



Infectious disease profiles of pathogens in a shelter environment

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Canine distemper (CDV)

Disease name:	Canine distemper			
Agent:	<i>Morbillivirus</i> (family <i>Paramyxoviridae</i> ; enveloped RNA)			
Susceptible domestic species	Dogs, ferrets			
Zoonotic?	No (suspected links to multiple sclerosis have not been supported by research)			
Diagnostic aids:	IFA for viral antigen or inclusion bodies in cells from conjunctival scrape, urine sediment, buffy coat	PCR of nasal or ocular discharge	Serum IgM or rising serum IgG	CSF antibody detection
Test Sensitivity (false negatives)	Fair to poor in acute disease, lousy in subacute or chronic disease	Fair during acute respiratory phase of disease	Good	Good in acute encephalitic disease, otherwise poor
Test specificity (false positives)	Very good	Good – false positive possible 1-2 weeks after vaccine	Good except false positive may occur within 3 weeks of vaccination	Good – antibody ratio can rule out blood contamination from traumatic collection contamination from traumatic collection
Test comments:	Lymphopenia and thrombocytopenia are common acutely. There is no really satisfactory test for diagnosing distemper ante-mortem.			
Vaccine available?	Yes			
Vaccine efficacy:	Good. Vaccine provides rapid protection against infection; puppies exposed 4 hours after vaccination were protected in one study. Recombinant vaccine provides better protection in the face of maternal antibodies (puppies less than 16 weeks).			
Excreted in :	All body excretions (feces, urine, etc), but most abundant in respiratory secretions			
Mode of transmission:	Highly contagious. Aerosol, droplet, direct contact spread most common. Fomite transmission over short time/distance.			
Disinfection:	Routine disinfection is adequate. Susceptible to heat, drying and most common disinfectants			
Incubation:	Fever spike 3-6 days post-infection, clinical signs 1-4 weeks post-infection (longer incubation more common), CNS signs may appear up to 3 months later with or without preceding signs			
Post recovery shedding?	Up to 90 days, but usually < 60 days			
Carrier state?	No, but mild and inapparent infection common and important in propagation. Old dog encephalitis may represent recrudescence of latent disease, but dogs are not infectious in the interim.			