ONE VACCINATION WITH UNISTRAIN® PRRS DURING GESTATION REDUCES VIREMIA AND VERTICAL/HORITZONTAL TRANSMISSION OF AN HETEROLOGOUS PRRS VIRUS

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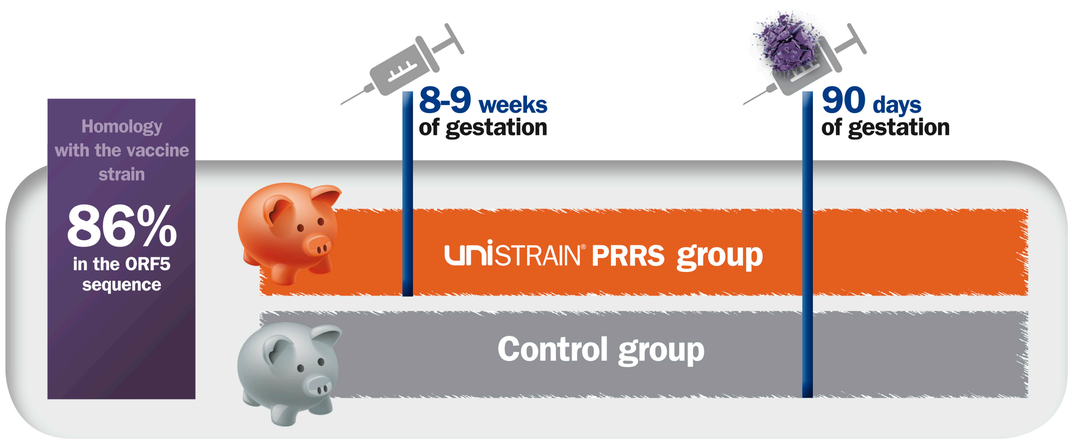
INTRODUCTION

The control of the viraemia is essential for the posterior PRRSV consequences. Although there are in vitro there are evidences for vaccine-induced protective immunity against heterologous challenge (1), in this study the control of the viraemia (sows and piglets) after a non-homologous PRRSV challenge will be assessed in UNISTRAIN® PRRS vaccinated gestating sows.

MATERIALS AND METHODS

The vaccine was applied at 8-9 weeks of gestation by IM route to 9 naïve sows. The efficacy was evaluated by means of an IN challenge at 90 days of gestation with a heterologous pathogenic strain of European genotype of the PRRSV (Spanish strain isolated at 2007; $10^{6.54}$ $CCID_{50}$ / sow). Virus detection was performed by PCR and virus isolation (VI) in alveolar macrophages.



RESULTS

Vaccination statistically reduced the number and length of viraemia (2.22±4.41 days in vs. 21±4.5 days) induced by the heterologous strain in sows. The viraemia was puntual in vaccinated group (11.11% VI) whereas in control one was of 100% broad in time. Furthermore, vaccination inhibited in 90.1% of the cases the vertical transmission to piglets (viraemic at birth). There was a statistically shedding reduction in milk (50% control vs. none of vaccinated sows) and a reductive tendency in nasal shedding, decreasing the possibility of a horizontal transmission during lactation.

CONCLUSIONS

Vaccination with UNISTRAIN® PRRS enabled gestating sows to clear the virus and reduced its vertical and horizontal transmission to foetuses. There was a reduction of shedding and infection pressure.

Figure 1. Viraemia of the gilts after challenge with PRRSV (χ2/ Fisher; p<0.05).

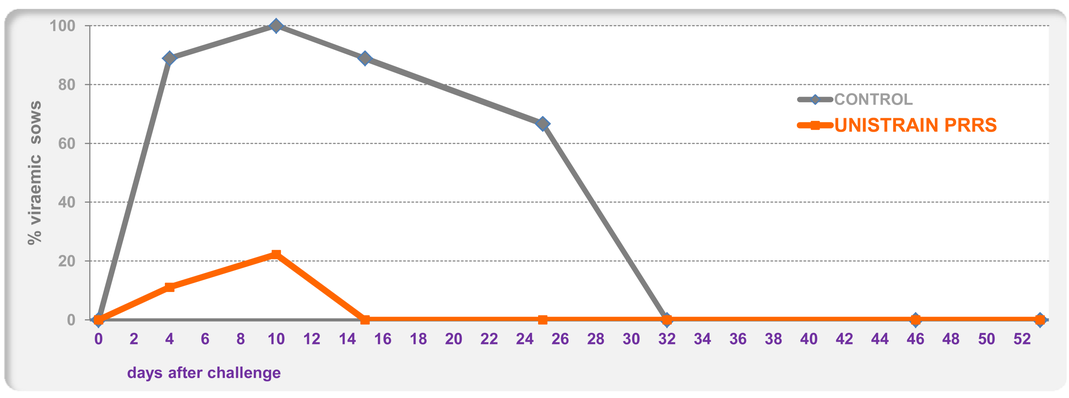
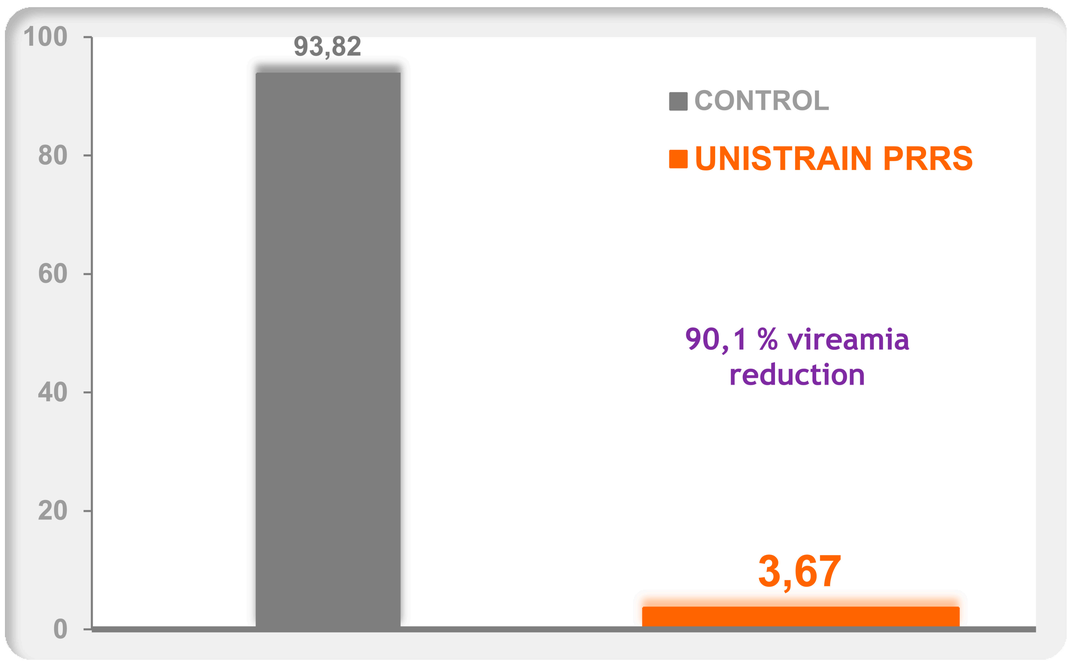


Figure 2. Percentage of viraemic piglets at birth (χ2/Fisher; p<0.05).



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