VACCINATION WITH THE MIXED ADMINISTRATION OF ERYSENG® PARVO AND UNISTRAIN® PRRS IN GILTS CLINICALLY PROTECTS AGAINST A HETEROLOGOUS PRRSV INFECTION

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INTRODUCTION

The clinical protection provided by the combined administration of ERYSENG® PARVO and UNISTRAIN® PRRS against the Porcine Reproductive Respiratory Syndrome (PRRS) in gilts was assessed in this study. Reproductive performance after a heterologous challenge was the main efficacy parameter.

MATERIALS AND METHODS

Twenty six-month-old gilts, clinically healthy and free from antibodies against PPV, *E. rhusiopathiae* and PRRS were randomly assigned to a vaccinated group (n=10) and a control group (n=10). Animals in the vaccinated group were vaccinated following the recommended protocol; they were immunised intramuscularly with ERYSENG® PARVO (2 ml/dose) and revaccinated three weeks later with the combination of ERYSENG® PARVO and UNISTRAIN® PRRS (2 ml/dose, the freeze-dried tablet of UNISTRAIN® PRRS was reconstituted with ERYSENG® PARVO). Vaccination and revaccination were done seven and four weeks before mating, respectively. Animals in the control group received PBS using the same strategy as the vaccinated group. At ninety days of gestation, all the gilts were inoculated intranasally with 1 ml PAM culture lysate containing $10^{6.39}$ $CCID_{50}$ of a pathogenic type I PRRSV strain. Gilts were examined daily after challenge until 28 days after farrowing. The reproductive parameters were analysed using the non-parametric Mann-Whitney U test ($p<0.05$).

RESULTS

In the vaccinated group, there were no abortions or premature farrowing (fewer than 111 days of gestation). The mean length of gestation was significantly lower in the non-vaccinated group (115.1 days in the vaccinated group vs. 113.3 days in the control group).

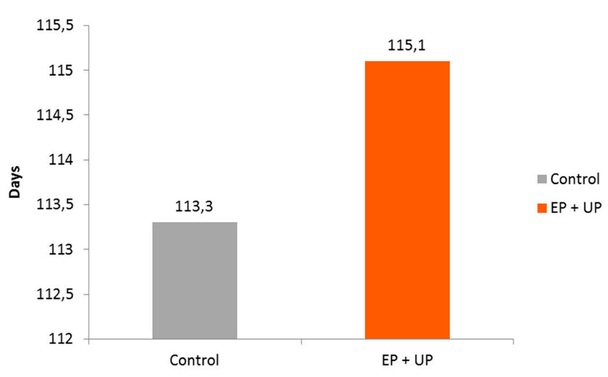

Figure 1. Length of gestation.

Consequently, there was a significant reduction in the vaccinated compared to control group significantly reduced ($p<..5$) in terms of the number of weak piglets (0.9 ± 0.99 vs. 2.4 ± 1.58) and the presence of mummies (0.2 ± 0.42 vs. 1.8 ± 1.93) at farrowing. Although statistical differences were not observed, in the vaccinated group there was also an improvement in the number of piglets born alive per sow (11.3 ± 3.47 vs. 9.1 ± 2.28) and a decrease in the total number of stillborn piglets per sow (1.4 ± 2.41 vs. 1.9 ± 1.66).

Figure 2. Reproductive parameters after challenge. [a,b]Different superscripts indicate statistically significant differences between groups ($p<0.05$).

CONCLUSIONS AND DISCUSSION

The combined administration of ERYSENG® PARVO and UNISTRAIN® PRRS significantly reduced the number of weak piglets and the presence of mummies in vaccinated gilts after a heterologous PRRSV challenge. So the use of the vaccine mixture clinically protected gilts from a heterologous PRRSV infection. The results obtained allow the conclusion to be drawn, that efficacy in terms of clinical protection after a PRRS challenge with the combined use of the two vaccines is comparable to that of UNISTRAIN® PRRS administered alone (1).

REFERENCES

1. Fenech et al. 2013. Proceedings ESPHM 2013, p.192

esphm 2015
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