Q fever tricuspid valve endocarditis

J M Lupoglazoff, P Brouqui, S Magnier, U Hvass, A Casasoprana

Abstract
Q fever is a zoonosis caused by Coxiella burnetii. The most frequent clinical expression of the chronic form is a bacterial culture negative aortic or mitral endocarditis. A case of tricuspid valve endocarditis due to C burnetii is described, with a favourable outcome after treatment with doxycycline and hydroxychloroquine. (Arch Dis Child 1997;74:448–449)

Keywords: Q fever; tricuspid valve endocarditis; coxiella

Discussion
Q fever presents variably. The acute form is characterised by pneumonitis, granulomatous hepatitis, or isolated fever. Bacterial culture negative endocarditis is seen in the chronic form, and mainly involves damaged aortic or mitral valves. We could find no previous report of tricuspid valve endocarditis due to C burnetii. One possible explanation for our case is that the spray which gushed from the congenital coronarycardiac fistula might have injured the septal valve endothelium allowing C burnetii to engraft and cause endocarditis. The valves are usually severely damaged by C burnetii, and distal embolism in the central nervous system is a frequent initial clinical manifestation of Q fever endocarditis. Culture of removed valves can help isolate the infectious pathogen despite antibiotic treatment. Unfortunately, neither blood culture nor culture of the removed valve was attempted in our case. Nevertheless, C burnetii serology is very specific. In patients with endocarditis, a titre of 1:800, or greater, of IgG directed against phase I antigen has a positive predictive value of 98% and a sensitivity of 100%. Identification of C burnetii DNA in tissue by polymerase chain reaction also strongly supports a diagnosis of Q fever. C burnetii specific citrate synthase DNA sequence detection in the vegetation, when added to the serological data, confirmed the diagnosis.

Treatment of Q fever endocarditis is based on a prolonged regimen of antibiotics. C burnetii is an obligate intraleucocytic Gram negative organism, which explains the lack of efficacy of most antibiotics. The low pH of phagolysosomes inhibits the bactericidal effect of doxycycline, which is necessary to eradicate the organism, particularly in immunosuppressed patients. The addition of a lymosotrophic agent such as hydroxychloroquine, which raises the pH of vacuoles, restores the bactericidal activity of doxycycline. Preliminary results of treating Q fever endocarditis with the combination of doxycycline and hydroxychloroquine have been successful. While the recommended duration of treatment with doxycycline and quinolones is at least three years, with numerous relapses, a two year treatment with no relapse at prolonged follow up seems possible. Although cyclines are contraindicated in children, it remains the only effective available treatment. Q fever endocarditis is not a rare disease and is found world wide. In case of fever with negative blood culture, Q fever should be suspected and the prescription of the specific serology performed. Prolonged treatment with...
doxycycline combined with hydroxychloroquine is recommended.

Q fever tricuspid valve endocarditis

J M Lupoglazoff, P Brouqui, S Magnier, U Hvass and A Casasoprana

Arch Dis Child 1997 77: 448-449
doi: 10.1136/adc.77.5.448

Updated information and services can be found at:
http://adc.bmj.com/content/77/5/448

These include:

References
This article cites 6 articles, 4 of which you can access for free at:
http://adc.bmj.com/content/77/5/448#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections
Drugs: cardiovascular system (514)
Drugs: infectious diseases (965)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/