technique of selective bronchography via the fibroptic bronchoscope which we have recently described using the contrast medium Iotrolan (a water soluble non-ionic dimer) would be suitable for this indication. Direct injection of the contrast medium into the suction channel of the fibroptic bronchoscope, after its tip has been placed at the proximal end of the tumour, should be attempted initially. It is simpler and less time consuming than the technique described by Dr George and his colleagues. Spilling of contrast medium into the contralateral bronchial tree should not cause pulmonary oedema as Iotrolan 300 (320 mmol/kg H2O) is almost iso-osmolar with the blood. If direct injection proved unsuccessful a catheter technique could be tried.

Low osmolar dimeric contrast media are more appropriate for such examinations. A monomeric non-ionic contrast agent such as Omnipaque at a concentration iso-osmolar with the blood would have an inadequate iodine content to produce a diagnostic result. Higher concentrations might induce pulmonary oedema if a substantial amount of the contrast medium were to spill over into the contralateral normal lung. We have used our technique successfully in one case with an obstructing central bronchial carcinoma before laser therapy. We were able to show the extent of the tumour and the patency of the distal bronchus.

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Value of washings and brushings at fibroptic bronchoscopy in the diagnosis of lung cancer

Dr V H F Mak and colleagues (May 1990;45:373-6) suggest that biopsies with both brushings and washings should always be carried out in the investigation of suspected lung cancer.

We performed a similar retrospective study of all our bronchoscopies in 1987-8, using the same exclusion criteria as Dr Mak and colleagues. We observed 171 lung cancers; biopsies and washings were obtained in 133 of these cases. One hundred and one had endoscopic evidence of malignancy (group A) and 32 had a normal bronchoscopic appearance (group B). Diagnostic sensitivity was 93% and 75% respectively. In group A biopsies gave a positive result in 89% and washings in 83%; cytological examination of washings provided a positive diagnosis in four cases with normal histological appearances. In group B biopsy specimens were positive in 53% and washings in 59%; washings gave the only positive result in 22% (7/32). Statistical analysis by the two tailed Fisher's exact test showed no significant difference between the diagnostic sensitivity of using biopsy specimens only and the combination of biopsy specimens and washings, either in group A or in group B. Indeed, reanalysing the results of Dr Mak and colleagues using the same exclusion criteria failed to show a significant difference between the sensitivity of the combination of biopsy, brushing, and washing and the use of biopsy and brushing only. Like other authors, on the basis of these analyses we do not think that bronchial washings should be carried out routinely for suspected lung cancer.

When bronchoscopic appearances are normal, cytological examination of the postbronchoscopy sputum might be useful. We collected 109 samples of postbronchoscopic sputum in 47 of our 171 patients with lung cancer; 57 samples gave a positive result. In 22 patients (47%) neoplastic cells were present in the first sample collected after bronchoscopy. This procedure gave the only positive result in 10 patients (21%), six of whom had a tumour that was not visible at bronchoscopy. Statistical analysis (χ2 test with Yates's correction) showed that cytological examination of sputum after bronchoscopy improved the diagnosis of the tumours when the endoscopic appearance was normal (p < 0.05). These results are in keeping with other observations, but our series of cases is too small to draw any conclusion.

In our opinion the use of biplanar fluoro- scopy to guide transbronchial fine needle aspiration or biopsy is at present the most reliable method for the diagnosis of peripheral lung cancer.

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