

Letters to the Editor

Readers are encouraged to write letters to the editor concerning articles that have been published in Japanese Journal of Infectious Diseases.

Survey of Zoonoses in Extremadura, Spain

Dear Editor: In a previous issue of the Japanese Journal of Infectious Diseases, Asencio et al. carried out a study on the seroprevalence, and the risk factors associated with, 5 major zoonotic diseases namely brucellosis, echinococcosis, spotted fever, leishmaniasis, and toxoplasmosis, in the Spanish region of Extremadura (1). Despite their comprehensive study, and the limitations that the authors recognized in their paper, several further remarks should be taken into account.

In the introduction, authors stated that “the actual prevalence of these diseases and their association with recognized risk factors remain unknown”, but their results showed the epidemiological situation in Extremadura region from 2002–2003. So how far are those conclusions easily extrapolated to the current situation in the same study area? The readers might be interested to know the real human population involved in the study over whom the results may be extrapolated. Census for estimations was taken in 1991. In the material and methods, several aspects may create confusion to readers; first, how were questionnaires carried out? It seems that patients were selected in health centers, but there is no comment regarding who completed the questionnaires (presumably, primary care clinicians). Moreover, there is a lack of information on the number of health centers that participated, and the number of questions included in the questionnaires. For example, after the selection of patients, how were they questioned? Were phone calls, written forms, or alternative methods used?

Additionally, more details should be given on the laboratory assays that were carried out; the name and/or references of the commercial kits used should be provided in order to facilitate further experiments by other investigators.

The main remarks are related to the risk factors analyzed. Several of them have no apparent link with the disease, e.g., ingestion of homemade sausages is related with hydatidosis, but it has never been identified as a risk factor (2), because the parasite life cycle is not known to include direct infections in humans due to meat or meat product consumption. It has instead been confirmed that the main risk factor is the ingestion of poorly washed vegetables, as may occur with *Toxoplasma gondii*. For this latter zoonotic agent, ingestion of undercooked lamb meat, contact with cats, or gardening, have been shown to be the most common exposure-related factors in Europe (3).

Additional findings need clarification; readers might be confused on what exactly “independent risk factors” means, or the way in which they were chosen; what is highlighted in table 2 with asterisks should be clarified; the population criteria for rural or urban distribution, and the reasons for dividing patients among 8 health areas, with limited spatial surface, if livestock farming,

environmental conditions and culinary aspects might be similar, should be stated.

We strongly encourage that a similar survey should be carried out in order to update the current epidemiological situation in the Extremadura region of Spain. It is desirable that more accurate risks factors that are more specific for each disease should be taken into account. For example, the relationships between adequate washing of vegetables and fruits and *T. gondii* infection, implementation of the correct deworming plan for dogs and cats and *Echinococcus granulosus* infection, or education or socioeconomic status and *Brucella melitensis* and other zoonoses.

In conclusion, attention should be focused on the study of epidemiologically specific risk factors associated with each disease, and on obtaining up-to-date prevalence data.

Conflict of interest None to declare.

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In Reply: This letter is in reply to questions by Calero-Bernal and Delgado de las Cuevas.

Although we are aware that changes may have occurred in the epidemiology of the Spanish region studied, we believe that the current situation is not necessarily different, because only 12 years have elapsed. Furthermore, our data could serve as a reference to assess the actual changes in this time period (1). A total of 1,050,490 inhabitants were involved in the study, according to the National Statistical Institute (1,092,997 in 2015).

Patients were selected from health centers at the time of blood collection. An additional sample (10 mL in adults and 5 mL in children) was collected from those who had been sent for blood testing for any condition