Nonbacterial Thrombotic Endocarditis Associated With Systemic Lupus Erythematosus

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In this report we describe the case of a 34-year-old woman who had mitral valve nonbacterial vegetation and right atrial thrombus attached to the atrial septum.

The patient was admitted to Kobe General Hospital with a 1-month history of fever. She had no history of heart disease. Physical examination revealed bilateral leg edema and apical pan-systolic murmur (grade 3). Her heart rate was 90 beats/min (sinus rhythm) and blood pressure was 110/70 mmHg. Transthoracic and transesophageal echocardiography demonstrated attachment of a nonmobile soft vegetation to the posterior leaflet of the mitral valve (Fig. 1A) and severe mitral regurgitation due to mitral valve prolapse (Fig. 1B). The vegetation size was 10 mm. A highly mobile right atrial mass attached to the atrial septum, mimicking a myxoma, was also visible (Fig. 2). The size of mass was 14 x 15 mm. Her left ventricular (LV) end-diastolic dimension was 45 mm, LV end-systolic dimension was 25 mm, and LV ejection fraction was 68%. Left atrial dimension was 37 mm. Estimated right ventricular systolic pressure was 61 mmHg. The patient was investigated for infective endocarditis, however this work up was negative. The diagnoses of systemic lupus erythematosus (SLE), antiphospholipid antibodies syndrome, and nephrotic syndrome were con-

Fig 1A

Fig 1B

Fig. 1. Transesophageal echocardiogram demonstrating a vegetation attached to the postero-medial scallop of mitral valve (A) and eccentric mitral regurgitant jet (B). LA=left atrium, LV=left ventricle.

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Fig. 2. Transesophageal echocardiogram demonstrating a right atrial mass attached to the fossa ovalis of the atrial septum, mimicking a myxoma. LA=left atrium, RA=right atrium.

firmed by laboratory data.

Open-heart surgery was performed because of severe mitral regurgitation and concern about the risk of embolism. The right atrial mass attached to the fossa ovalis of the atrial septum was removed, and mitral valve plasty was then performed. The right atrial mass proved to be the thrombus and the mitral valve mass was the sterile vegetation by histological examination.

Valvular involvement in SLE is common, and valvular abnormalities have been shown by transesophageal echocardiography in more than 50% of the patients with SLE [1]. Valvular thickening is the most common echo finding, followed by vegetations and valvular regurgitation. Valvular diseases have been demonstrated to be a source of embolic cerebrovascular disease [2]. The antiphospholipid antibodies syndrome is a well-defined clinical and serological entity characterized by venous and arterial thrombosis. Clinically sig-

nificant valvular or intracardiac masses may be treated by high-dose anticoagulation with warfarin [3]. However, there are no long-term controlled studies of the effect of chronic anticoagulation and valve disease.

This case offers the opportunity to emphasize the difficulty of diagnostic differentiation of intracardiac masses using echocardiographic imaging.

Reference

1. Roldan CA, Shively BK, Crawford. An echocardiographic study of valvular disease associated with systemic lupus erythematosus. *N Engl J Med* 1996; 335: 1424-1430
2. Roldan CA, Gelgand EA, Qualls CR, Sibbitt WL Jr.. Valvular heart disease as a cause of cerebrovascular disease in patients with systemic lupus erythematosus. *Am J Cardiol* 2005; 95: 1441-1447.
3. Agirbasli MA, Hansen DE, Byrde BF. Resolution of vegetations with anticoagulation after myocardial infarction in primary antiphospholipid syndrome. *J Am Soc Echocardiogr* 1997; 10: 877-880