EDITORIAL COMMENT

Infective Endocarditis: How Well Are We Managing Our Patients?*

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Infective endocarditis remains a major cause of morbidity and mortality in the U.S., with an estimated number of 10–15,000 new cases being diagnosed each year (1). Although the number of cases of infective endocarditis occurring as a result of rheumatic disease is diminishing, this reduction in cases has been replaced by an increased incidence of endocarditis among intravenous drug users and older people (2). Of late, the ability to appropriately diagnose infective endocarditis has been significantly improved through the development of specific diagnostic criteria that use clinical findings, pertinent laboratory data and either the transthoracic or transesophageal echocardiogram.

Guidelines for the prevention of bacterial endocarditis through both appropriate antimicrobial prophylaxis and other preventive measures including proper dental care, and so forth, have been developed by the American Heart Association and other organizations (3). Expert groups in Europe (4), including France, the source of an accompanying article in this issue of the Journal of the American College of Cardiology (5), have also published guidelines very similar in nature. Guidelines have also been developed to aid in the diagnosis of infective endocarditis and to assist in its management after the diagnosis has been made (6). These include guidelines for initial evaluation, antibiotic treatment, appropriate surgical intervention and follow up after completion of antibiotic treatment.

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Although, due to the complexity of the disease process itself, these guidelines may not be based on evidence from direct randomized clinical trials in every case (7), they do represent the standard as determined by acknowledged experts in the field. Despite the long existence of such guidelines, this article from France represents one of the first systematic studies designed to assess their use in routine clinical practice. Their discovery of a relative lack of compliance to even fairly straightforward components of the management guidelines is of concern. The fact that a significant number of patients with documented structural heart disease did not receive mandated antibiotic prophylaxis and then developed infective endocarditis raises questions as to the success of current antibiotic prophylaxis administration programs. Another particularly troubling finding was that 58% of patients with known valvular heart disease and fever who were ultimately found to have infective endocarditis did not receive appropriate blood cultures before the institution of antibiotic therapy. This somewhat careless management practice may also have significant implications in many other patient populations in which infectious processes other than endocarditis are manifested. The relative reluctance to proceed to surgical therapy for infective endocarditis when indicated is also a concern.

Because the data in this report are observational and retrospective, the exact effect of these management misadventures on the ultimate outcome of the patients cannot be determined. Inconclusive diagnosis due to institution of antibiotic therapy before blood cultures, inappropriate evaluation and treatment of potential portals of infectious entry and inappropriate use or delay of the use of surgical treatment certainly have the potential to worsen the outcome. It is also interesting to note that the quality of adherence to management guidelines seemed to be unrelated to the specialty of the managing physician. Cardiologists, internists and infectious disease specialists all seemed to be equally remiss. This emphasizes the general nature of the problem.

Although the information in this report relates directly only to a certain geographic region of France, these results do raise a question concerning the quality of the management of infective endocarditis occurring in the U.S. It is very possible that our standard of practice is not significantly superior to that reported from France. I believe the potential reasons for the lack of adherence to guidelines may include the following: 1) infrequent management of infective endocarditis by any one individual physician, 2) inadequate education regarding infective endocarditis during medical school and housestaff training, 3) inadequate availability or use of continuing medical education offerings regarding infective endocarditis after graduation, 4) too limited a distribution of national guidelines to potential treating physicians and 5) disagreement regarding the importance of strict adherence to the guidelines. The authors of the article propose a variety of suggestions to improve the management of infective endocarditis. These may include self-adhesive sticker reminder labeling of the charts belonging to patients who are at risk for infective endocarditis, use of preprinted order forms designed according to management guidelines and an overall enhancement in both the quantity and quality of educational offerings for the practicing physicians.

In the U.S. and other parts of the world, it seems expedient to proceed with studies designed to determine the extent of the
problem in “our own back yard.” Inasmuch as many of the guidelines’ basic principles are simple to perform appropriately and have a potentially tremendous effect on the outcome of our patients, this type of information gathering seems imperative. By determining whether we indeed have similar compliance problems to those described in this article, we might thereby be able to proceed to improve our own quality of the management of this very important and high-risk group of patients.

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REFERENCES


