



Mycoplasma hyopneumoniae (Mhyo) seroconversion induced by a bivalent PCV2 and Mhyo vaccine in a farm with low Mhyo MDA level

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INTRODUCTION

Mhyo is an important pathogen worldwide distributed and responsible for retarded growing, mainly in the finishing period.

The 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 x Duroc genetics, where low-level maternal derived antibodies (MDA) against Mhyo were detected just prior weaning, 39 piglets were selected the day before weaning and randomly separated in two different groups. 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 (4 weeks of age). CONTROL GROUP (CG): 19 piglets not vaccinated.

All of them were 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 (Picture 1).

No positive results were detected in previous studies regarding real time PCR of nasal swabs at weaning (0/30 positive). Serum was analyzed by IDEXX® M. hyo ab test (Positive: >844, Negative: <617). Statistical analysis by Anova (LN Titter).

RESULTS

Regarding the group effect: T1; statistical differences were found ($p < 0.001$) in favor of CG (mean values: 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) (Figure 1).

In VG there was also a statistical correlation between T1 and T3, indicating that low titers value in T1 were correlated with high ones in T3 ($p = 0.005$).

Figure 1.

Mean LN Titter numerical results ^{a, b, c, d}: different letter shows statistical significance

Group/Age	T1 (4w)	T2 (7w)	T3 (10w)
Vaccinated	6 ^a	2113 ^c	1535 ^c
Control	316 ^b	369 ^d	491 ^d

Picture 1.

Blood sampling of piglets at T1



CONCLUSIONS

Despite erratic data regarding seroconversion that have been found in previous studies to Mhyo vaccines, this trial with low-level MDA demonstrated a clear seroconversion to Mhyo in vaccinated piglets.

So, in these situations seroconversion could be used as a tool to determine a correct vaccination technique while using this product.

BIBLIOGRAPHY

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