Evolution of leptospirosis in Belgian dogs from 2002 to 2009.

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Leptospirosis is a world-wide zoonosis, caused by a gram-negative aerobe bacteria of the genus \textit{Leptospira}. The pathogenic species, \textit{L. interrogans} sensu lato, can be classified into 24 serogroups and into over 240 serovars. Because of the wide variety of clinical manifestations as kidney and liver failure, reproductive disorders, conjunctivitis, anemia, fever and flu-like symptoms, the diagnosis of leptospirosis is most probably underscored. Rodents are considered as the principal reservoirs. Transmission between animals and humans is through environmental contamination with urine of chronically infected subjects.

Belgian canine vaccines contain only antigens against the serovars \textit{L. Canicola} and \textit{L. Icterohaemorrhagiae}. However, there is no cross-reaction between the serovars of different serogroups. Therefore we analyzed 2195 sera originating from cases suspected of \textit{Leptospira} infections for antibodies against 22 serovars, covering 22 of the 24 serogroups, using the Microscopic Agglutination Test. Only the samples with at least 50\% agglutination at a serum dilution of 1/100 were defined as positive.

Of all sera, 13.62 \% reacted positive. The different serogroups found were Australis (38.4 \%), Grippotyphosa (18.6 \%), Pomona (9.8 \%), Icterohaemorrhagiae (6.8 \%), Javanica (5.3 \%), Autumnalis (4.8 \%), Pyogenes (4.0 \%), Ballum (3.0\%), Canicola (1.5 \%), Serjoe (1.3 \%), Cynopteri (1.3 \%), Manhao (1.3 \%), Tarassovi (0.8 \%), Celledoni (0.5 \%), Louisiana (0.5 \%), Mini (0.5 \%), Ranarum (0.5 \%), Shermani (0.3 \%), Hebdomanis (0.3 \%), Djasimani (0.3 \%), Bataviae (0.3 \%) and Panama (0.3 \%). An evolution of serogroups in time was seen. While in the first 4 years Grippotyphosa was the dominant serogroup, this shifted towards Australis between 2006 and 2009.

It can be concluded that in 1/10\textsuperscript{th} of the cases suspected of leptospirosis, the diagnosis is confirmed. As such vigilance is required when compatible symptoms are seen. A remarkable change in serovars is noted. This may urge for a change in the vaccine composition.

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