



TEPHINET  **KUALA LUMPUR,
MALAYSIA 2008**
1 - 6 NOVEMBER

Global Scientific Conference

PP151

Surveys on Canine Leishmaniasis And Phlebotomine Sand Flies — Umbria, Italy, 2005–2006

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Background

In Italy, coastal areas and islands in the Tyrrhenian and Ionian seas have been endemic foci of canine leishmaniasis. Recently, new foci and the presence of sand fly vectors have been reported in northern regions. This study reports data on canine infection and sand fly captures in the Province of Perugia in central Italy.

Methods

Local canine registry offices were used to randomly select 100 dogs. Indirect fluorescent antibody testing was used to detect anti-*Leishmania* IgG antibodies, samples with clear-cut fluorescence when diluted at 1:80 were considered positive. A questionnaire was used to collect information regarding risk factors. Five sites were monitored for sand flies using standard blacklight traps, and specimens were collected weekly during the summer.

Results

Eight samples tested positive to anti-*Leishmania* antibodies (prevalence 8.0%, 95% CI: 3.8–15.6). None of the positive dogs had travelled outside Umbria in the last two years. Serological positivity was statistically associated with age and with the area of residence. A total of 5698 sand flies were collected and two species were identified, *Phlebotomus perfiliewi* and *Phlebotomus perniciosus*. The number of flies collected in areas with higher canine seropositivity was 25 times higher than in areas where seropositivity was low or absent.

Conclusions

The discovery of antibodies in dogs who had never left the region and the presence of two species of sand flies demonstrated to vectors in Italy for *Leishmania infantum* suggests local transmission is occurring. These findings may have implications for human disease since these same vectors may transmit disease to humans, suggesting the need for more intense animal, vector and human surveillance.

Keywords

canine leishmaniasis, central Italy, leishmaniasis vectors, seroepidemiological survey.

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