

TOXOPLASMA AND LEPTOSPIRA INFECTIONS IN WILD BOAR (*Sus scrofa L.*)

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Between November 1993 and January 1994 a total of 130 blood serum samples collected from wild boar of 8 hunting areas in south-western Northrhine-Westphalia, Germany, were tested for the presence of antibodies to *Toxoplasma gondii* (IgG and IgM) using the fluorescent antibody test as well as to *Leptospira* using the complementary fixation test (LCAN, LGRI, LICT, LSER). Antibodies against *Toxoplasma gondii* were found with titres ranging from <10 to 3560. 32 serum samples (25%) had IgG-titres of ≥ 80 and 5 samples (4%) had IgM-titres of ≥ 80 .

Only in one case (a several year old male) was there evidence of antibodies to *Leptospira* (LGRI, LICT) with titres of 1:64. Results did not vary according to age and sex. The health status of the wild boar did not seem reduced.

MATERIAL AND METHODS

Blood serum samples of 70 juveniles, 30 yearlings and 30 adult animals of both genders (gender ratio 1:1) from 8 different areas of origin were available for testing. a-TogG and a-TogM were tested for using indirect immunofluorescence. *Leptospira* antibodies were tested for with complementary binding reaction. The *Leptospira* antigens of *Leptospira canicola*, *L. grippothyphosa*, *L. serjoe* and *L. icterohaemorrhagica* were used.

RESULTS

In 16% of all samples no IgG-antibodies could be shown and in 60% there were no IgM-antibodies against *Toxoplasma gondii*. The distribution for IgG-antibodies was as follows: titre / N wild boar 10/22, 20/29, 40/26, 80/9, 160/6, 320/12, 640/2, 1280/2, 3560/1. 25% of the samples showed a titre of ≥ 80 . Positive IgM-titres were distributed as follows: 10/34, 20/9, 40/4, 80/3, 160/1 and 320/1. 7% of the sera were positive for IgM and negative for IgG (< 10). 34% of the sera were positive for both IgG and IgM. 50% of the samples reacted positive for IgG and negative for IgM. The remaining samples were negative (9%). In relation to age groups the percentage of IgG-positive samples decreases from juveniles (96%) to yearlings (77%) to adult animals (63%). Again with regard to age groups the percentage of IgM-positive samples increases from 30% for juveniles to 43% for yearlings to 60% for adult animals. These numbers are not statistically validated.

Antibodies against *Leptospira canicola*, *L. grippothyphosa*, *L. serjoe* and *L. icterohaemorrhagica* could only be shown in one older male. Titres were 1:32 for LCAN and LSER and 1:64 for LGRI and LICT. Furthermore, a titre of 1:8 for LGRI could be shown in one juvenile female from another area of origin.

DISCUSSION

Carefully planned screenings of game within the framework of a health monitoring are suitable for gaining an insight into natural reservoirs as well as temporal and spatial occurrence of diseases and for recognizing their importance for humans and animals. In 91% of the wild boar examined a latent or chronic infection with *Toxoplasma gondii* (IgG-antibodies) could be shown. An acute infection (IgM-antibodies) was present in 40%. There may be a relation between the antibody production and the pathogenicity of the parasite strain (OMATA et al. 1994). The high rate of infection clearly indicates that the danger of an infection by handling wild boar must not be underestimated. The incidence of *Leptospira* antibodies in wild boar can be considered small with regard to numbers cited in the literature.

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