



VIRAL DISEASES

VVD-029

DETECTION OF PORCINE CIRCOVIRUS 3 IN PIGS AFFECTED BY DIFFERENT DISEASES AND PATHOLOGICAL CONDITIONS

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Introduction

Porcine circovirus 3 (PCV3) is a novel species of circovirus detected in several countries around the world during the last two years. PCV3 has been found in several tissue samples or sera from pigs with different clinical presentations, as well as in healthy animals. The present study aimed to assess whether PCV3 was present in sera of pigs suffering from different pathological conditions as well as its coexistence with other pathogens.

Material and methods

PCV3 PCR positive serum samples corresponding to a retrospective study made with pigs submitted for diagnostic purposes between 1996 and 2017 were used (n=75, group A). The same number of age-matched animals with a negative PCR result for PCV3 in serum (group B) was selected from the same retrospective study. Frequency of pathogens and pathologies of the two groups were compared by Fisher's exact test using XLSTATS 365 Excel 2016 Statistics software.

Results

The most frequent pathogens in both groups of animals were PCV2 (Group A: 13.3% vs Group B: 14.7%) and PRRSV (9.3% vs 8.0%). Other pathogens that were detected in co-infection with PCV3 were *Escherichia coli*, *Candida albicans*, *Porcine epidemic diarrhea virus* (PEDV) and *Swine influenza virus* (SIV). The most common pathological findings were poor body condition (48% vs 49.7%), followed by interstitial pneumonia (25.3% vs 29.3%) and catarrhal-purulent bronchopneumonia (21.3% vs 26.7%). No statistically significant differences were observed in the frequency of any pathogens or lesions between both groups.

Discussion and conclusion

Results obtained indicate that PCV3 is present in both groups of animals, suggesting that PCV3 may be ubiquitous in the swine population. Furthermore, and although the information obtained is limited, PCV3 did not appear to be linked to any specific pathological condition included in this study.