

## Canine Distemper Carrier Status in a dog – A Case Report\*

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### Abstract

A four year old non-descript, female dog was presented at Madras Veterinary College Teaching Hospital (MVCTH) for immunization against Rabies. Clinical examination revealed that the pet was normal in all clinical parameters except for the presence of purulent bilateral ocular discharges. Ocular swab was collected and the sample found to be positive for Canine Distemper (CD) by N gene targeting nested PCR. This study suggested that the early detection of CDV in carrier and unvaccinated dogs are paramount importance to reduce the incidence of CD.

**Key words:** Canine Distemper, Carrier status, dog

Canine Distemper (CD) is a highly contagious airborne disease and possesses a high case fatality rate next to rabies which is affecting respiratory, digestive, neurological, cutaneous and immune system of infected animals (Beineke *et al.*, 2015). CD is caused by pantropic morbillivirus, with wide spectrum of host infection viz., Canidae, Felidae, Hyaenidae, Mustelidae, Procyonidae, Ursidae and Viverridae (Deem *et al.*, 2000). Due to its high sensitivity in CD diagnosis, reverse transcriptase PCR was routinely used to identify the excretory status of CD virus in infected dogs (Rzezutka and Mizak, 2002). This present case study was aimed to analyse in epidemiological point of view with addressing the various pathogenic nature of CDV in dogs.

### Materials and Methods

A four year old non-descript, female dog was presented at Madras Veterinary College Teaching Hospital (MVCTH) for the purpose of vaccination against Rabies. On general clinical examination revealed that the pet was found to be clinically normal except for the presence of purulent bilateral ocular discharges. The pet was regularly vaccinated against rabies but not against Canine distemper and the dog was reared in semi-intensive pattern. Ocular discharges was collected in a sterile swab (Himedia) suspended

in buffered phosphate saline and stored in -80°C until further processing. The total RNA was extracted as per TRIzol reagents manufacturer's protocols and next move of cDNA were converted using iScript synthesis kit as per manufacturer's guidelines. The converted cDNA were immediately amplified with nested RT-PCR targeting N gene with published primer (Rosana *et al.*, 2013).

### Results and Discussion

In this case report the animal was confirmed as canine distemper using nested RT-PCR. Majority of the infected dogs remains silent (up to 70 %) and excretion of CDV with intermittent shedding pattern noted commonly (Greene and Appel, 1998). In this study, the dog didn't show any clinical signs for CD but virus excretion was noticed in the excretion of the eye. Hence this study recommends the early detection of CDV in unvaccinated dog which will helps in reducing the incidence of CD.

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