

CANINE DISTEMPER VIRUS

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CANINE DISTEMPER VIRUS (CDV)



CLINICAL SIGNS



DIAGNOSIS



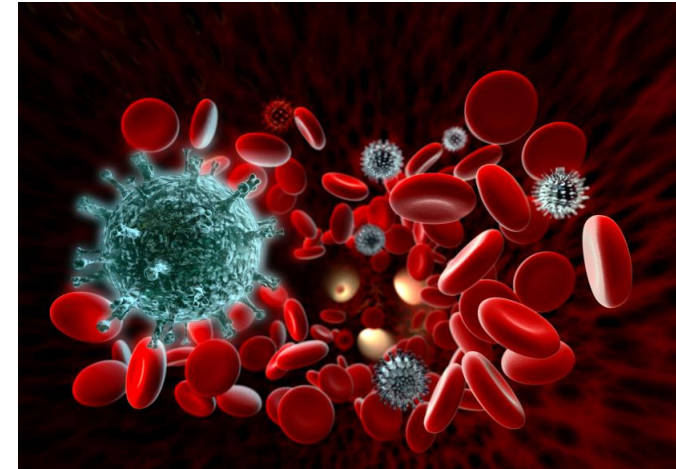
TREATMENT &
PREVENTION

KEY POINTS

- RNA virus of the Paramyxoviridae family and *Morbillivirus* genus
- Highly contagious
- Multi-systemic disease-
 - Respiratory tract, Skin, GI tract, Urinary tract, CNS
- Dogs are the principal reservoir host
- Coinfections of respiratory tract are common- *canine infectious respiratory disease complex*
- No treatment
- Preventable with vaccination

PATHOPHYSIOLOGY

- Prevalent in respiratory secretions
 - Most common spread through aerosol or droplets
 - Can shed viral particles in nearly all bodily fluids
- Within 24 hours of contact with respiratory tract epithelium, CDV multiples in tissue macrophages and is carried to local lymph nodes
- Virus proliferates throughout lymphoid organs
- Spreads by blood to other body systems
 - Epithelial and CNS tissues are typically infected day 8-9
- Can cause significant immunosuppression

