losis and to other antimicrobial agents. Fortunately, M. kansasii responds well to "standard" antituberculosis regimens. The M. intracellulare-avium-scrofulaceum complex of organisms represents another matter. The spectrum of disease varies widely. In many, there is little or no progression or very slow changes occurring over years, often with minimal symptoms. Underlying pulmonary disease is frequently present and difficult to differentiate in terms of progression or symptoms from those of the mycobacterial disease. Disease may progress and cause extensive damage or death in other patients. The organisms are resistant to most of the antituberculosis drugs when tested in vitro, and disease responds poorly to "standard" regimens. Empirically chosen, multiple drug regimens of five and six antituberculosis drugs give better results but often are impracticable because of toxicity, unpredictable results, and the apparent benign circumstances of disease in some patients. Surgery is effective in selected patients. Unfortunately, all treatment modalities are in an uncertain state of understanding because of a lack of controlled treatment trials. It is clear that better and more specific drugs or methods are needed to treat disease. This can come about only with cooperative efforts since the number of patients and experience in any one institution is limited.

As the incidence of disease with M. tuberculosis continues to diminish in the United States and the clinical awareness of disease caused by other mycobacteria increases, it is apparent that the major problems and areas of greatest concern in mycobacterial disease will be with these other mycobacteria which now are so incompletely understood.

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REFERENCE


Selection of Diagnostic Procedures

In attempting to minimize the trauma and morbidity associated with diagnostic procedures and at the same time improve the sampling yield, pulmonary physicians and surgeons have proven to be a resourceful and inventive group. Currently, we have available to us an array of diagnostic techniques that allow examination of the pulmonary structure. Based on the bridge principle that a "peek is worth two finesses," directed sampling of airways' secretions and cells, pulmonary parenchymal juices and tissue, and mediastinal-pleural tissue is possible via bronchoscopic procedures, mediastinoscopic examination, minithoracotomy, and fluoroscopically guided needling. Regrettably, as yet the relative roles of these techniques in our diagnostic tool kit are unclear, although with each report of clinical experience, the merits of each procedure become further clarified.

We can view the "inside" of the lung with the fiberoptic bronchoscope, and it was inevitable that methods would be devised for viewing it from the "outside" as well. To this end, the thoracoscopic procedure has recently been resurrected as a means for directed sampling of the pleural fluid and cells, as well as pleural and lung biopsy. Examination of the pleural cavity was used initially in the 1920s and 30s, especially in Europe, in association with therapeutic pneumothorax and the attendant "pneumonolysis" that was often necessary. With improvements in general anesthetic and thoracic surgical techniques, as well as the development of effective social and chemotherapeutic control of tuberculosis, the procedure fell into disuse in North America. Evolution of the thoracoscopic procedure for directed sampling has continued in Europe, where interest seems to have persisted and large series have been reviewed.1,2 Recently, on this side of the Atlantic, there has been a reawakening of interest in the thoracoscopic procedure as a means of diagnosing pleural and pulmonary disease.3-7 The technique for "peeking" used has varied greatly, and diverse instruments have been employed, including bronchoscopes, trocar and telescopes, telescopes orbronchoscopes and chest tubes, fiberoptic bronchoscopes, mediastinoscopes, and even sigmoidoscopes (11). The only prerequisite is a reasonably free pleural space. Advantages cited include a high diagnostic yield (90+ percent), minimal morbidity, and reasonable simplicity. Minor limitations are that complete inspection of accessible pleural space is time-consuming; and, like all endoscopic procedures, considerable experience is required for the endoscopist to appreciate what is being viewed. Reported mortality has been negligible, although complications have included hemorrhage, persistent air leaks, empyema, and implantation of tumor.

Elsewhere in this issue of Chest (see page 126), Rodgers and co-workers report their experience with
27 thoracoscopically guided biopsies of the lung in 24 immunologically compromised children with pulmonary infiltrates. The diagnostic yield in this small series is impressive, although the attendant complications cannot be ignored. The "advantages" of doing this sort of procedure without control of the airway in patients under anesthesia with a respiratory depressant (fentanyl) who are in respiratory distress are questionable. Furthermore, although the benefits to be derived from a precise diagnosis must always be weighed against the risks imposed by the procedure, it would seem wise to anticipate serious hemorrhage in patients with abnormal clotting profiles (a common situation in the immunologically compromised). Transbronchial bite biopsy via the fiberoptic bronchoscope was probably possible in at least nine of the patients and aspiration biopsy in all. As these are simpler procedures and in combination probably yield essentially the same information, the question must be asked, "What does the thoracoscopic procedure offer that is unique?" Certainly, the reliability of aspiration biopsy in infective processes is high, and transbronchial bite biopsy and brushings provide histologic and cytologic specimens that are comparable in quality to those obtained by the thoracoscopic procedure. These observations are not intended to decry the use of thoracoscopic examination, but only to raise a question as to its ultimate role in our diagnostic toolkit. The greatest advantage offered by the technique is that good specimens can apparently be obtained from selected, directly visualized abnormal areas of pulmonary surface.

Many centers now offer a full range of diagnostic techniques, and readers of Chest will look forward with interest to reports comparing yield, morbidity, and mortality among the various procedures. At the moment, it is my impression that aspiration biopsy and transbronchial bite biopsy with washings and brushings provide an answer in most cases of diffuse infiltrate in the immunologically compromised host. Small children pose a special problem, and it may be in this area, as well as in patients with specific pleural disease, that the thoracoscopic procedure will prove most useful. In the meanwhile, until the relative merits of all of these procedures can be assessed, it probably behooves chest physicians and surgeons to remain familiar with all techniques for sampling pulmonary tissue, so that the simplest and most direct one can be selected for a given clinical problem.

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Mitral Commissurotomy

A Perspective

In a report of importance not only to surgeons, Montoya and co-workers in this issue (see page 131) add their extensive experience to the growing body of literature in support of open mitral commissurotomy as the preferred surgical approach for mitral stenosis.

An interesting sidelight on this technical debate is that it will be self-limited, since closed commissurotomy is rarely taught now. Among other reasons, one cannot entrust to a trainee the responsibility for the blind opening thrust as readily as one can delegate and guide an open commissurotomy. Thus, in the next generation of surgeons, closed commissurotomy will be a rare skill.

The relevance of this report for all chest physicians lies not in its clarification of a technical issue, however, but in its implications regarding the timing of operation for symptomatic patients. Because successful surgery for mitral valvular disease was the first modem intracardiac operation, beginning with Bailey's1 report of closed commissurotomy in this very journal in 1949, most physicians who manage patients with mitral disease are all too aware of the mortality and morbidity that accompanied commissurotomy in its early years. Consequently, the common indications for commissurotomy have remained similar to those for mitral valvular replacement, ie, disabling symptoms (New York Heart Association's [NYHA] functional class 3) or repeated systemic emboli. Furthermore, as with the study by Montoya et al, most other surgical reports have focused attention on the technical conflict between...