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.

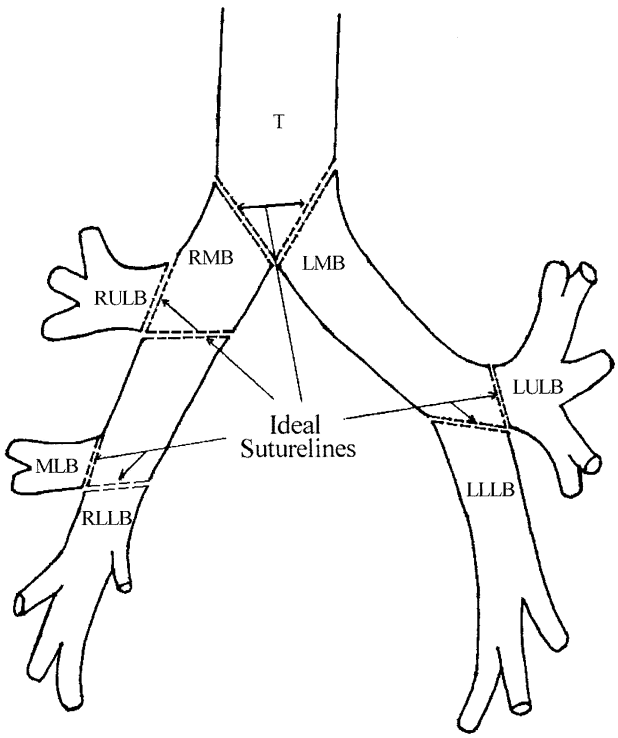

Fig 1. Diagrammatic view of the ideal suture line in different kinds of lung resections (pneumonectomy and lobectomy). (LLLB = *left lower lobe bronchus;* LMB = *left main bronchus;* LULB = *left upper lobe bronchus;* MLB = *right middle lobe bronchus;* RLLB = *right lower lobe bronchus;* RMB = *right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