Letters to the Editor

The clinical challenge of chronic Q fever with isolated liver involvement

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Dear Editor,

Chronic Q fever is defined as an infection by Coxiella burnetii (C. burnetii) that lasts for six months or more (1). It occurs in 1-5% of individuals infected with this agent and develops over a period of months to years after the acute infection (2). Cases of hepatic involvement are rare (3).

We report the case of a 38-year-old male with persistent elevation of aminotransferases and gamma-glutamyltransferase, two to three times the upper normal limit, with an evolution of ten years. The standard tests for liver diseases were negative. Due to the diagnostic uncertainty a liver biopsy was performed. The analysis described the following relevant findings: expansion of some portal spaces by confluent epithelioid granulomas (Ziehl-Neelsen, PAS and PAS-D negative) (Fig. 1). Further studies addressed the potential causes of granulomatous liver disease. A positive reaction to the anti-C. burnetii antibody was observed, and the infection was subsequently confirmed by the polymerase chain reaction (PCR). The patient started on empirical treatment with doxycycline 200 mg/day and the subsequent liver tests were normal.

Chronic Q fever with only hepatic involvement is rare, and a high clinical suspicion and knowledge of the appropriate diagnostic methods and their limitations is required, particularly in the absence of symptoms. Patients with chronic Q fever are often ill for more than one year before a diagnosis is made (4). Serology is the most commonly used diagnostic tool. Indirect immunofluorescence is sensitive and specific, and it is the method of choice in most countries. In addition, a sample of whole blood can be tested by PCR to determine if a patient has Q fever. However, other causes of chronically abnormal liver tests should be excluded, especially when there is an epidemiological history of a possible exposure to C. burnetii, thus, reducing the probability of future complications.

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Fig. 1. Characteristic granuloma with a central lipid vacuole and a dense fibrin ring termed a “doughnut” granuloma. HE plus reticulin stain x 400. This feature is typical of Q fever.
References