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TITLE

MYCOPLASMA HYOPNEUMONIAE (MHYO) SEROCONVERSION STUDY IN A LOW-LEVEL MDA FARM DUE TO A BIVALENT VACCINE COMBINING PCV2 AND MHYO

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CONTENT

Introduction

Mhyo is an important pathogen worldwide distributed and responsible for retarded growing, mainly in the finishing period. Use of bivalent vaccines to control of Porcine Circovirus type 2 (PCV2) and Mhyo is very extensive due to management convenience and good productive results obtained. But few data exist regarding seroconversion to the Mhyo fraction of this kind of vaccines.

Material &Methods

In a Spanish farm, Iberian genetics, where low-level maternal derived antibodies (MDA) against Mhyo were detected, 39 piglets were selected pre-weaning. VACCINATED GROUP(VG): 20 piglets vaccinated against PCV2 and Mhyo using a commercial vaccine (Porcilis® PCV M Hyo, MSD Animal Health) the day before weaning. CONTROL GROUP(CG): 19 piglets not vaccinated. All of them individually identified and blood sampled just prior vaccination (T1) (4 weeks of age), and at 7 (T2) and 10 (T3) weeks of age to determine serological response to Mhyo. No positive results detected in previous studies regarding real time PCR of nasal swabs at weaning (0/30 positive). Serum analyzed by IDEXX® M. hyo ab test (Positive>844, Negative<617).

Results

Group effect: T1; statistical differences were found ($p < 0.001$) in favor of CG (VG=6 vs. CG=316), but still negative. T2 and T3; statistical differences were found ($p < 0.001$) in favor of VG (T2: VG=2113 vs. CG=369) (T3: VG=1535 vs. CG=491). In VG, statistical differences were found between T1 and T2-T3 ($p < 0.001$), showing a clear seroconversion (titer value in CG decreases with time). In VG there is also a statistical correlation between T1 and T3, indicating low titers value in T1 are correlated with high ones in T3 ($p = 0.005$).

Discussion & Conclusion

Despite erratic data regarding seroconversion to Mhyo vaccines, this trial with low-level MDA demonstrated a clear seroconversion to Mhyo in vaccinated piglets. So, in this situations seroconversion could be used as a tool to determine a correct vaccination technique.