authors conclude that transesophageal echocardiography is not necessary in patients with mitral stenosis and atrial fibrillation if the study is being performed for the evaluation of left atrial stasis. While this is a worthy conclusion from the data presented, the clinician must use caution not to overextend these observations to include decisions concerning all patients with mitral stenosis, atrial fibrillation, or left atrial thrombus.

The population presented in this study by Vigna would probably not be representative of a population of patients with mitral stenosis in the United States, where patients with significant mitral stenosis, particularly those with atrial fibrillation and previous embolic events, would be anticoagulated. The lack of systemic anticoagulation in the present series apparently was due to the fact that many of these patients were referred from rural areas where the lack of facilities for anticoagulant test monitoring and patient compliance were poor. The risk of thrombus formation and embolic events associated with rheumatic mitral stenosis has been well documented, and has become an accepted part of the management of such patients.1 There are, however, several important issues raised by this study that deserve further discussion.

First of all, do all patients with mitral stenosis require transesophageal echocardiography? Transesophageal echocardiography provides a uniquely high-resolution image of the left atrium and mitral valve apparatus in the absence of acoustic impedance. Although it is difficult to recommend a procedure for all patients regardless of the abnormality, it would be difficult to avoid this examination indefinitely in this group of patients. Anticoagulant therapy is certainly not a benign form of treatment, and might be instituted more aggressively in patients at higher risk for embolic events, including those with evidence of left atrial thrombus or even spontaneous left atrial contrast.2 Since the presence of left atrial thrombus can be reliably demonstrated only by transesophageal echocardiography,2 the more aggressive therapy that these patients deserve can be documented only with this form of testing. Furthermore, a large percentage of patients have relative contraindications to anticoagulation. The therapeutic decision whether to use anticoagulants or antiplatelet agents, even in the presence of atrial fibrillation, may well be assisted by the demonstration of either of these abnormalities. For although most patients with atrial spontaneous contrast were in atrial fibrillation in the present study, not all patients with atrial fibrillation had left atrial spontaneous contrast. Identifying this relatively lower-risk group has important therapeutic implications. It is also interesting to note that four patients with left atrial spontaneous contrast and one patient with left atrial thrombus were in sinus rhythm. These numbers speak against the conventional wisdom that left atrial stasis and thrombus formation are exclusively the domain of atrial fibrillation. These individuals would probably represent a lower risk group clinically, and perhaps less aggressive antithrombotic therapy would have been used inappropriately, if not for a transesophageal echocardiographic examination.

Finally, in an age in which percutaneous balloon valvuloplasty has become an accepted part of our therapeutic armamentarium, the data presented in the present study speak for an even greater role of transesophageal echocardiography in the screening of all patients with mitral stenosis. As the authors discuss, transesophageal echocardiography provides important information on prevention of complications due to left atrial thrombus and on the morphology of the valve structure, as well as a highly accurate assessment of the degree of mitral insufficiency,4 greatly influencing the therapeutic options of valve repair or replacement.

The clinician must constantly weigh the possible benefits versus the risks, and these days the cost as well, when determining which tests or procedures would provide optimal management of a particular patient. Considering the minimal risk and the information to be gained, it would seem that the vast majority of patients with mitral stenosis should undergo this examination during the course of their disease.

Arthur J. Labovitz, M.D., F.C.C.P.
St. Louis

Professor of Medicine, St. Louis University University School of Medicine.
Reprint requests: Dr. Labovitz, Internal Medicine/Cardiology, 3555 Vista Avenue, St. Louis 63104

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A Catastrophe Is Brewing

Tuberculosis is back with a vengeance. Case numbers are increasing, and the threat of multidrug-resistant tuberculosis has emerged. How could this happen in our developed nation in modern times when
we know how to treat individuals with tuberculosis, when we know how to prevent the disease from developing in those infected, when we understand how drug resistance is acquired by the tubercle bacillus and how to prevent its emergence? Tuberculosis is back because we have ignored the lessons we learned years ago. Those lessons taught us that the only way to control tuberculosis was to ensure that those infected completed an effective course of therapy.

Our public health infrastructure has deteriorated. At a time when the services provided by the public health department have increased, dollars spent for our public health system have decreased. Primary health care for the poor is very important; however, this care is being delivered through our public health system at the expense of infection control. The first responsibility of public health should be to protect the public from communicable diseases. Other sectors of the health care system can and should assume some of the burden of caring for the poor. However, no organization other than the public health department is capable of protecting the public from communicable diseases. Unfortunately, a loss of focus in the original mission of our public health system has contributed to the reemergence of tuberculosis.