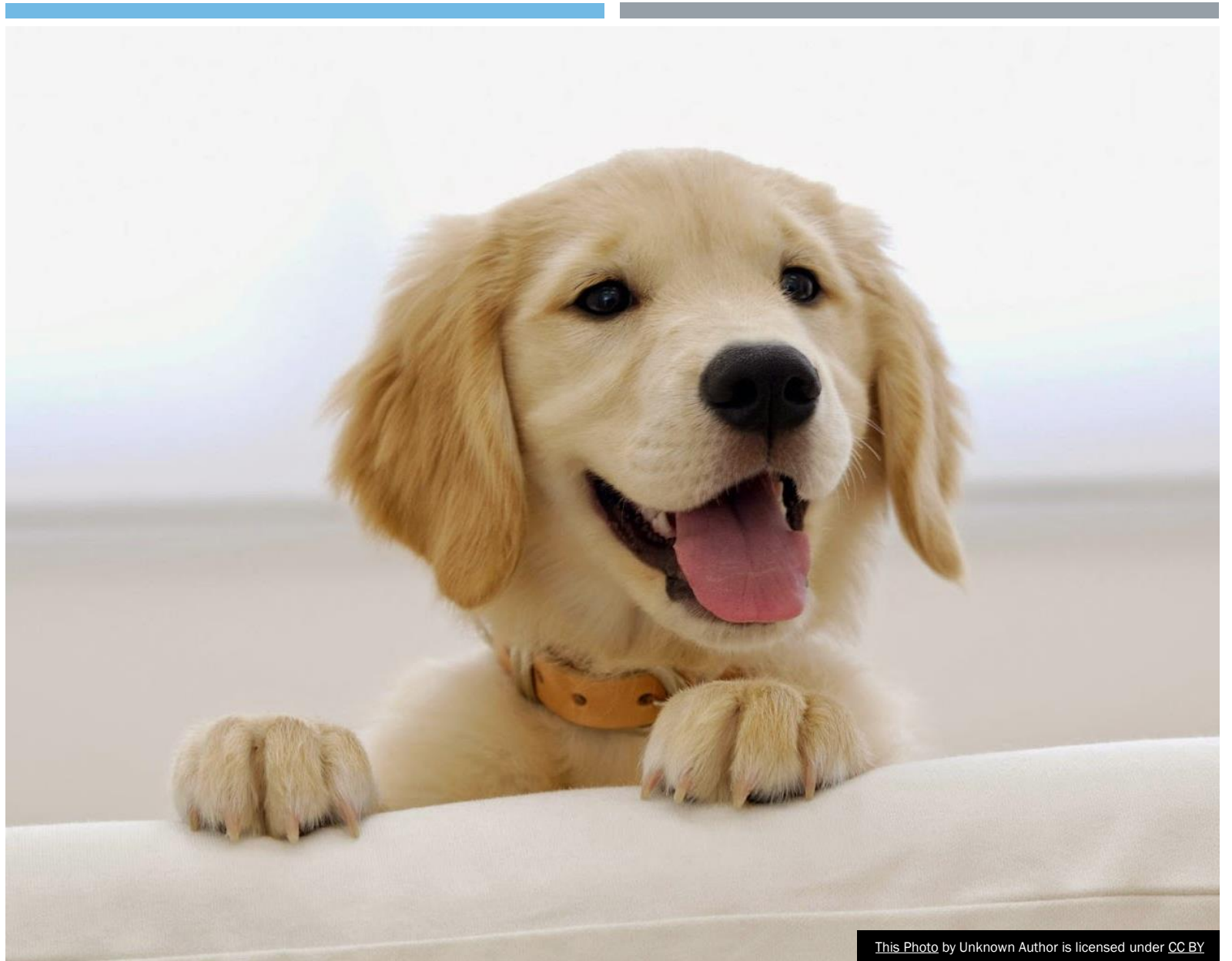


IMMUNE RESPONSE TO VIRUS

- Immune response determines extent of disease
- Effective immune response by day 14- no symptoms, virus is cleared
- Mild/intermediate immune responses- will develop infection of skin and show clinical signs
 - Virus can still eventually be cleared
 - May persist for extended periods in uvea, CNS, and footpads
- Dogs that fail to mount an immune response by days 9-14 tend to experience severe clinical signs and can die acutely

SIGNALMENT

- Young dogs
- Unvaccinated
- No sex or breed predisposition



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CLINICAL SIGNS- EARLY

- Lethargy, anorexia, fever, dehydration
- Oculonasal discharge/ coughing
- Vomiting/diarrhea may also occur
- Conjunctivitis/uveitis
- Pustular dermatitis



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CLINICAL SIGNS- LATER

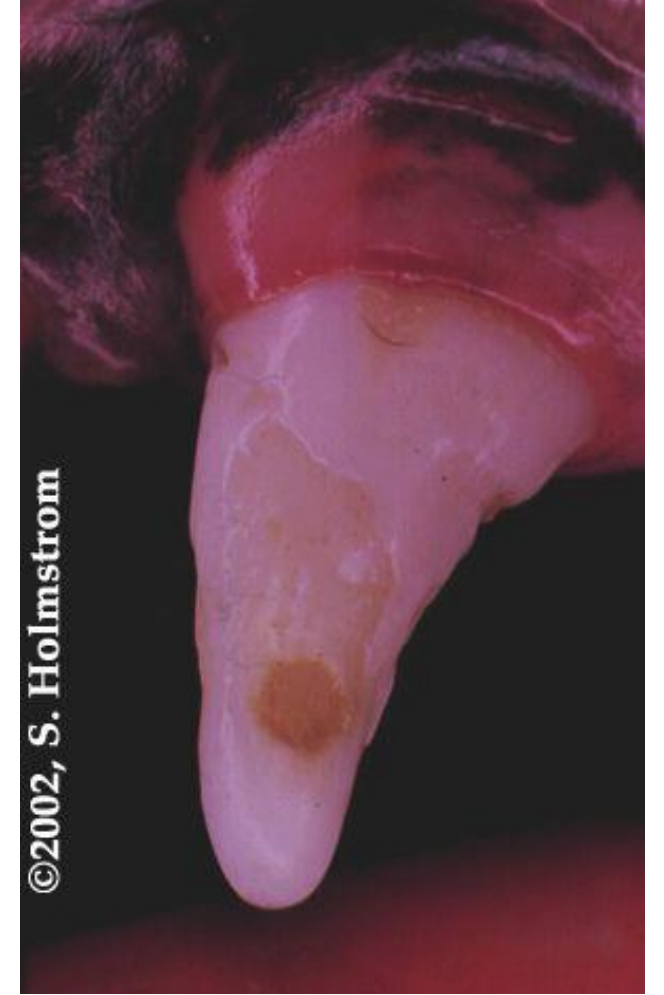
- Neurologic signs- **Myoclonus**, seizures, paraparesis, tetraparesis, vestibular signs, and hypermetria.
- Hyperkeratosis of the nasal planum and footpads



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NEONATES

- Enamel hypoplasia
- Hypertrophic Osteodystrophy
- Abortion/still birth



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DIAGNOSIS

- High suspicion based off clinical signs
- Common bloodwork abnormalities
 - Anemia, Lymphopenia, neutrophilia, hypoproteinemia
- Chest radiographs
 - Bronchopneumonia
- **PCR testing**
 - Previous vaccination can interfere



TREATMENT



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- Supportive care
 - Fluids
 - Nebulization
- Treat secondary bacterial infections
 - Amoxicillin 20 mg/kg PO, IV, SC q 8 hrs
 - Doxycycline 5-10 mg/kg PO, IV q 12 hrs
- Can try anti-convulsants
 - Phenobarbital 10-20 mg/kg IV once to effect then 2-8 mg/kg PO q 12 hrs
 - Diazepam 5-10 mg/kg IV or rectally for status epilepticus



PROGNOSIS

- Based off clinical signs
 - Neuro signs present- guarded to poor prognosis
- 50% mortality rate

PREVENTION

- VACCINATION!!!
 - rCDV- less adverse side effects
 - MLV can cause HO or cellulitis
- Vaccine schedule (AAHA guidelines)
 - Start at 6-8 weeks of age and repeat vaccine q 3-4 weeks until 14-16 weeks of age
 - In dogs >16 weeks of age, the initial series can consist of two vaccines given 2-4 weeks apart
- Other preventative measures
 - Disinfection
 - Quarantine

