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## Letter to the Editor

### Comment on: Epidemiologic, Clinical and Laboratory Findings of Patients with Brucellosis in Hamadan, West of Iran

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#### Dear Editor-in-Chief

In an interesting study recently published by your journal, Eini et al<sup>1</sup> addressed the epidemiological, clinical and laboratory findings among patients with brucellosis. They used hospital data in Hamadan. Accordingly, hospital admissions are selective and may lead to bias. Authors reported majority of patients (72.2%) were from rural areas in Hamadan City. This key finding has been supported by frequency of history of contact with infected animals, while, authors have cited the results of Haj Abdolbaghi et al.<sup>2</sup> with 15.67% and Haddadi et al<sup>3</sup> with 40.5% in contrast to their findings regarding proportion of patients from rural areas. But they have given their explanation as follows. "In Hamadan the percentage of population who live in rural areas is more than urban areas"<sup>1</sup>. Moreover, they have justified the above mentioned finding by citing a similar study<sup>4</sup> which included 245 patients with brucellosis who referred to Sina Hospital in Hamadan Province from January 2004 to December 2005.

It seems that better explanation is lack of geographical representativeness in case of application of hospital data. In another word, patients who were from rural areas have had a greater probability to admission to Farshchian Hospital in comparison to other patients with brucellosis from urban areas in Hamadan City. On the other hand, patients who live in urban areas of the city of Hamadan probably tend to visit private clinics rather than general hospital/referral hospitals.

In conclusion, the limitation of Eini et al's study regarding the generalizability of its own findings should be considered by interested readers and policy makers. Moreover, interested readers are advised to compare such probably biased results with a valid data source, although

the surveillance data of brucellosis in the city of Hamadan may not complete and representative of all cases of brucellosis. By the way, such data sources help readers and policy makers to interpret the above mentioned findings.

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#### Reply

The authors of the article would like to thank the reader for his constructive comments, and we would like to explain more regarding to why the prevalence of brucellosis in the rural patients was higher than the urban patients in this study. As we know, Hamadan is the capital city of Hamadan Province of Iran. At the 2011 census, the population of Hamadan Province was 1,758,268 which of 59.2% of them were living in urban

areas; however, the censuses of people who have lived in rural areas were more than 40% before 2011<sup>1</sup>.

In addition, the Department of Infectious Diseases in Farshchian (Sina) Hospital is the sole center of infectious diseases ward in the city of Hamadan and also in the province. Therefore, the most of patients with brucellosis who need to admit at the hospital referred to this hospital. Moreover, people who live in rural areas higher than people living in urban areas are in contact with infected animals and consumption of unpasteurized dairy products and also the rural patients do not access to physicians or laboratory facilities easily because of long distance of their villages from the city. Furthermore, sometimes delay in their diagnosis of the disease lead to severe or complicated brucellosis in these patients, so they may need to admit at the hospital for more evaluation and treatment than patients who referred from urban areas. Of course, in urban areas, more patients would like to go to private clinics because of easy access to these centers.

In addition, we should state among patients who live in rural areas, the risk of recurrent contact with infected animals and consumption of unpasteurized dairy products which leads to reinfection in these subjects is more than urban patients.

In the national guideline for brucellosis in 2009, Zeinali et al<sup>2</sup> reported that the rate of brucellosis in rural areas (80%) was more than urban areas (20%) in Iran; therefore, these results support our study which was done in Farshchian (Sina) Hospital in Hamadan.

Eventually, we agree that this is an important issue that requires further research in the entire population especially in areas with high prevalence of brucellosis like Hamadan.

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