Throughout our history, catastrophe has been the force to change the focus of our public health efforts. Let’s not wait until a true catastrophe occurs before we redirect the efforts of our public health system. If we are to curb the new tuberculosis epidemic, we must first delineate what we want our public health system to do. We must prioritize the extensive list of needs and focus our efforts on those deemed most important for the public good.

In order for a tuberculosis control program to be effective, the program must identify and successfully treat cases of active tuberculosis and cases that need preventive therapy. The program must rapidly investigate cases of tuberculosis, trace contacts, and screen high-risk sites, such as prisons and nursing homes.

Several characteristics of a tuberculosis control program make it distinct from other clinical services provided through the public health departments. The mandate is to find each and every case of active or suspected tuberculosis, whether or not the affected individual desires medical care. This is very different from clinical services that are rendered when patients come to clinics seeking help with medical problems. To track each tuberculosis patient and ensure that medication is taken properly requires a great deal of directed effort that cannot realistically be expected from public health personnel also charged with delivering primary medical care.

The essential characteristics of a tuberculosis control program are as follows:

1. Tuberculosis treatment should be physically separated from other clinical services so that individuals seeking prenatal or primary health care are not exposed to tuberculosis in the clinic. A fast track for tuberculosis cases is needed if a separate clinic facility is not available.

2. An accurate and accessible database of cases and treatment schedules should be maintained at each local area to ensure follow-up and uninterrupted treatment.

3. Directly observed therapy programs must be established with trained personnel devoted exclusively to this task. Because of the deteriorating public health infrastructure, this care is available at only a limited number of public health sites. Most patients needing this service do not receive it; therefore, many are not completing chemotherapy.

4. Utilization of productivity measures unique for tuberculosis control is essential. Rates of sputum conversion and rates of completed, successful antituberculous therapy should be the program goals, rather than numbers of patient visits or interventions.

5. Tuberculosis outbreaks must be investigated quickly and thoroughly. Tuberculosis control personnel must be willing and able to go wherever their services are needed.

6. Continuity of patient care is a vital component of any successful directly observed therapy program. Trust must be built between patient and care-giver if therapy is to be successfully completed.

7. Specially trained personnel need to be dedicated solely to the tuberculosis control effort. These experts should not be expected to provide other medical services. Only when nurses, physicians, and staff focus their efforts on tuberculosis control can the public be assured that patients are completing a course of antituberculous therapy and creative solutions to local problems in tuberculosis control can be devised.

It is argued that our public health departments cannot afford to have a program with trained personnel dedicated solely to tuberculosis control. It is said that having personnel performing multiple tasks is more cost-effective. However, these arguments lose credence when one considers the costs of treating one case of drug-susceptible tuberculosis compared with treating one case of multidrug-resistant tuberculosis. Drug-resistant strains are developing and will always develop without a well-focused tuberculosis program directed by experts who understand how drug resistance develops and who can prevent it with essential techniques such as supervised chemotherapy. The consequences of missing a single case of tuberculosis, particularly multidrug-resistant disease, are devastating. Each missed case is a potential epidemic, the effects of which may not be realized for decades. Particularly because our society is transient, an epi-
demic anywhere in the country could have disastrous consequences throughout the United States. Cutting back on prevention and early treatment is false economy.

Any state or large city that has more than 50 cases of tuberculosis or a case rate greater than 3 per 100,000 should institute a tuberculosis control program with the features outlined above. The strategy of focusing the efforts of a group of trained individuals on tuberculosis control is cost-effective in the long run. It is also the only way to avert this looming public health catastrophe.

Nancy Dunlap, M.D., Ph.D., F.C.C.P.; and William C. Bailey, M.D., F.C.C.P.
Birmingham, Alabama

Dr. Dunlap is Assistant Professor of Medicine, Division of Pulmonary and Critical Care Medicine, University of Alabama at Birmingham and Staff Physician, VA Medical Center. Dr. Bailey is Professor of Medicine, Division of Pulmonary and Critical Care Medicine, University of Alabama at Birmingham; Associate Chief of Staff for Education, VA Medical Center.
Reprint requests: Dr. Dunlap, University of Alabama at Birmingham, 246 OHB, 619 South 18th Street, Birmingham, AL 35233-6505