

## Endoscopy assisted microthoracotomy

In this issue Donnelly and his coworkers<sup>1</sup> (p 490) report their initial experience with therapeutic thoracoscopy. This is an exciting and important development in thoracic surgery. They are to be applauded on the efforts they are making in this area, and we all hope to benefit from their pioneering work. They and others have used videoscopic directed thoracoscopy to undertake lung biopsy, the closure of air leaks, the treatment of emphysema, pleurodesis and pleurectomy, the excision of peripheral pulmonary tumours, resection of leiomyoma and even carcinoma of the oesophagus, and oesophageal myotomy for achalasia. This development is fuelled by surgical audit and the desire to reduce hospital stay, and by the new found competition of the "open market." It is further encouraged by our patients, keen to have the latest technology and the smallest incision, and by the instrument companies, who see the lucrative results of expansion in this area and market domination.

Donnelly *et al* are right in sounding a note of caution, however. This technique is not one that should encourage non-thoracic surgeons into undertaking thoracic operations. In almost 20% of their cases the thoracoscopic procedure had to be abandoned, for one reason or another, and "conversion" to conventional thoractomy performed.

In this stage of development it is natural to explore what is *technically possible*, but we must also, as responsible advisers to our patients, have consideration for what is *technically desirable*. We should not lose sight of the end point of our surgery. In some circumstances a few days off the hospital stay and a smaller incision may be valid considerations, but in others these are minor issues.

We are often forced to consider surgery in patients with poor lung function, and videoscopic surgery is appealing in these circumstances. It has yet to be proved whether the smaller incisions possible with this method offset the disadvantages inherent in the technique. Can the patient with poor lung function withstand the increased morbidity that must attend the learning curve, single lung ventilation during the operation, and the longer anaesthesia—which often runs into several hours?

If videoscopic lung biopsy specimens are *representative* and *adequate* in size, and if the endoscopic staplers provide secure closure in patients with chronic fibrosing lung conditions, we should all move to this approach; but this is for our physicians to judge. If patients with severe

emphysema and persistent pneumothorax leave hospital alive with their lung fully expanded, then thoracoscopic surgery is fully justified. The justification for the surgical treatment of recurrent pneumothorax in young adults, however, is the virtual guarantee of lifetime security from recurrence. In this respect the length of incision should be a secondary consideration, and the one patient of Donnelly's who suffered a recurrence within one week is disturbing.

When resecting pulmonary metastases or lung cancer we aim for cure. With careful palpation of the lung, not possible through a thoracoscope, at pulmonary metastasectomy we have found additional deposits in almost one third of our series.<sup>2</sup> These deposits were missed on computed tomograms and cure is to be expected only if all disease is removed. We have come to realise that careful intra-operative staging is important in evaluating lung cancer, and routine dissection of mediastinal nodes is increasingly recognised as an aid to decision making at operation. The most careful preoperative staging, using computed tomography and mediastinal exploration, is accurate in less than half of all cases.<sup>3</sup> This is true even for the small, peripheral tumours accessible to thoracoscopic resection. This is the group in which we have most chance of cure—but not if resection is incomplete, or if affected nodes are not resected. Full nodal dissection and evaluation is not possible at thoracoscopy. We have done our patients a disservice if they leave hospital earlier, with smaller scars and their primary tumour resected, but with the chance of cure missed.

All who are concerned in the development of videoscopic surgery have a responsibility to remember these surgical end points, and to ensure that this new era of surgical endeavour provides benefits for our patients without detracting from the rationale of surgical treatment.

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- 1 Donnelly RJ, Page RD, Cowen ME. Endoscope assisted microthoracotomy: initial experience. *Thorax* 1992;47:490-3.
- 2 Venn GE, Sarin S, Goldstraw P. Survival following pulmonary metastasectomy. *Eur J Cardiothorac Surg* 1989;3:105-9.
- 3 Fernando HC, Goldstraw P. The accuracy of clinical evaluative intrathoracic staging in lung cancer as assessed by postsurgical pathologic staging. *Cancer* 1990;65:2503-6.