

EPIDEMIOLOGY OF CANINE INFECTIOUS RESPIRATORY DISEASE: INSIGHTS INTO KENNEL COUGH

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ABSTRACT

The canine infectious respiratory disease complex (CIRDC) is a globally endemic syndrome involving multiple viral and bacterial pathogens. It is characterized by the abrupt onset of a dry cough, often intense, sometimes accompanied by expectoration and nasal-ocular discharge. CIRDC can affect dogs of all ages and is typically prevalent in environments where large numbers of dogs are housed together (such as kennels or boarding facilities) or in locations where dog shows and training classes are conducted.

This study aimed to determine the prevalence of the main pathogens associated with canine infectious respiratory disease complex (CIRD) in symptomatic and asymptomatic dogs. Sixteen samples were collected using sterile swabs from the conjunctival mucosa, nasal mucosa, and pharynx. From the 16 samples taken, 12 (75%) strains of *Bordetella bronchiseptica* and 15 (93.7%) strains of *Streptococcus equi subspecies zooepidemicus* were isolated and identified. In these bacterial strains, significant resistance to various groups of antibiotics (including cephalosporins, ampicillin, erythromycin, and enrofloxacin) was observed.

Canine parainfluenza virus and canine adenovirus CAV-2 tested negative at RT-PCR, but *Mycoplasma cynos* was detected by RT-PCR in dogs exhibiting respiratory symptoms.

Keywords: dogs, CIRDC, bacteria, antimicrobials

INTRODUCTION

The canine infectious respiratory disease complex (CIRDC) is a globally endemic syndrome involving multiple viral and bacterial pathogens [Balboni et al., 2014, Corona et al., 2013, Decaro et al., 2016, Jacobs et al., 2005]. The syndrome is characterized by the sudden onset of a paroxysmal, dry cough, sometimes with expectoration and naso-ocular discharge. CIRDC can affect dogs of all ages and is usually prevalent where large numbers of dogs are housed together (in kennels or boarding kennels) or in places where dog shows and training classes are held [Canonne et al., 2018, Corona et al., 2013, Hiebl et al., 2019].

Many bacteria and viruses may be involved in the aetiology of CIRDC. Typically, *Bordetella bronchiseptica*, canine adenovirus type 2 (CAV-2), canine distemper virus, canine herpesvirus (CHV) and canine parainfluenza virus (CPIV) have been considered the main causative agents. In recent times, new pathogens have been implicated in the development of CIRDC, namely canine influenza virus (CIV), canine respiratory canine