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 inherited 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.

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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, cicatrificial 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, 5 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.

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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 reaction1 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.
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Migration Medicine

The Challenge of Tuberculosis

To the Editor:

The recent phenomenon of population movement from developing areas with high tuberculosis (TB) prevalence to industrialized countries of Western Europe and North America has elicited a new component to TB epidemiology. These host countries that have had their TB control programs compromised by the problem of HIV coinfection now have a new feature to deal with. Although some studies suggest that detected TB cases among immigrants does not represent a real threat to local population, it is not true for immigrants themselves, considering the precarious socioeconomic conditions in which the majority of them live.

With the aim of evaluating the clinical and epidemiologic profile of TB in migrant populations, a retrospective study of all TB cases in this group admitted to a sanatorium in Lombardy, Italy, was done. Between January 1988 and February 1993, 269 patients were evaluated (11 percent of total patients admitted in this period), 91 percent men (246/269), mean age of 30 y (SD 7.49). The mean staying time from arrival in Italy was 30 months. Provenience areas were distributed as follows: East Europe 3 percent, South America 7 percent, Asia 11 percent, Africa 79 percent, with the latter subdivided in 5 percent East Africa, 31 percent North Africa, and 43 percent West Africa. A history of prior TB diagnosis was referred by 22 percent (55/250). Data on previous treatment with antituberculous drugs and anterior bacille Calmette-Guérin vaccination were not considered reliable. The HIV serology (Elisa and Western Blot) performed in 76 patients was positive in 16 percent. Tuberculin skin test (5 tuberculin unit, purified protein derivative by Mantoux test) was positive (induration 10 mm) in 67 percent (46/72) of investigated cases, all of them HIV negative. Pulmonary involvement was present in 77 percent of patients, lymphonodal tuberculosis being the most frequent presentation among the extrapulmonary forms (57 percent, 55/61). Bacteriologic diagnosis was possible in 52 percent by smear examination and in 51 percent by culture, with identification of Mycobacterium tuberculosis. Among the antiobiotics performed (129), resistance to at least one drug was present in 28 percent of cases, with the following distribution: 78 percent toisoniazid, 50 percent rifampin, 42 percent streptomycin, and 22 percent ethambutol. Multidrug resistance was detected in two patients. Resistance to rifampin was present in one HIV-positive patient.

Our findings support the need for a new approach to the problem of TB among immigrants. Apart from ethnic and economic prejudices, this population is at great risk of reactivation of previous TB infection in the first years after migration and associated with a high rate of drug resistance and possible transmission within their own group. Therefore, special preventive and therapeutic measures for these particular groups are urgently required.

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Raised Pleural Adenosine Deaminase Does it Mean Tuberculosis?

To the Editor:

We read with interest, the article by Valdés et al who conclude that raised pleural adenosine deaminase (PADA) and interferon (IFN) are both useful for early diagnosis of tuberculous pleural effusions (note that determining PADA is much less expensive). Since its initial description by Piras et al,2 raised PADA has been assumed as a great/useful diagnostic tool for tuberculous pleurisy. But some of the works from the continents conclude that PADA has poor diagnostic value in tubercular pleural effusion.3,4 The methods of adenosine deaminase (ADA) activity estimation are either colorimetry or spectrophotometry, following the enzyme-substrate reaction. It may be one of the reasons why the cut off points for significant ADA activity has been described variously as that of 25 U/L,2 30 U/L,5 45 U/L,6 47 U/L,1 50 U/L7 Besides the ambiguity of significant PADA level, raised PADA has also been reported in pleural effusions due to rheumatoid arthritis, lymphoma, lung cancer, and mesothelioma, and it has been aptly quoted in a recent editorial.8 Besides the above conditions, increased PADA activity has been recorded in effusions associated with spontaneous pneunothorax and also parapneumonic effusions. All the above facts point to the fact that raised PADA is unlikely to be a useful diagnostic aid (definitely not confirmatory) for tuberculous effusion; however, sufficiently raised PADA may be an aid to differential diagnosis and should be taken into cognizance along with other clinical and laboratory parameters.

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