

Evolution from acute q Fever to endocarditis is associated with underlying valvulopathy and age and can be prevented by prolonged antibiotic treatment.

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Abstract

Background. The prevention of Q fever endocarditis through the use of systematic echocardiography and antibiotic prophylaxis in patients with acute Q fever and valvulopathy has never been validated in a cohort study.

Methods. From 2007 to 2012, all patients followed at the French National Referral Center for acute Q fever were included in a cohort study. The prevention of endocarditis included a systematic transthoracic echocardiography (TTE) and a 12-month course of doxycycline and hydroxychloroquine prophylaxis in patients with significant valvulopathy. Transesophageal echocardiography (TEE) was performed in patients with a negative TTE and a rapid rise of phase I immunoglobulin G titers.

Results. Seventy-two patients were included with a median follow-up time of 22 months. A valvulopathy was identified in 31 patients (43%), being previously unknown in 24 (33%) and diagnosed only upon TEE or a second TTE in 7 (10%). The major determinants associated with endocarditis were age (hazard ratio [HR], 1.07; 95% confidence interval [CI], 1.006-1.13; $P = .03$), aortic regurgitation (HR, 10.2; 95% CI, 3.2-32.2; $P < .001$), and mitral regurgitation (HR, 4.78; 95% CI, 1.4-16.0; $P = .01$). Antibiotic prophylaxis was highly effective (HR, 0.002; 95% CI, .00-.77; $P = .04$) for the 31 patients with valvulopathy.

Conclusions. Acute Q fever could be associated with an increased prevalence of valvulopathy. The evolution from acute Q fever to endocarditis is associated with age and valvulopathy and can be entirely prevented by antibiotic prophylaxis. In acute Q fever patients aged >40 years and/or with IgG anticardiolipin titers of >90 IgG phospholipid units, a transthoracic echocardiography is mandatory. Immediate action is recommended upon the rapid onset of endocarditis, as observed in some patients from our cohort (<15 days). Echocardiography should be repeated in the case of a rise in phase I IgG levels or high levels of IgG anticardiolipin antibodies. Although the name "chronic Q fever" suggests otherwise, rapid evolution (<1 month) was observed.