method, is reported to be associated with some fatal cases. There is certainly a personal learning curve. Are there volunteers for the fatal outcome?

In video-assisted thoracic surgery, as in laparoscopy, the three main justifications for the technique are (1) decreased pain (2) shortened hospitalization and (3) diminished costs. The first point is correct when video-assisted thoracic surgery is compared with formal thoracotomy. Diagnostic procedures like mediastinoscopy and parasternal mediastinotomy are not very painful, and this is also true for limited axillary thoracotomy used for pleurabrasion.

Length of hospitalization in minor thoracic surgery is related to the length of drainage, which is not necessarily shortened in video-assisted thoracic surgery. The question of cost-effectiveness is debatable and a matter of geography. It depends on how much special equipment is used. Whereas endoscopic staplers cost about $600 per video-assisted thoracic surgery bleb resection, for example, the cost of hospitalization in Israel is $250 (though I must admit we are charged less than our colleagues in the United States for endoscopic staplers). On the other hand, video-assisted thoracic surgery has inherent disadvantages. The need for lung collapse requires a more complicated anesthesia. Thoracoscopic procedures require longer anesthetic and operating periods, which may increase the morbidity slightly and certainly add to the cost. Despite this argumentation, I agree that lung biopsy and pleural inspection are probably the best indications for video-assisted thoracic surgery, and hence, the interest for pulmonologists.

Being, or not being, enthusiastic about video-assisted thoracic surgery, it is still a type of surgery done under general anesthesia, requiring double lumen endotracheal tube with full surgical equipment in the operating theater. Intraoperative complications usually require immediate open thoracotomy. Yet pulmonologists are vividly willing to perform it. I have not heard of nonsurgeons involved with laparoscopic surgery, although it may also occasionally be diagnostic. The reasoning that pulmonologists should do video-assisted thoracic surgery because it is another diagnostic tool is bizarre. Are we to understand that therapeutic surgery is the domain of surgeons, and diagnostic surgery is to be done by less qualified physicians?

In Israel, where 95 percent of medicine is socialized, not one pulmonologist performs diagnostic video-assisted thoracic surgery. The initiative of the financial benefit does not exist in most cases, and our colleagues are happy to trust us with thoracoscopy as we trust them with fiberoptic bronchoscopy. I would dare state that much of the discussion published in Chest is but a mere rationalization of nonmedical issues.

Alon Yellin, M.D., F.G.C.P.,
Department of Thoracic Surgery,
The Chaim Sheba Medical Center, Israel

Endobronchial Tuberculosis
Report of 102 Cases

To the Editor:

We read with great interest the article by Lee et al., which appeared in the October 1992 issue of Chest. Over the past 3 years, a total of 102 patients with endobronchial tuberculosis (21.6 percent) out of 472 subjects who had undergone a flexible bronchoscopic examination were found at our hospital. There were 65 men and 37 women; the median age was 45 years (range 15 to 75 years). Hemoptysis and barking cough with sputa were present in 40.2 percent. Other complaints included chest pain, generalized weakness, dyspnea, and fever. Prebronchoscopic sputum sample was positive for acid-fast bacilli (AFB) in only nine cases. Thirty-five patients (34.3 percent) showed no abnormality on chest x-ray films.

Diffuse mucosal congestion edema is the most common finding in 36.2 percent. Other bronchoscopic findings included hypertrophy with luminal narrowing, erosion and ulceration, cicatricial stenosis, and granuloma in 29.4, 15.7. 14.7, and 3.9 percent of the cases. Three types of specimen were obtained by fiberoptic bronchoscopy: brushing, washing, and biopsies. All specimens were examined microscopically after staining by the Ziehl-Neelsen method after concentration when necessary. Transbronchial biopsies were stained with hematoxylin and eosin and by the Ziehl-Neelsen method. Biopsies were considered positive of caseating granulomas or AFB (or both) were present. Of these, 76 were positive by brushing only, 6 by washing, 6 by biopsies, 7 by both brushing and washing, and 5 by both brushing and biopsies. Therefore, brushing was particularly useful. The positive rate achieved 96 percent, probably because it is possible to position the brush under fluoroscopic guidance to sample the lesions directly. Washing gave a lower yield, and this may be a result of using small volumes of lavage fluid (10-20 ml normal saline solution) to minimize the risk of seeking tubercle bacilli in other parts of the lung. In no cases did the bronchoscopic examination lead to a worsening of the symptoms.

In conclusion, the intensive use of fiberoptic bronchoscopy will improve the diagnostic rate in patients with negative sputum smears and in whom endobronchial tuberculosis is suspected, and the detective rate would be increased when the various methods of obtaining specimen at bronchoscopy were carried out.

Shen-Yuan Wang, M.D., and Xin-Shan Zhang, M.D.,
Chen-Guang Worker’s Hospital,
Tsuyi Guang, Sichuan, China

REFERENCES

To the Editor:

We appreciate Dr. Wang’s interesting comments regarding our article on the useful means of “brushing” through the fiberoptic bronchoscopy to detect acid-fast bacilli (AFB) among the patients with endobronchial tuberculosis. In his Chinese investigation, brushing stains surprisingly yielded a high positive rate reaching 86 percent not with further evaluation by a brushing specimen culture but with available fluoroscopic guidance as suggested. Although a culture for AFB takes a long time, the radiation hazard should be cautiously kept in mind. Obviously, the possibility of a normal roentgenographic picture even after careful reading would be consensual for the symptomatic patients. In this regard, age and sex differences are epidemiologically interesting for clinical attention. Of course, innovative developments of molecular biology such as polymerase chain reaction or in situ hybridization may be promising for the rapid identification of AFB from the specimens of brushing or biopsy undertaken by fiberoptic bronchoscopy. We would like to emphasize also the importance of bronchoscopy in a therapeutic trial of curettage of the pseudomembrane for relieving atelectasis caused by endobronchial tuberculosis.