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Author(s)	ISHIBASHI, Kazuki
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EPIZOOTICS OF CANINE PARVOVIRUS INFECTION IN DOGS IN SAPPORO AND SEROTHERAPY FOR THE DISEASE

Kazuki ISHIBASHI

*Department of Epizootiology
Faculty of Veterinary Medicine
Hokkaido University, Sapporo 060, Japan*

In recent years canine parvovirus (CPV) infection has become an issue of great concern to veterinarians. In Sapporo, numerous epizootics of enteric infections in dogs have spread in areas where parvovirus infections were observed. The purpose of the present study is to investigate the occurrence of epizootic diarrhea by CPV and to evaluate the usefulness of serotherapy for CPV infection.

1) Epizootics of CPV in Sapporo: From October 1980 to October 1981, 60 dogs showing clinical signs of vomiting, diarrhea, depression and dehydration were suspected for CPV infection, and virus isolation was performed from these dogs. Virus was isolated from 32 dogs, mainly puppies (2-4 months of age) of small type dogs, and it was identified as CPV according to morphological, physicochemical, serological and pathological evaluations. The most affected dogs had hemagglutination inhibition (HI) antibody against CPV, and half of the dogs showed leukopenia. CPV was also isolated from clinically normal dogs raised with the affected dogs in the same house. HI antibodies to CPV were first recognized in serum which had been collected in 1979. In cases in which CPV infection occurred in only one colony, morbidity and mortality rates were 84% and 47% respectively.

2) Usefulness of serotherapy for CPV infection: To evaluate the usefulness of serotherapy for CPV infection, dogs inoculated experimentally with CPV or which showed clinical signs of CPV infection under field conditions were treated with intravenous injection of anti-CPV serum prepared in a dog. In the dogs experimentally inoculated with CPV, serum-injected animals had mild symptoms of the disease and recovered. Rapid increase in HI titer was observed, and the shedding of the virus ceased within a short period. Serum uninjected control dogs, however, showed severe clinical signs, and half of them died. In the field cases, most of the dogs recovered rapidly from the disease after the serum treatment. These results indicated the usefulness of serotherapy for CPV infection in dogs.