CANINE DISTEMPER

SYNONYMS: HARD PAD

SPECIES AFFECTED: CANIDS, MUSTELIDS, PROCYANIDS

Canine distemper is a disease of wild and domestic carnivores caused by a virus of the genus Morbillivirus. Canine distemper is an important disease of raccoons and may also affect red fox, coyote, grey fox, skunks, ferrets and mink. Other species may be affected but are not commonly found. Canine distemper does not affect cats. There is no evidence that canine distemper affects humans. The virus is easily transmitted between domestic and wild carnivores.

Distemper usually affects the respiratory system first and animals will show respiratory distress, coughing and sneezing. The eyes often have a watery or pus like discharge which may adhere the eye lids closed. There is often a watery discharge from the nose and some animals will have a watery diarrhea. Neurologic signs are the last to develop and include convulsions, tremors, chewing fits, loss of fear of humans, wandering about in daylight, listless, disorientation and occasionally aggression. If the animal survives long enough they may be emaciated, develop a rough hair coat and thickened pads on the paws – the origin of this disease being called “hard pad”. Secondary bacterial infections are common.

Animal to animal transmission of the virus via contact or secretions (oral, respiratory or ocular) is the most common route of infection. Large amounts of virus are found in nasal and ocular exudates. There is evidence of transmission occurring due to contaminated objects and some evidence of transplacental transmission. Virus has been found in urine and feces and may contaminate food or water. The virus is relatively unstable out of the host and is inactivated by heat, dehydration, 1% formalin or bleach.

Diagnosis is based on clinical signs and gross pathology, but the definitive diagnosis is dependent on serological, histological and PCR assays. One must exhibit caution when handling animals suspected of having distemper as many of the clinical signs are very similar to rabies.

Canine distemper may be a significant limiting factor of carnivore populations in an area in a given year or series of years. Mortality in epizootics may range from 20% to near 100% in susceptible populations. In Colorado, epizootics in raccoons along the Front Range are fairly common with cases of distemper seen in most years, primarily in the spring and summer months. Distemper has been found in raccoons as far west as the Silverthorne area.