SAFETY AND IMMUNOGENICITY OF VEPURED® CO-ADMINISTERED WITH PREVIRON® IN PIGLETS

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BACKGROUND AND OBJECTIVES

The aim of this study was to evaluate the safety and efficacy of VEPURED®, when administered concomitantly with PREVIRON® for the prevention of Edema disease (ED) in swine.

MATERIALS AND METHODS

Three groups of piglets of 2 days of age, free from VT2e neutralizing antibodies, were included:

- VEPURED® (n=10):
  Received 1 ml of VEPURED® and 1 mL of PREVIRON® one day after vaccination.
- VEPURED® + PREVIRON® (n=10):
  Received 1 ml of VEPURED® co-administered but not mixed with 1 mL of PREVIRON®.
- CONTROL (n=10):
  Received 1 ml of PBS and 1mL of PREVIRON® one day after administration of PBS

Local reactions and temperature were evaluated before vaccination and at 4, 24, 48 and 72 hours after vaccination in the three different groups. Blood samples were collected before vaccination and at 28 days after vaccination. The presence of neutralizing antibodies against VT2e was determined by VERO cell neutralization assay.

RESULTS

The body temperatures of the piglets increased from 0 to 4 hours after vaccination. The increase in the VEPURED® group was 0.38ºC; in the VEPURED® + PREVIRON® group it was 0.47ºC; and in the control group it was 0.05ºC. No significant differences were detected between groups (ANOVA test; $p>0.05$). Twenty-four hours after vaccination, the temperatures returned to baseline in all the groups (Figure 1).

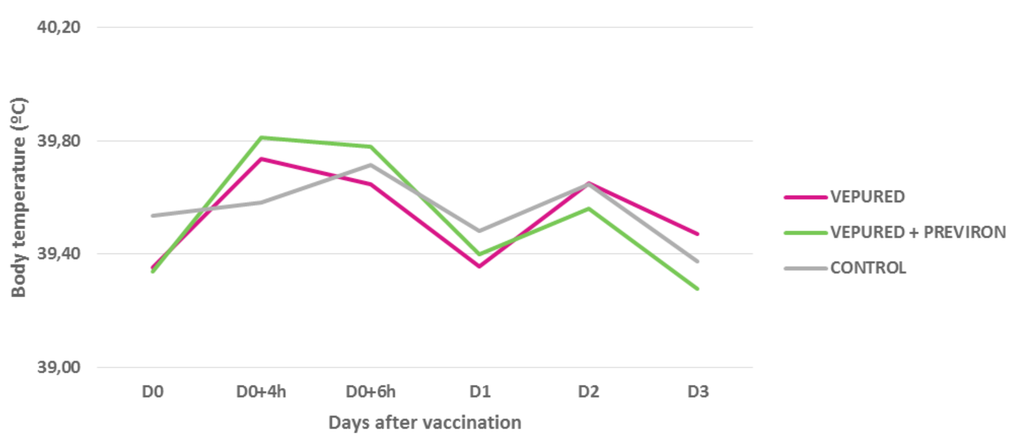

Figure 1. Mean rectal temperature (ºC) after vaccination.

After vaccination slight inflammation (<3 cm) was observed in some animals included in the study (Figure 2). Local reactions had disappeared 48 hours after vaccination. No significant differences in the percentage of animals with local reactions were detected between groups (two-tailed $\chi 2$ test; $p>0.05$).

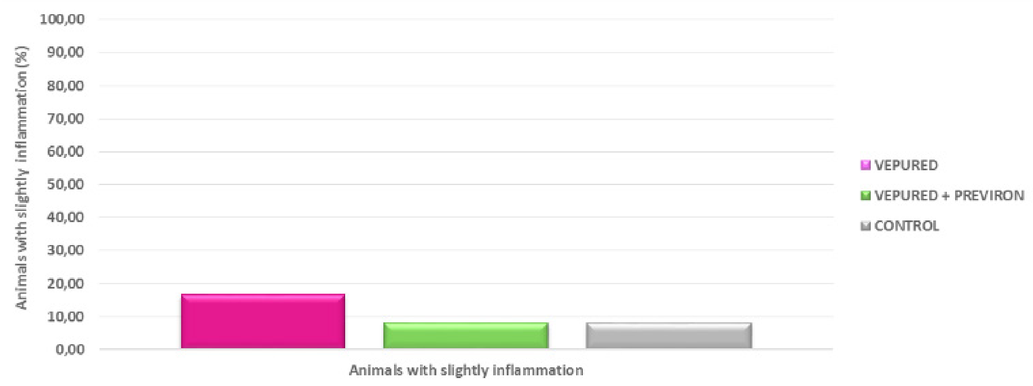

Figure 2. Percentage of animals with slight inflammation.

At 28 days after vaccination, the majority of the piglets from the VEPURED® group and the VEPURED® + PREVIRON® group presented VT2e neutralizing antibodies. The vaccinated groups had significantly higher percentages of animals with neutralizing antibodies compared to the CONTROL group (Table 1). However, no significant differences were observed between the VEPURED® group and the VEPURED® + PREVIRON® group.

Group	D0	D28
VEPURED®	0,0	91,6[a]
VEPURED® + PREVIRON®	0,0	90,9[a]
CONTROL	0,0	0,0[b]

[a,b] Indicates statistically significant differences between groups.

Table 1. Percentage of animals with neutralizing antibodies against VT2e at day 0 and 28 of the study (two-tailed $\chi 2$ test; $p>0.05$).

DISCUSSION AND CONCLUSIONS

The results obtained in this study show that VEPURED® is safe when administered concomitantly with PREVIRON®, and demonstrate that this simultaneous administration does not interfere with the generation of VT2e neutralizing antibodies by the vaccine.

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