Seropervalence and risk factors of canine ehrlichiosis in urban and rural dogs in Ahvaz

Baharie Yazdi, M.[1]; Pourmahdi Borujeni, M.[2]; Mosallanejad, B.[3] and Gharibi, D.[4]

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Abstract

Canine monocytic ehrlichiosis is a tick borne and zoonotic disease caused by *Ehrlichia canis*. The disease has a variety of clinical signs in dogs. The aim of the present study was to determine the prevalence and risk factors of *Ehrlichia canis* in dogs by ELISA assay and blood smear examination. Blood samples were randomly collected from 184 urban and rural dogs in Ahvaz district. Of the 184 dogs that were studied, 30.98% (95 % CI: 24.28-37.68%) and zero percent were identified as positive on the ELISA and blood smear, respectively. Logistic regression showed that the odds of infection is 1.6 (95 % CI: 1.3-1.97%) between the age based on year and disease and 16.3% of fluctuation in infection was justified by age (P<0.001). The odds of infection in male dogs was 1.1 times than female (95% CI: 0.58-2.09) (P>0.05). The relative frequency of infection in pure breed and mixed breed were 11.69 and 44.86 percent, respectively. The odds of infection in mixed breed was 6.14 times than pure breed (95% CI: 2.78-13.58) and 17.9% fluctuation in infection was justified by breed (P<0.001). The odds of infection in rural dogs was 4.31 times than urban dogs (95% CI: 2.17-8.59) and 13.9% of fluctuation in infection was justified by location (P<0.001). The odds of infection in dogs with tick was 8.51 times than without tick (95% CI: 3.7-19.57) and 2.02% of fluctuation in infection was justified by contact with tick (P<0.001). This study confirmed that *E. canis* exists in dogs of Ahvaz district. Prevention and control measures should be considered by health authorities.

Key words: Epidemiology, Ehrlichiosis, Serology, Dog, Ahvaz

1- DVM Graduated from Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran
2- Associate Professor, Department of Food Hygiene, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran
3- Professor, Department of Clinical Sciences, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran
4- Associate Professor, Department of Pathobiology, Faculty of Veterinary Medicine, Shahid Chamran University of Ahvaz, Ahvaz, Iran
Corresponding Author: Pourmahdi Borujeni, M., E-mail: pourmahdim@scu.ac.ir

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