

# Correspondence

## Survival in small cell lung carcinoma after surgery

SIR.—In their paper (June 1986;41:479–82) Dr HR Sorenson and others conclude that “a selected group of patients with small cell carcinoma should be treated by surgery alone without adjuvant chemotherapy, which might reduce the long term survival.”

This was a large retrospective study, but one in which none of the patients who had a successful resection was given chemotherapy. It is therefore especially important to find out in a prospective randomised study whether or most patients who have had a successful resection after careful staging, of stage I small cell lung cancer are likely to benefit from postoperative chemotherapy or not. Readers may therefore be interested to know of a clinical trial, which the Medical Research Council is conducting jointly with the EORTC, that is specifically designed to answer this question.

In the MRC-EORTC study patients have had a successful resection of T<sub>1</sub>N<sub>0</sub>M<sub>0</sub>, T<sub>1</sub>N<sub>1</sub>M<sub>0</sub>, or T<sub>2</sub>N<sub>0</sub>M<sub>0</sub> small cell lung cancer are being randomised postoperatively either to receive or not to receive postoperative chemotherapy with etoposide, doxorubicin, and cyclophosphamide. The study is a multi-centre study and if any readers who are not already taking part are likely to be interested in doing so they can obtain a protocol from the address below.

NM BLEEHEN (*Chairman*)  
DJ GIRLING (*Secretary*)  
MRC Lung Cancer Working Party

(Copies of protocol from  
Dr DJ Girling at  
MRC Tuberculosis and Chest Diseases Unit,  
Brompton Hospital,  
London SW3 6HP)

## Bronchopleural fistula after pneumonectomy

SIR—Bronchopleural fistula after pneumonectomy is a serious complication. Treatment is by various means, including reoperation or the bronchoscopic application of tissue glue.<sup>1</sup> We would like to report a case in which the bronchoscopic application of cyanoacrylate monomer was successful in closing a fistula after fibrin glue<sup>2</sup> and reoperation had failed. A 71 year old man underwent right pneumonectomy for a

squamous cell carcinoma of the right lower lobe bronchus. On the 16th postoperative day he developed respiratory failure, which led to a cardiac arrest. He was resuscitated and a right intercostal chest tube was inserted. This revealed a massive air leak and drained purulent fluid. Fibreoptic bronchoscopy confirmed a bronchopleural fistula in the bronchial stump. On the 21st postoperative day fibrin glue was injected through a polyethylene catheter in the instrumentation channel of the bronchoscope and an endotracheal tube was positioned in the left main bronchus to avoid inflation of the right bronchial stump. After application of the glue the air leak ceased for 10 days but then recurred. On the 38th day he developed massive bleeding from the right pulmonary artery. This was treated by reoperation with resuture of the pulmonary artery and the bronchial stump which was reinforced with a pectoralis major muscle flap. Six days later bronchoscopy revealed recurrence of the fistula. We therefore tried to close the fistula by bronchoscopic application of cyanoacrylate monomer, with the patient holding his breath for 10 seconds. As soon as the tissue glue was applied the air leak ceased, and the patient was able to establish spontaneous respiration through an endotracheal tube. Eight months later the patient has shown no recurrence of the fistula.

This case demonstrates that the bronchoscopic application of cyanoacrylate monomer may be successful in closing a fistula in some patients. The glue works by plugging the hole and thereafter producing permanent closure by an inflammatory or granulomatous response to the glue.<sup>1</sup> The self sterilising property of cyanoacrylate monomer<sup>3</sup> may also have been important in the closure of the fistula in our patient. We believe that this method offers a safe and effective alternative in the management of post-pneumonectomy bronchopleural fistula in critically ill patients.

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- 1 Roksvaag H, Skalleberg L, Nordberg C, *et al*. Endoscopic closure of bronchial fistula. *Thorax* 1983;38:696–7.
- 2 Türk R, Weidringer JW, Hartel W, *et al*. Closure of lung leaks by fibrin gluing. Experimental investigations and clinical experience. *Thorac Cardiovasc Surg* 1983;31:185–6.
- 3 Dutton J, Yates PO. An experimental study of the effects of plastic adhesive, methyl 2-cyanoacrylate monomer (M2C-1) in various tissues. *J Neurosurg* 1966;24:876–82.