

Tissue culture positive prosthetic aortic valve *Brucella* endocarditis

Dear Editor,

Brucella endocarditis is a rare complication but is the main cause of death due to brucellosis.¹

A 50-year-old woman who was a housewife was admitted to cardiothoracic surgery department of our hospital with complaints of fever, sweating, fatigue, weight loss (ten kilos) during the two months. She also had chest pain, dyspnea and arthralgia for two weeks. She was performed an aortic valve replacement operation in 2002 with a diagnosis of aortic stenosis and dilatation in ascending aorta.

On physical examination she had a fever of 38.2° C (axillar), her blood pressure was 140/80 mmHg, heart rate 110/min and respiratory rate 24/min. Diastolic murmur (grade III/IV) was heard in the mitral area on cardiac auscultation.

Laboratory test showed anemia (9.6 mg/dl haemoglobin) and elevated erythrocyte sedimentation rate (56mm/hour). Posteroanterior chest X-ray showed cardiomegaly, and bilateral hilar enlargement.

Transthoracic echocardiography (ECHO) showed a dilated left ventricle with mildly reduced systolic function and 3rd-4th grade mitral regurgitation, left ventricular hypertrophy, metal prosthetic valve in aortic position and valvular regurgitation. Serial blood samples were taken for hemoculture and vancomycin, gentamicin and rifampin were initiated empirically.

Since her fever did not resolve on the 7th day of the treatment a diagnostic operation was planned but on the 10th day of treatment *Brucella melitensis* was grown from blood cultures. Rose Bengal test was found positive and Wright standard tube agglutination (STA) was positive with a titer of 1/640.

The antibiotic therapy was then shifted to doxycycline (200mg/day) and rifampin (600 mg/day) the fever and chills disappeared and her haemodynamic state stabilized on the 5th day. Emergency prosthetic valve replacement was performed. Surgical exploration and pathologic examination confirmed infective endocarditis and bacteriologic culture of prosthetic valve also yielded *B. melitensis*. On the follow-up she had no complaints and her ECHO was normal. Antibiotic therapy was continued for three months

after surgery. She had no relapse after 24 months of follow-up and her control standard agglutination test was positive in a titer of 1/80.

Brucella endocarditis is a rare but serious complication of brucellosis.² *Brucella* spp should be kept in mind in culture negative endocarditis. Whereas the aortic valve is the most frequently affected, prosthetic valve involvement is very rare.^{3,4} Culture positive *Brucella* endocarditis is very rare. In our case positive blood and cardiac tissue cultures, rose bengal positivity and STA 1/640 positivity confirms the diagnosis of *Brucella melitensis* endocarditis.

There are reports about successful treatment of prosthetic valve infective endocarditis with *Brucella* spp. using a combination of medical treatment and valve replacement.⁵ Our case also responded well to combined surgical and medical therapy.

Brucella spp endocarditis is a very serious and potentially lethal complication of brucellosis. After diagnosis of *Brucella* endocarditis of either native valve or prosthetic valve, antibiotic therapy must be started immediately and surgical intervention should be performed as soon as possible.

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