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Concurrent administration of Ingelvac® PRRS MLV and Ingelvac® M.hyo - proof of lack of interference

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Introduction and Objectives

Vaccinations against porcine respiratory und reproductive syndrome (PRRS) as well as Mycoplasma hyopneumoniae (M.hyo) are common tools to combat the porcine respiratory disease complex (PRDC). However, as commonly available modified live vaccines (MLV) against PRRS as well as one-shot M.hyo vaccines are usually administered at weaning, the lack of interference of these vaccines need to be elucidated.

Materials and Methods

A total of 100 pigs of 3 week of age were evenly allocated to 4 treatment groups. Group 1: vaccination with Ingelvac® M.hyo; group 2: vaccination with Ingelvac® PRRS MLV; group 3: Ingelvac® M.hyo and Ingelvac® PRRS MLV (in different injection sites) and group 4 remained as unvaccinated controls.. Seroconversion against PRRSV as well as M.hyo was measured by means of ELISA tests (Idexx HerdCheck PRRSV 2XR and DAKO *Mycoplasma hyonpeumoniae* ELISA kit) were measured as indicators for efficacy until 56 days post vaccination. The trial was designed as an equivalence trial and the margin of equivalence (Δ) was set at 15% difference in seropositivity for both ELISAs. A coverage probability of two-sided 95% confidence intervals had been defined in which the interval for equivalence should entirely lie within – Δ to + Δ.. Relevant comparisons were tested with Fisher's Exact test (SAS 8.2).

Results and Discussion

Table 1: Seroconversion against PRRSV (number positives/total tested samples)

Day	Ingelvac® PRRS MLV	Ingelvac® PRRS MLV + Ingelvac® M.hyo	Confidence Intervals (p-value for Fisher's Exact Test)
0	0/25	0/25	- (1.0)
14	4/25	4/24	-21.37 – 20.04 (1.0)
28	20/25	18/24	-18.37 – 28.37 (0.74)
42	22/25	22/24	-20.53 – 13.20 (1.0)
56	21/25	23/24	-28.28 – 4.61 (0.35)

Table 2: Seroconversion against M.hyo (number positives/total tested samples)

Day	Ingelvac® M.hyo	Ingelvac® PRRS MLV + Ingelvac® M.hyo	Confidence Intervals (p-value for Fisher's Exact Test)
0	0/25	0/25	- (1.0)
14	3/25	3/24	-42.04 - 13.04 (0.39)
28	21/24	19/24	-3.83 – 12.16 (1.0)
42	23/24	22/24	-3.83 – 12.16 (1.0)
56	22/24	21/24	-3.83 – 12.16 (1.0)

As evident from tables 1 and 2 the compatibility of the concurrent administration of Ingelvac® M.hyo and Ingelvac® PRRS MLV at the age of 3 weeks was clearly proven at all time points with regard to both seroconversion against PRRSV as well as M.hyo. The validity and integrity of data was confirmed by inclusion of an untreated control group which remained serologically negative throughout the study.

Compatibility of concurrent administration of both products was further confirmed by absence of local reactions at the injection sites or any systemic reactions that could have lead to any disturbance of the general health status following single or concurrent vaccination.

As the efficacy and rapid onset of action of the products have been proven (Roof et al., 2004; Roof et al., 2000; Genzow et al, 2004, Roof and Kolb, 2004), the concurrent administration of Ingelvac® M.hyo and Ingelvac® PRRS MLV at weaning is a convenient way to protect pigs against the major pathogens of PRDC.

References

Roof, M.; Vaughn, E.; Burkhart, K.; Halbur, P.; Faaberg, K. (2004): AASV 2004

Roof, M. ; Gorcyca, D.E.; Wensvoort, D. (2000): 16th IPVS 2000

Genzow, M.; Lasagna, C.; Hardge, T.; Kolb, J. (2004):Allan D. Leman Swine Conference 2004

Roof, M.; Kolb, J. (2004): 18th IPVS 2004