pared with other procedures for refractory CH described in the literature and in view of published algorithms, TIPS is probably the first choice, when and where available. TIPS is the only procedure designed to ameliorate or reverse the pathophysiology causing ascites and CH. If TIPS is not available, refused by the patient, or is unsuccessful, the remaining procedures designed to divert and/or block movement of ascites into the pleural space are probably equivalent in efficacy. The significant problems of peritoneovenous and pleurovenous shunting may make VATS a more attractive alternative, but the choice among these remaining procedures depends on available equipment and technical expertise. Humans may continue to evolve a better mechanism of coupling the lung to the chest wall in order to avoid the unintended consequences of the pleural space. In the meantime, we will need to deal with our hydrothoraces and pneumothoraces as best we can.

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Dilemmas and Realities of Rapid Diagnostic Tests for Tuberculosis

Over a period of > 100 years, the only rapid test for presumptive diagnosis of tuberculosis (TB) was the smear examination of the patient’s specimen for acid-fast bacilli (AFB). Smear from a nonprocessed sputum specimen can be positive if the specimen contains > 100,000 AFB/mL, but the sensitivity of this method can be increased to detect 10,000 and even 1,000 AFB/mL, if the specimen is concentrated through appropriate processing and centrifugation, and the smear is examined by means of fluorescent microscopy. So far, culture isolation remains the final laboratory diagnosis of TB. Incorporation of the rapid broth-culture methods (for example, BACTEC-460 from Becton Dickinson [Diagnostic Instrument Systems; Sparks, MD]), used along with the solid media, into the laboratory
protocols expedited recovery of growth of Mycobacterium tuberculosis from most of the smear-positive specimens within 2 weeks, and from most of the smear-negative specimens within 3 weeks. Additional application of the rapid identification techniques, such as the AccuProbe test (Gen-Probe; San Diego, CA) or high-pressure liquid chromatography (with a fluorescent detector), provides precise and final diagnosis within an additional 24 to 48 h with the cultures grown in liquid medium.

There are obvious needs on this background for techniques that are more sensitive and more specific than the AFB smear technique, and methods more rapid than culture isolation for final laboratory diagnosis in all TB patients.

Introduction of the direct amplification method (DAT), such as AMPLICOR (Roche Molecular Systems; Branchburg, NJ), MTD (Gen-Probe), or Stand Displacement Amplification test (Becton Dickinson), fosters hope that this technique would provide an answer to the question of rapid and reliable diagnosis of TB. This modern technology became the subject of many publications, and has been even viewed by some authors as an alternative to the conventional method. Although these methods represented significant scientific advancement, the reality was rather disappointing. Many publications from different countries and often exaggerated claims by the industry have created a number of controversies and dilemmas. It became clear that DAT by any of the currently available techniques is no more sensitive than properly performed AFB smear examination, since DAT results were positive in only about 50% of the smear-negative cases consequently confirmed, with significant rates of false-positive results as well.

A workshop has been organized to address the usefulness of the amplification methods after 6 years of their broad implementation. This report emphasized the usefulness of DAT for differentiation between M tuberculosis and nontuberculous mycobacteria (NTM) in smear-positive specimens in areas with high prevalence of NTM, and that further development of amplification tests with higher sensitivity is highly desirable. Despite the overwhelming information on the limited advantages of DAT, the desire for rapid diagnosis and pressure from the industry lead to the continuing evaluation of the DAT methodology in many laboratories around the world. The article by Gallina et al (Italy), presented in this issue of the CHEST (see page 28) to evaluate the usefulness of the Amplified M tuberculosis Direct Test (AMTDT), is one of such studies. The authors concluded that the AMTDT had a limited sensitivity of 87% for culture-positive specimens, and it can only be useful when the results of AMTDT have been evaluated in conjunction with AFB smear examination, resulting in 89% sensitivity and 97% specificity. This and other conclusions by Gallina et al are not much different from those of previous reports. The importance of this study is that after evaluation of another cohort of patients in Italy, it stresses that any direct amplification test, at the current state of development, cannot be considered as an alternative to the conventional methods. Rather, it is an addition to the standard laboratory protocol, and implementation of such an expensive procedure should be considered only in laboratories that have already achieved the highest standards in performance of the conventional procedure. Implementation of DAT should also take into account the local epidemiologic situation, particularly the prevalence of NTM, and should be based on the cost-effective analysis.

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REFERENCE

Exertional Dyspnea in Congestive Heart Failure

Living Longer and Doing More?

The management of patients with advanced congestive heart failure has undergone a remarkable transformation in the last 20 years, and we have become accustomed to aggressive pharmacologic treatment with classes of drugs that would previously have been thought to be useless, irrational, or contraindicated. We administer and titrate vasodilators for afterload reduction, we prescribe β-adrenergic blockers and diuretics, and we have the satisfaction of seeing improved outcomes even in patients with very severe heart failure. Indeed, even our understanding of the potential mechanisms of how these drugs can improve survival has altered, changing from how the limited cardiac output can best be distributed to how the damaged myocardium can be protected, preserved, and, potentially, allowed to recover.

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