

# Bartonellosis diagnosis requires careful evaluation

## TO THE EDITOR

Human bartonellosis are emerging infectious diseases. These bacteria clinical spectrum is rapidly increasing as the diagnosis of this infection is considered by doctors and more sensitive laboratory tests are performed. They are potentially fatal, especially in immunocompromised patients.

Although there is a test with optimal sensitivity setting for diagnosis of human<sup>1</sup> or animal<sup>2</sup> bartonellosis, molecular techniques have been widely used alone or in association with liquid or solid medium isolation.<sup>2</sup> Nevertheless, false negative results are observed depending on the sensitivity of the technique (single round or nested PCR), serology antigen origin,<sup>3</sup> number of copies of *Bartonella* sp. on the specimen studied,<sup>1,4</sup> and specimen preservation (fresh tissue or paraffin),<sup>5</sup> among other factors.

Apparently, samples that are products of a pre-enrichment culture have a larger number of copies per nanogram of DNA to be studied. They allow more positive results, as exemplified by the work of Diniz *et al.* 2009.<sup>2</sup>

These are fastidious bacteria and their primo-isolation is difficult, even using the necessary conditions, such as media enriched with blood, atmosphere of 5% carbon dioxide, temperature between 35 and 37° C for most human pathogenic species, and environment saturated humidity.<sup>1</sup> The false-negative serology can, amongst other factors, be associated with differences between strains.<sup>3</sup> There are no Brazil-1 strain commercially available antigens. The agents may not always be identified by histology. They may be observed in clumps in angiomatous lesions and are rare in granulomatous reactions.<sup>4</sup>

Thus, the diagnosis of human bartonellosis should be considered for patients with classic manifestations of cat scratch disease, bacillary angiomatosis, or recurrent fever as occur in trench fever.<sup>7</sup> But it should be also considered for those with severe or recurrent anemia, cholestatic liver, serositis of unknown cause, lymphadenopathy, chronic uveitis, and granulomatous or angioproliferative reactions of undefined etiologies.<sup>1,5</sup>

However, negative results of serology, culture, histology, and molecular techniques should be evaluated carefully and, whenever possible, seek the combination of these diagnostic tests. For the authors, the molecular amplification associated with liquid or solid medium isolation should be prioritized.

[Braz J Infect Dis 2010;14(3):217]©Elsevier Editora Ltda.

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Submitted on: 10/30/2009  
Approved on: 12/01/2009

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