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Coxiella burnetii seroprevalence in the rural part of Bolu, Turkey\*

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Abstract: Aim: This study was performed to determine the seroprevalence of Coxiella burnetii in the rural part of Bolu, a city located in the western part of the Black Sea region of Turkey. Materials and Methods: The study population was chosen by cluster sampling to represent the rural population of the city. Serum samples were collected from the 9 rural districts of Bolu. Blood samples were taken to the laboratory while stored at 4 °C in ice-cooled boxes. The sera were then stored at -20 °C until testing. The presence of IgG antibodies against C. burnetii phase-II antigens in the sera was determined using IFA. Results: The study included 293 cases and C. burnetii phase-II IgG was positive in 61 of the subjects (20.8%). The seroprevalence of C. burnetii was 23.8% (59/248) among the participants above 18 years of age and 4.4% (2/45) among those younger than 18 years of age (P < 0.01). There was a significant relationship between C. burnetii seropositivity and direct contact with the birth products of farm animals (P < 0.001); however, there was not a significant difference between genders. Conclusions: Although the seroprevalence rate was high, Q fever was underreported and unrecognized in rural Bolu. We conclude that Q fever must be considered in patients with a suitable clinical course in this region.

Key words: Coxiella burnetii, seroprevalence, Bolu, Turkey

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