



P-6. COMPREHENSIVE NATIONAL SURVEY OF FELINE DIROFILARIASIS IN SPAIN

Montoya-Alonso, J.A.¹, García Rodríguez, S. N.¹, Carretón, E.^{1*}, Rodríguez Escolar, I.², Costa-Rodríguez, N.¹, Matos, J. I.¹, Morchón, R.^{1,2}

¹Internal Medicine, Faculty of Veterinary Medicine, Research Institute of Biomedical and Health Sciences (IUIBS), University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain, elena.carreton@ulpgc.es

²Zoonotic Infections and One Health GIR, Laboratory of Parasitology, Faculty of Pharmacy, University of Salamanca, Campus Miguel Unamuno, Salamanca, Spain

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Heartworm infection caused by *Dirofilaria immitis* is a well-known vector-borne disease in the canine population. Its distribution is cosmopolitan, with reports found in any part of the world where the disease has been investigated in any of its hosts. Spain is considered an endemic country and there are several studies in canine hosts but not in domestic cats. The objective was to analyze the exposure to *D. immitis* throughout Spain to complete the epidemiological map in the feline species. For this, 6,588 feline serum samples were analyzed for the presence of *D. immitis* antigens and antibodies against *D. immitis* and *Wolbachia*. The results were analyzed according to sex, age, breed, habitat, origin (owned or shelter cats), presence of clinical signs, use of preventive, location and climatology. The results showed a prevalence of 0.5% and a seroprevalence of 9.4%. The highest antibody seroprevalences were reported in the Canary Islands and the Balearic Islands (19.2 and 16%, respectively), as well as in the autonomous communities located on the Mediterranean coast (9.2–11.2%). Seropositive cats were found in both indoor and outdoor cats, and from 6 months of age. Furthermore, only 5.8% of cats received regular prophylactic treatment. The results show that feline dirofilariosis is widely distributed throughout the national territory and corroborate that, where infected dogs are present, there are cats exposed to the parasite. It is necessary to implement efficient awareness and prophylaxis measures to control the incidence and expansion of feline heartworm in Spain.

References

1. Morchón R, Carretón E, González-Miguel J, Mellado-Hernández. I. Heartworm disease (*Dirofilaria immitis*) and their vectors in Europe – new distribution trends. *Front Physiol.* 2012; 3:196.
2. Montoya-Alonso JA, Carretón E, Corbera JA, Juste MC, Mellado I, Morchón R, Simón F. Current prevalence of *Dirofilaria immitis* in dogs, cats and humans from the island of Gran Canaria, Spain. *Vet Parasitol.* 2011; 176:291–294.
3. Montoya-Alonso JA, Carretón E, García-Guasch L, Expósito J, Armario B, Morchón R, Simón F. First epidemiological report of feline heartworm infection in the Barcelona metropolitan area (Spain). *Parasit Vectors.* 2014; 7:506.
4. Montoya-Alonso JA, Carretón E, Morchón R, Silveira-Viera L, Falcón Y, Simón F. The impact of the climate on the epidemiology of *Dirofilaria immitis* in the pet population of the Canary Islands. *Vet Parasitol.* (2016) 216:66–71.
5. Montoya-Alonso JA, Morchón R, Falcón-Cordón Y, Falcón-Cordón S, Simón F, Carretón E. Prevalence of heartworm in dogs and cats of Madrid, Spain. *Parasit Vectors.* (2017) 10:354.
6. Villanueva-Saz S, Giner J, Verde M, Yzuel A, González A, Lacasta D, Marteles D, Fernández A. Prevalence of microfilariae, antigen and antibodies of feline dirofilariosis infection (*Dirofilaria immitis*) in the Zaragoza metropolitan area, Spain. *Vet Parasitol Reg Stud Reports.* (2021) 23:100541.

