

## **Letter to the Editor**

# **Nomadic Kala-azar in South of Iran**

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Visceral leishmaniasis (VL) is an infectious disease transmitted by sandflies and usually caused by *Leishmania infantum* in Iran (1). The clinical signs of VL in human include prolonged fever, hepatosplenomegaly, substantial weight loss, progressive anemia, and even death (2).

The endemic areas of Iran are Fars and Bushehr Provinces in South, the districts of Meshkinshahr and Moghan in Northwest and Qom Province in center of Iran (1, 3, 4). There were approximately 50 cases of VL per year from Fars Province. In these regions, children were more sensitive than adults (5) were. Dogs (*Canis familiaris*) that are used in livestock breeding in these tribes are principal reservoir hosts for Mediterranean type of visceral leishmaniasis (6). Based on reports from health centers of Fars Province, 1995-2005, there was an average of 68.3 newly infected individuals each year, which has increased in comparison to 1991 statistics. Moreover, the infection was predominantly observed in children aged less than 12 years old from Qashqaei and Khamseh tribes. In order to determine the VL prevalence in Qashqaei tribes, 321 serum samples from  $\leq 12$  year old children and 32 serum samples from Qashqaei tribe dogs were collected and tested by Direct Agglutination Test (DAT).

In this study, promastigote of *L. infantum* Lon 49 (Iranian Strain) used as antigen were prepared in School of Public Health in Tehran University of Medical Sciences. The cut off titer of

DAT for VL in humans was considered 1:3200 whereas this titer in dogs was 1:320 (3). Results showed the rate of seropositivity in children and dogs to be 1.86% and 6.25%, respectively.

The tribes' people live in tents and have more environmental exposure than others. The traditional nomadic tribes travel with their flocks each year from the summer highland quarters north of Shiraz to winter quarters [on lower (and warmer) lands near the Persian Gulf] of south of Shiraz.

The Qashqaei, a nomadic tribe living in Fars Province, have a Turkish ancestry. They are believed to have migrated into the area in the 16th century from Azerbaijan in Northwest of Iran, where is considered as an important endemic region for VL in Iran. However, adjacent to the Qashqaei, there are tribes of Khamseh federation, who speak Arabic and are said to have entered eastern Fars Province from the 13th century onwards (7).

It seems that tribes' dogs, which serve as a main reservoir for the disease, have historically played an important role in the transmission of VL from Northern to Southern, Iran.

However, further investigation is needed to clarify phylogenecity between the species of Fars Province with Northwestern parts of the country.

We suggest that for prevention of VL, Nomadic tribes must be settled in village homes instead of tent where they have more exposure to envi-

ronmental risk factors and less facilities. The surveillance of the disease in canine and human population can be monitored by clinical and serological approaches in health centers of the districts.

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