

CANINE PARVOVIRUS INFECTION IN FREE-RANGING CARNIVORES FROM GERMANY

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Abstract

Binn et al. (1970) first described a so-called minute virus of canids (MVC, CPV-1). This so far unknown virus was isolated from apparently healthy dogs. Years later Eugster and Nairn (1977) described a new virus that was pathogenic for dogs, causing haemorrhagic enteritis and myocarditis. In the last twenty years this original canine parvovirus (CPV-2) was detected in many countries in domestic and free-ranging carnivore species and underwent several mutations. Presently, it occurs in two new types (CPV-2a, CPV-2b).

To assess whether wild carnivores play a potential role in the epidemiology of CPV in domestic dogs in Germany, the seroprevalence against CPV in free-ranging carnivores (n=1.669) was determined. Our objective was to compare the prevalence of antibodies against CPV among free-ranging carnivores in selected urban (Berlin Ø 3.818 man/km², cities in Nordrhein Westfalen 1.242-2.376 man/km²) and selected silvatic areas (Mecklenburg-Vorpommern 41-49 man/km², Brandenburg Ø 51 man/km²). We assume that human population density is positively correlated with the density of domestic dogs (Frölich et al. 2000). Moreover, dogs were suspected to contaminate the habitat of free-ranging carnivores, and therefore, dog density was assumed to influence the seroprevalence of CPV antibodies in wild carnivores.

In sera from red foxes (*Vulpes vulpes*) (106 of 1593 [6.7%]), raccoon dogs (*Nyctereutes procyonides*) (2 of 37 [5.5%]) and stone martens (*Martens foina*) (4 of 13 [31%]) antibodies were detected by using haemagglutination inhibiting test. Antibodies against CPV were found in all four areas. Preliminary results indicate that the seroprevalence in foxes was not significantly higher in urban compared to silvatic areas suggesting an independent infection process among free-ranging foxes.

Furthermore, we tested 494 tissue samples (small intestine, spleen, mesenterial Inn.) for the presence of CPV nucleic acid by using polymerase chain reaction (PCR). However, until now no positive sample could be detected.

Zusammenfassung (??)

Résumé (??)

Key words: (??)

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