Screening for leptospirosis in clinically suspected cases.

I. BEHAEGHEL[1], E . MEROC[1], P. HANSEN[2], S. ROELS[1], P. BUTAYE[1], E. GOOSSENS[1].

([1] CODA-CERVA, Groeselenberg 99, 1180 Brussels and [2] Laboratoires Collard, Bd de Froidmont 14, 4020 Liège)

Leptospirosis is a re-emerging zoonosis caused by a gram negative aerobe spirochete of the genus *Leptospira*. The pathogenic species can be classified into 24 serogroups and into over 240 serovars. Mainly rodents are asymptomatic carriers, who excrete *Leptospira* by urinating. Men and mammals can be infected by contact with urine or with urine contaminated water. Infected animals often present renal and/or hepatic failure, anemia and reproductive disorders. When not treated adequately, these spirochetes can survive up till 4 years in the kidneys and are shed intermittently in the urine.
In humans, the disease usually causes fever, headaches and rigidity and passes undiagnosed. In severe cases, kidney and liver failure occurs.

The goal of the study was to determine if *Leptospira* infections are underestimated in dogs and cats with abnormal blood values. Frequently, infected dogs and cats are treated with antibiotics without knowing the cause of the illness. In mild cases, the symptoms of leptospirosis will disappear but no preventive measures were taken to prevent reccurrence of shedding and the contamination of men, animals and environment.

The sera of 95 dogs and 44 cats, obtained from a private laboratory, with suspicion of abnormal hematological and biochemical blood values were screened retrospectively for leptospirosis, using the Micro Agglutination Test. We tested against a panel of 12 serovars, with threshold 1/100. Student t and Wilcoxon tests were used to compare biochemical parameters results in cases to that in controls.

22 dogs (23.2%) and 1 cat (2.3%) had positive results on the MAT-test. No significant differences ($p<0.05$) were found when comparing a selection of hematological and biochemical results of the leptospirosis positive cases with the control group. Although, a substantial increase of leucocytes, urea, creatinine, TGO and TGP was noticed in the positive group. The dominantly found serogroup was Australis.

In all these seropositive animals, leptospirosis had not been taken into consideration at the time of illness and no preventive measures were taken to prevent infection of environment and men. As the Belgian vaccines only protect dogs against two serogroups (Canicola and Icterohaemorrhagiae), leptospirosis should always be a part of the differential diagnosis when diagnosing animals with kidney and/or liver failure.

This research was funded by the Federal Public Service of Health, Food Chain Safety and Environment (contract RT 09/4 LEPTOCOMPAN).