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TITLE

COMPARISON OF THE VARIOUS COMBINED OR SIMULTANEOUSLY ADMINISTERED VACCINES AGAINST MYSOPLASMA HYOPNEUMONIAE INFECTION

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CONTENT

Introduction

PCVD and Enzootic pneumonia remain two of major economically most important diseases in pig farms. Vaccination against PCV2 and Mycoplasma hyopneumoniae (M.hyo) helps to reduce clinical manifestation of those infections and corresponding losses. Several commercial mono- or bi-valent vaccines are available. The aim of this study was to evaluate the efficacy of combined ready-to-mix (RTM), ready-to-use (RTU) or simultaneously administered vaccines against experimental M.hyo infection in a standardized challenge model.

Material and Methods

Three week-old piglets were vaccinated either with Circovac® plus Hyogen®(CH) - both Ceva simultaneously, or Hyogen® (H) only, or PCV2+M.hyo RTM vaccine or one of two RTU (RTU A, RTU B) vaccines. At 7 WOA the animals were inoculated intratracheally with two different M.hyo strains consecutively. Five weeks later the pigs were slaughtered and the lung lesions scored, samples from affected lungs were collected for histopathology. Blood samples were collected for serology before vaccination, before challenge and before slaughter and tested by two M. hyo antibody ELISA kits (BioChek and IDEXX).

Results

Group mean lung lesion scores (LLS) in groups CH, H, RTM, RTU A, RTU B and positive control were as follows: 0.3; 0.3; 0.9; 1.1; 0.7 and 0.8. Circovac® plus Hyogen® and Hyogen® groups were significantly lower than any other vaccine groups or positive control. They were not significantly different from the negative control. The scores in other vaccine groups didn't differ significantly from the positive control, with RTU A being also different from RTU B. Histopathology confirmed the macroscopic scores.

Conclusion

This study demonstrated that some of the combined PCV2 and M.hyo vaccine may provide sub-optimal protection against M.hyo infection. Hyogen® administered either alone or simultaneously with Circovac® protected lungs the best against the development of the lesions.