Detection of a Subvalvular Vegetation in Endocarditis by Two-Dimensional Echocardiography

Therapeutic Implications

To the Editor:

This report demonstrates the presence of a large, highly mobile vegetation in the mitral valve substructure, detected by two-dimensional echocardiography, which led to consideration of prophylactic surgical excision in the absence of hemodynamic compromise.

CASE REPORT

A 48-year-old white man with known mitral stenosis was transferred for treatment of staphylococcal endocarditis. Physical examination revealed signs of multiple emboli to the skin, extremities and central nervous system and findings of non-critical mitral stenosis. M-mode echocardiography revealed mild-to-moderate mitral stenosis with increased echo density in the mitral substructure. A two-dimensional sector scan was obtained using a Toshiba phased array SSH-10A Sonolayergraph. Figure 1 is an apical long axis view of the left heart and shows a large vegetation in the chordo-papillary region of the mitral substructure with two rabbit ear-like protuberances on its cardiac apical border. In real time the vegetation appeared to be forcefully thrust to and fro by cardiac systole and diastole. The protuberances oscillated very rapidly during diastolic filling of the ventricle. A cardio-

FIGURE 1. Long axis apical view in diastole. LV = left ventricle; LA = left atrium; A = aorta; V = vegetation; the anterior mitral leaflet lies immediately above the small white "a."

thoracic surgical consultant felt that the patient’s clinical condition precluded consideration of surgical excision of the vegetation to prevent further emboli. He died 24 hours later despite standard antibiotic and supportive care.

DISCUSSION

Two-dimensional echocardiographic technique in this case enabled visualization of the vegetation as a large, highly mobile, intracardiac mass with portions of it rapidly oscillating in response to blood flow. Dimensional and motion characteristics are not as apparent without the multiple perspectives afforded by two-dimensional imaging as compared to M-mode techniques. Seen in this way, the size and mobility of the vegetation in this case raised the possibility of prophylactic surgical excision to prevent further embolization. This was despite the absence of hemodynamic compromise which is a more generally accepted indication for operative intervention in such cases.

Debridement of vegetations without valve replacement is a part of the surgical approach to treatment of endocarditis described by Parrott et al. At least two cases have been reported of debridement of tricuspid vegetations in patients with antibiotic resistance and pulmonary emboli which led to cure of the disease. Unfortunately, by the time our patient arrived at this hospital, he had had numerous emboli and was felt to be too poor a risk to make surgery a tenable approach. Additional prospective study will clarify the potential applicability of surgery in this regard.

Ira S. Cohen, M.D.,
Boston Veterans Administration Medical Center
and Tufts University School of Medicine,
Boston

Reprint requests: Dr. Cohen, Boston VA Hospital, 150 South Huntington, Boston 02130

REFERENCES


Mitral Stenosis and COPD

To the Editor:

In the recent article of Beeson et al in Chest 75:716-719, 1979, the authors’ position on mitral stenosis and associated chronic obstructive pulmonary disease is quite pessimistic. To illustrate that, please allow me, just as they did, to present one of our patients with such a problem.

CASE REPORT

Twenty-eight years ago, we reported the case of an 18-year-old girl suffering from mitral stenosis and severe pulmonary hypertension thought to be due to far advanced, irreversible changes in her pulmonary vasculature. Some of her attending physicians believed that probably she would not