

ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELLA SICILIA "A. MIRRI", PALERMO, ITALY

Evidence of canine leptospirosis in Kennels in Sicily, by PCR method

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SUMMARY

Stray dogs in kennels in western Sicily were monitored for zoonotic diseases presence; considering life conditions before their capture they are particularly exposed to the environment and so they can give good epidemiological information on disease prevalence. *Leptospira* pathogen specific PCR had been used to identify potential reservoirs of pathogenic serovars and provide a preliminary picture of the prevalence of the disease among stray dogs.

Key words: Leptospira PCR, stray dogs, kennels as observatories for zoonotic disease.

Leptospirosis is a worldwide disease caused by more than 200 antigenically different serovars in several serogroups belonging to the spirochete *Leptospira interrogans* (sensu lato).¹ In Sicily, Italy, data on the prevalence of the disease are mostly focused on cattle and swine.² A preliminary monitoring of stray dogs present in 4 kennels in two province of western Sicily (fig.) had been started.

64 just captured dogs were selected randomly. Evidence of pathogenic leptospire DNA was pursued by a PCR analysis targeting 16S rRNA gene as described.²

Samples from 5 out of 64 dogs under investigation yielded a positive PCR test result for *Leptospira spp.* (table) All positive subjects were young males and none of them had clinical evidence of leptospirosis. They all were housed in a kennel

whose hygienic conditions could be referred to as poor.

TABLE. PCR results on screened animals

No. of samples	Males	Females
	40	24
Positive	5	0
Negative	35	24

Crowding of animals in unsanitary quarters is associated with a high prevalence of infection since animal may acquire the disease through contact with urines from infected dogs or infected rodents.³ PCR testing is highly sensitive and specific for the diagnosis of leptospirosis,⁴ but our findings suggest so far an exposure to leptospire rather than a real disease status.

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Fig. Sicilian province (Palermo and Agrigento) in which 4 Kennels under observation are located.

Anyway a follow-up of the all animals is planned to have more information about clinical implications of positive PCR results.

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Evidencia de leptospirosis canina en las perreras de Sicilia según el método de RCP

RESUMEN

Se monitorearon los perros callejeros, ubicados en las perreras existentes en Sicilia, en busca de la presencia de enfermedades zoonóticas. Considerando las condiciones de vida antes de su captura, estos están particularmente expuestos al medio y, por lo tanto, pueden ofrecer una buena información epidemiológica acerca de la prevalencia de la enfermedad. La RCP específica para el patógeno de la *Leptospira* se utilizó para identificar los

posibles reservorios de serotipos patogénicos y proporcionar una panorámica preliminar de la prevalencia de la enfermedad entre los perros callejeros.

Palabras clave: *Leptospira*, RCP, perros callejeros, las perreras como observatorios para la enfermedad zoonótica.

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