Reply

To the Editor:

We are indebted to Dr Jaretzki and colleagues for their comments and suggestions concerning our report. In addition to pointing out a definite shortcoming of that study, ie, that preoperative pulmonary function status was not defined, they criticize our protocol for the preoperative preparation of patients and underline the high incidence of respiratory complications. Further, they express doubts as to whether improving perioperative management might reduce the incidence of such complications.

During the decade corresponding to the study period, the recording of respiratory variables immediately before operation was obligatory according to the preoperative management protocol adopted by our institution. This screening was performed even on patients undergoing operation with the trachea open. Only the stratification by forced expiratory volume in 1 second (FEV_1) is mentioned here. Respiratory insufficiency was ascertained in 52 (20%) of 266 patients with an FEV_1 greater than 60%, in 13 (32%) of 41 patients with an FEV_1 higher than 40%, and in 6 (35%) of 17 patients with an FEV_1 lower than 40%.

Like others, we are aware of the widely known close correlation between preoperative status and postoperative complications rate; also, we acknowledge the importance of having patients optimum condition for surgical intervention [1]. This, however, can be achieved by a variety of strategies and methods that are undoubtedly dependent on financing. In Hungary, plasmapheresis was introduced for the management of myasthenia gravis as early as 5 years after its first publicized use in the literature [2]. High costs and meagerness of resources have precluded extensive use of this procedure for many years. Pretreatment with intravenously administered immunoglobulin g before thymectomy has been omitted for similar reasons. A recent review of the literature [3] showed no recent decline in the importance of immunosuppression. Nevertheless, this treatment is no substitute for plasmapheresis; rather, these two therapeutic modalities supplement each other. The truth of this statement is illustrated also by the following: "The patients should be as free of symptoms as possible at the time of surgery, especially free of signs and symptoms of oropharyngeal and respiratory weakness, using plasmapheresis and immunosuppression when necessary" [4].

Our clinical routines and approach to the surgical treatment of myasthenia gravis have changed substantially compared with those reflected in the retrospective analysis of the decade-long period covered by our study. Indications, preoperative preparation, and perioperative management have all been improved. Shortage of space prevents us from discussing here the changes that have resulted in a reduction in the rate of respiratory complications from 22% to 6%, the rate for the 171 patients undergoing extended transsternal thymectomy for myasthenia gravis performed by us since 1996.

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Late Recurrence After Resection of Stage I Lung Adenocarcinoma

To the Editor:

In 1999, Lenner and coworkers [1] reported cases with late recurrence after resection of stage I lung cancer. Late recurrences in early-stage lung cancer have been rarely observed more than 10 years after complete resection [1, 2]. The following report is of a stage I lung cancer patient with late recurrence 12 years after complete resection.

In September 1989 a 53-year-old woman was admitted for a small nodular lesion in the right lower lobe incidentally noted on a screening chest x-ray film. She was totally asymptomatic with an unremarkable physical examination. She had no remarkable medical history and had never smoked. Chest radiography and computed tomography (CT) scan showed a 2-cm nodule in S^6. Bronchoscopic biopsy revealed a well-differentiated papillary adenocarcinoma. No distant metastases were detected. Right lower lobectomy and lymph node dissection were performed, with a pathologic stage of T1N0M0. Careful review of serial chest radiographs spanning 12 years revealed no lesions believed to be recurrence. In February 2002, however, elevated serum CEA (31.9 ng/mL) was found incidentally on mass screening. On chest CT scan multiple small nodular opacities up to 1 cm in both lungs were discovered. Mediastinal lymph nodes were not enlarged. Workup included CT scan of the abdomen, bone scintigram, brain magnetic resonance imaging, endoscopy, barium enema, gynecologic examination, gallium scintigram, examination of thyroid and breast, and other blood tests, the findings of which were normal. The patient underwent a thoracoscopic lung biopsy in May 2002. The histologic appearance of the small nodular opacities were similar to that of the original lung adenocarcinoma. No treatment was offered, and the patient remained in stable condition for an additional 2 months.

