
Reprints or correspondence: Dr. Daniele Torchia, 6525 Villa La Jolla Dr. #K, La Jolla, CA 92037 (daniele.torchia@unifi.it).

Clinical Infectious Diseases 2009;48:1320–2 © 2009 by the Infectious Diseases Society of America. All rights reserved. 1058-4838/2009/4809-0032$15.00 DOI: 10.1086/597824

**Bartonella quintana** Coinfection in *Staphylococcus aureus* Endocarditis: Usefulness of Screening in High-Risk Patients?

To the Editor—A 43-year-old homeless man was admitted to a Parisian hospital in February 2008 with acute onset of fever, chills, and altered general status. No significant signs were found at initial examination. Usual blood test results were normal except for hyperleukocytosis (16,000 neutrophils/mm³) and an elevated C-reactive protein level (298 mg/L). Three blood cultures were obtained, and treatment with amoxicillin-clavulanate (3 g/day) was empirically started. On day 1, all blood cultures grew methicillin-susceptible *S. aureus*. Serologic test results for *Bartonella* species were negative, but Western blot with cross-absorption identified antibodies to *B. quintana* [1]. Because of these conflicting data, the presence of *S. aureus* and *B. quintana* DNA in the valve tissue was confirmed by specific PCR [2, 3]. Subsequent Warthin-Starry and Giemsa staining on vegetations revealed both small bacilli and clustered cocci (figure 1). The diagnosis of coinfective endocarditis due to *B. quintana* and methicillin-susceptible *S. aureus* was confirmed. A 6-week course of doxycycline (400 mg/day) was added to the previous antibiotherapy regimen to target *B. quintana*; the patient received oxacillin for 6 weeks and gentamicin for a total duration of 2 weeks (gentamicin acts effectively against both pathogens). The patient was lost to follow-up 3 months after surgery, with no clinical or echocardiographic evidence of relapse.

Acute superinfection by *S. aureus* of chronic *B. quintana* endocarditis is the most likely cause of illness for this patient. Dual-pathogen endocarditis is rare [4], and to our knowledge, this is the first case report of coinfective native valve endocarditis due to *S. aureus* plus *B. quintana*. *S. aureus* endocarditis accounts for 30%–40% of all infective endocarditis [5], whereas *B. quintana*, a fastidious gram-negative bacterium, has been increasingly reported in culture-negative endocarditis over the past decade because of the development of specific serological and molecular diagnostic tools [6]. *B. quintana* is transmitted by *Pediculus humanus var. corporis*, the human body louse. Homelessness and other conditions associated with pediculosis thus constitute the leading risk factors for *B. quintana* infection, which usually involves chronic bacteremia [6, 7]. However, the link between chronic bacteremia and endocarditis remains unclear, because most patients, including ours, do not have preexisting valvulopathy.

In polymicrobial specimens, sequences from broad-range eubacterial 16S ribosomal DNA PCR products may be mixed and unreadable. In our case, the fortuitous discovery of *B. quintana* by amplification and sequencing, in spite of the coexistence of *S. aureus* in the valvular tissue, was probably favored by the high ratio of *B. quintana* to *S. aureus*.

This case underlines the usefulness of a systematic search for *B. quintana* coinfection with use of specific diagnostic tools in homeless patients with endocarditis caused by fast-growing bacterial species, enabling the choice of appropriate antibiotic therapy and undoubtedly leading to improved outcomes.

**Acknowledgments**

We thank Nadine Richard and Patricia Lawson-Body for technical assistance.

**Potential conflicts of interest.** All authors: no conflicts.

**François Barbier,**1 Pierre-Edouard Fournier,4 Marie-Christine Dauga,2 Sébastien Gallien,2 Didier Raoult,1 Antoine Andremont,1 and Raymond Ruimy1

1Department of Bacteriology, EA3984, and Departments of 2Histology and 3Infectious Diseases, Bichat-Claude Bernard Hospital (Assistance Publique—Hôpitaux de Paris) and Paris-7 University, Paris, and 4CNRS-IRD UMR 6236, Centre for Rickettsial and Other Arthropod Borne Infectious Diseases, Faculté de Médecine, Marseille, France

**References**

4. Kaech C, Raoult D, Greub G. Incidental life-saving polymerase chain reaction in a case of

**Figure 1.** Warthin-Starry and Giemsa costaining on a valvular sample (vegetation) showing both small bacilli (*Bartonella quintana*; red arrows) and clustered cocci (*Staphylococcus aureus*; white arrows). Original magnification, ×100.

Reprints or correspondence: Dr. Raymond Ruimy, Hôpital Bichat-Claude Bernard, Laboratoire de Bactériologie, 46, Rue Henri-Huchard, 75018 Paris, France (raymond.ruimy@bch.ap-hop-paris.fr).

Clinical Infectious Diseases 2009; 48:1332–3
© 2009 by the Infectious Diseases Society of America. All rights reserved. 1058-4838/2009/4809-0033$15.00
DOI: 10.1086/597826