Brucella Myopericarditis

To the Editor,

Cardiac complications from brucellosis are unusual, occurring in 0%-2% of patients according to the large series published.[1] The most usual complication is endocarditis involving a healthy native valve, generally the aortic valve. One possible complication of endocarditis is myocardial or pericardial involvement, although its isolated presentation is exceptional. We present a patient with acute isolated myopericarditis which resolved favorably.

The patient was a 29-year-old veterinarian who was in routine contact with cattle. He had been asymptomatic until 5 days before admission for general malaise, night fever, and incessant non-oppressive retrosternal pain, which was not alleviated by changes in posture. The axillary temperature was 39°C and the blood pressure was 130/70 mm Hg. Cardiac and pulmonary auscultation and abdominal examination were all normal. Laboratory tests made on admission showed the following: creatine kinase 2476 U/L, creatine kinase MB fraction 163.6 U/L, troponin I 142 U/L, AST 201 U/L, ALT 334 U/L, GGT 120 U/L, and LDH 515 U/L. The rest of the biochemical tests were normal, as were the results of a blood test and coagulation tests. Chest x-ray was normal. The ECG showed a generalized rise of the J-point and high T waves and peaks in the precordial leads. Abdominal ultrasound was normal. Serological tests were negative for cytomegalovirus, enterovirus, mononucleosis, Q fever, *Toxoplasma*, and *Mycoplasma.* Tests for antinuclear antibodies, immunoglobulins, rheumatoid factor and the Mantoux test were also negative. Bengal rose and *Brucella* agglutinations were negative at the time of admission, becoming positive 48 hours later at a titer of 1/320. Blood cultures showed *Brucella melitensis* on the eighth day and the anti-*Brucella* Coombs test was positive at a titer of 1/320. Transthoracic echocardiography showed pericardial thickening with no effusion. The chambers, valves, and left ventricular function all appeared normal. Treatment was initiated with analgesics and nonsteroidal anti-inflammatory drugs. After the results of the cultures were known parenteral streptomycin (1 g/24 h) and doxycycline (100 mg/12 hours) were given. The patient remained afebrile and asymptomatic for four days, with no signs of heart failure or arrhythmias on serial ECG during the hospital stay. The creatine kinase fell progressively from the level on admission over the following three days (1320, 654, and 180 U/L), as did the levels of the other enzymes. Antibiotic therapy was maintained for 6 weeks. At the 3 month follow-up revision the patient remained asymptomatic, and the agglutination and Coombs tests were positive at a titer of 1/80.

Brucellosis is an anthropozoonosis with a very polymorphic, worldwide distribution. The most common species in Spain is *Brucella melitensis*. Cardiovascular involvement is very uncommon and usually presents as endocarditis,[2] often affecting a healthy aortic valve.[3] Isolated pericardial or myocardial involvement is exceptional,[4,5] even less so in association with brucellosis.[6] The cardiac damage may be due to the direct effect of the microorganism (demonstrated in pericardial fluid obtained by pericardiocentesis)[7] or to the local deposit of immunocomplexes. In the absence of pericardiocentesis, diagnosis is based on the symptoms, serological tests and blood cultures, as well as the exclusion of other possible causes. The low number of patients in this area of the world who have cardiac involvement from brucellosis is surprising, given that the disease is endemic. This lack of cardiac involvement may be related with some local factor which preserves the heart and with the early diagnosis of the infection. The prognosis for patients with brucellar myopericarditis is usually favorable, as it was for the patient presented in this report. Heart failure has occasionally been reported, with a favorable course.[8] Pericarditis may be almost asymptomatic or it may cause cardiac tamponade.[4,7] Although brucellar pericarditis is very unusual, it should always be considered in a country where brucellosis is endemic.

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