A generalization accepted in the treatment of cancer assumes that a cure is present if there is freedom from disease for 5 years. This concept may apply to the majority of cases of lung cancer but rare cases do recur after many years of disease-free survival. Therefore recurrence of lung adenocarcinoma 12 years after complete resection is almost unique. This observation suggests either a long period of dormancy of residual lung adenocarcinoma cells prior to reinitiation of proliferative activity or the presence of a more slowly growing population of residual cells. It is interesting that in both patients reported by Lenner and colleagues as well as in the present case histologic type was well-differentiated adenocarcinoma and that the first site of late recurrence was lung [1]. Metastases in sites other than lung were not found in these 3 patients. Clues to the mechanism of late recurrence may exist in this clinocopathologic information. Whatever mechanism is involved, it is clear that complete

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resection does not always mean cure [3]. Lung adenocarcinoma represents a life-long threat to some patients and requires constant vigilance by medical practitioners.

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A Favorable Way to Close the Bronchus in Pneumonectomy

To the Editor:

Algar and colleagues [1] published a very interesting and valuable study about the predictors of early bronchopleural fistula after pneumonectomy.

The authors reviewed the results of pneumonectomy operations, which included more than 200 cases over 11 years. They evaluated several pre-, intra-, and postoperative risk factors for early bronchopleural fistulas (BPF) using univariate and multivariate analysis. Preoperative risk factors including chronic obstructive pulmonary disease, hyperglycemia, hypoalbuminemia, and preoperative steroid therapy have statistically significant correlations with the development of BPF.

We think that there are important intraoperative factors that also have great influence. Some, such as bronchial stump length and coverage of the bronchial stump, were shown to be independent predictors of BPF by multivariate analysis.

Other independent predictors such as mechanical ventilation, previous chronic obstructive pulmonary disease and side of the resection are also very important, but we cannot really influence them [2].

As pointed out and reported by Péterffy and Calabrese [3] in 1979, the principle for placing the bronchial suture line is the following. The stapler or manual sutures should be applied to the bronchus to achieve as short a stump as possible with the suture line parallel to the nearest remaining bronchus (Fig. 1). Thus, we can minimize the mucus accumulation in the bronchial stump and decrease the risk of the potential infection, which leads to unsatisfactory healing of the bronchus [3].

It was also shown by their model study that with mechanical suturing a more regular suture line is achieved with less resultant deformation of the bronchial tissue, which leads to a better circulation in the edge of the bronchial stump [3]. According to these findings and our experience, we recommend mechanical sutures under optimal circumstances.

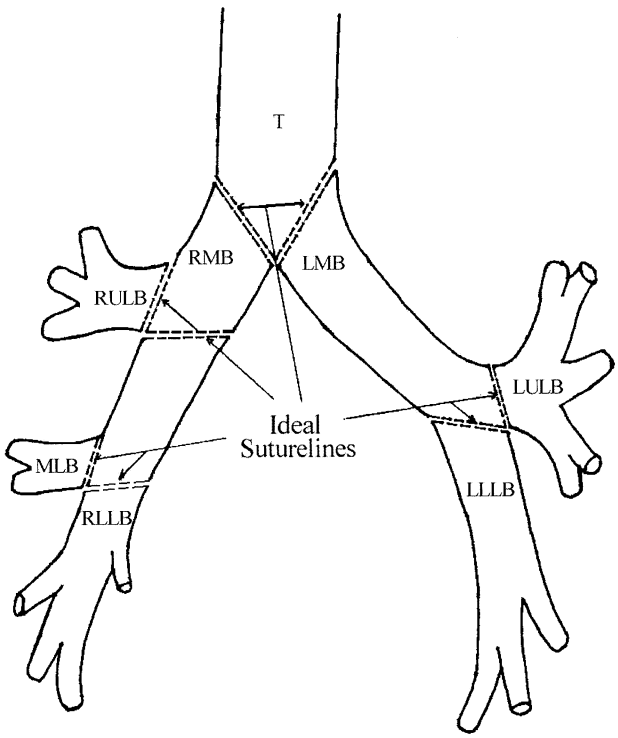

Fig 1. Diagrammatic view of the ideal suture line in different kinds of lung resections (pneumonectomy and lobectomy). (LLLB = *left lower lobe bronchus;* LMB = *left main bronchus;* LULB = *left upper lobe bronchus;* MLB = *right middle lobe bronchus;* RLLB = *right lower lobe bronchus;* RMB = *right main bronchus;* RULB = *right upper lobe bronchus;* T = *trachea.*)

Even if a nearly optimal bronchial stump is achieved, it is advisable to cover it with well vascularized autologous tissue, especially on the right side, as demonstrated by Algar and colleagues [1] and as reported by Anderson and associates [4].

In conclusion, bronchopleural fistula is a terrifying complication with decreasing, although still high mortality rates. Therefore, attention must be directed to minimizing known risk factors.

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